



An  
Bord  
Pleanála

## Inspector's Report APB-304207-19.

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<b>Development</b>	Sand and Gravel Quarry.
<b>Location</b>	Roscat, Tullow, County Carlow.
<b>Planning Authority</b>	Carlow County Council.
<b>Applicant(s)</b>	Kilcarrig Quarries Ltd.
<b>Type of Application</b>	Application under section 177E of the Planning and Development Act 2000, as amended for Substitute Consent.
<b>Observer(s)</b>	None.
<b>Date of Site Inspection</b>	28 <sup>th</sup> June 2019.
<b>Inspector</b>	Patricia Calleary.

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## 1.0 Introduction

1.1. This report provides an assessment of an application which seeks substitute consent of an existing sand and gravel quarry at Roscat, Tullow in County Carlow, in accordance with section 177E of the Planning and Development Act, 2000, as amended, hereinafter referred to as 'the Act'. It has been lodged by Kilcarrig Quarries Ltd. (c/o Earth Science Partnership (Ire) Ltd.) who are stated to have recently acquired the quarry. The 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, c.4.7 hectares in area, is located in the townland of Roscat approximately 3 km south west of Tullow and 2 km east of Rathoe in County Carlow. It forms part of an existing worked sand and gravel pit, which is approximately six hectares in area. The excluded L-shaped indentation in the south eastern corner relates to an area measuring approximately 1.3 hectares and which was authorised by a current planning permission (Carlow Co. Co. Planning No. CW7850).
- 2.2. Access to the existing quarry site and the adjoining agricultural lands that are proposed to be used for further quarrying, is from an established entrance off a local road, through a c.1 km long gated laneway. The N81 national road connects Tullow with the N80 national road at Ballon, approximately 1.5 km east of the site. The site is surrounded by agricultural fields, farm holdings and scattered one-off housing.
- 2.3. Existing ground levels on the worked area of quarry floor are between 63 and 64 metres (m) Ordnance Datum (OD) and the greenfield area to its northwest has contours ranging between 70 and 72 mOD.
- 2.4. The wider area is characterised by agricultural land uses including tillage and grassland agriculture. The closest dwelling to the existing working area is located

c.328m to the northeast and has an accompanying farmyard. There are three other dwellings within a 500m radius, two of which are accompanied by farmyards.

### 3.0 Development

3.1. As set out on the site notice, the development which historically occurred on site consists of an existing sand and gravel pit. Further details of the historic development are set out in the remedial Environmental Impact Report (rEIAR) including the following:

- stripping of c.16,800 m<sup>3</sup> of overburden which was stockpiled on the quarry proposed to be used in restoration of the site;
- extraction of c.214,000 m<sup>3</sup> of sand and gravel;
- processing of some extracted material onsite (including crushing and screening using mobile plant close to the excavation area);
- stockpiling of other processed product awaiting transport off site;
- removal of some material off-site for external processing;
- transportation of material;
- surface and groundwater management;
- portacabin for use as office / staff facilities;
- dust and noise control measures;

3.2. It is submitted that plant and material which operated in the application area consisted of tracked excavators, wheel loaders, dump trucks, mobile processing plant, heavy good vehicles (HGVs) and a water bowser for dust suppression. Processing on-site was undertaken using a dry screening process and no aggregate washing is stated to have occurred on site.

3.3. It is stated that no activity has taken place on site on an ongoing basis since 2008 and the current owners have recently acquired the site.

3.4. In addition to the drawings and documents received, the application is accompanied by a remedial Environmental Impact Assessment Report (rEIAR) and a remedial Natura Impact Statement (rNIS).

## 4.0 Planning History

4.1. This application runs in parallel with an application (**ABP-304209-19**) seeking permission in accordance with section 37L of the Act for further development of an existing sand and gravel quarry on a 14.7 hectare site including the current 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 (8<sup>th</sup> 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 (23<sup>rd</sup> 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 (11<sup>th</sup> 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 22<sup>nd</sup> day of August 2012, Carlow County Council decided that the quarry commenced operation after the 1<sup>st</sup> 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 (10<sup>th</sup> October 2013) that the quarry development was carried out after the 1<sup>st</sup> 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 26<sup>th</sup>

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 25<sup>th</sup> 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 7<sup>th</sup> 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 25<sup>th</sup> 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 on the Substitute Consent application 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 quarry site 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;
- Irish Water have submitted that there has been no impact on Irish Water Infrastructure;
- States that the principle of the development is acceptable subject to conditions.

## 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 rEIAR should be included as conditions.

### Inland Fisheries Ireland (IFI)

- notes that the site is in close proximity to a tributary of the Burren River, a tributary of the River Barrow which is an important Spring salmon and trout fishery that supports several species listed in Annex II of the Habitats Directive;
- notes that an examination of historical mapping highlights that the south-western boundary of the site borders a very wet area with a number of springs and that an examination of aerial photographs of the site highlight that there was significant production of concrete blocks and other concrete products in the recent past;
- lists a number of concerns around protection of water quality, including pollution from uncured concrete, discharge of suspended solids and escape of hydrocarbons. A number of recommendations are also set out to protect water quality of the receiving rivers and fisheries;

- Sets out a number of recommendations for further quarrying activities.

#### 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.

#### Geological Survey of Ireland (GSI)

- acknowledges the referral and states that GSI have no comment.

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

- excavation has taken place above ground water level;
- groundwater regime in the area has been unimpeded by historical activities and there have been no impacts to groundwater through the Ardristan Fen pNHA;
- surface water runoff from the hardstand area of the site passes through a series of settlement ponds;
- states that the Ardristan Fen has significantly reduced in size over the years as a result of arterial drainage to restore peats to productive grassland soils. Water quality in the fen appears to be affected by nutrient inputs from agriculture and any impacts to the Fen appear to have been from local agricultural practices rather than historical activities at the working pit;
- following Appropriate Assessment, states that the past development did not result in any impacts that adversely affected the River Barrow and River Nore SAC, having regard to the site's conservation objectives.

### 5.8. Applicant's response to submissions

#### 5.8.1. Applicant's response to IFI submission

- no concrete related production took place on site and none is planned in the future;
- all site excavations remained above the water table and there is no 'run-off' from the site;

- hardstand area discharged from the site after passing through a series of settlement ponds;
- sets out environmental protection measures which were employed;

## 5.9. Planning Authority Response to Submissions

### 5.9.1. Response to IFI submission from Planning Authority

- the Planning Authority states that they have noted the submission and have no further observation on the submission.

## 6.0 Assessment

6.1. Part XA of the Act specifically deals with applications for substitute consent. Section 177K(2) states that when making its decision in relation to an application for substitute consent, the Board shall consider the proper planning and sustainable development of the area having regard to a number of matters, listed as (a) to (l).

6.2. In the current application documentation, it is stated that the quarry commenced operations in 1987 with the existing working pit haven been most active within the period 2000 - 2008 and that the existing working area has generally been unused since 2008. The Board's determination of the case can only be made in respect of the development that has already been carried out. i.e. the determination must be confined solely to the works undertaken on site and for which substitute consent is being sought. The Board is required to restrict its deliberations to the works undertaken and whether or not it is appropriate to grant substitute consent for the past works.

6.3. Throughout the application it is stated that no concrete block making took place on site and no reference has been made to this activity on the public notice. In response to the IFI report, it is also stated that concrete-related production did not occur on the site and that concrete or cement was not used on site. However, this clearly contradicts with past aerial imagery and historical mapping available. In addition, photographs attached to history files related to this application clearly show substantial stockpiles of concrete blocks on site sometime between 2005 and 2012. They appear to have been stockpiled on a sizeable hardstand concrete platform which currently remains on site. In this regard, I refer the Board to the Planning

Authority's Planning report in relation to file history details including a review of quarry under S261A, report signed on 21<sup>st</sup> August 2012 which includes photographs attached clearly showing fresh stockpiles of concrete blocks on the site at that point. Stockpiles of blocks also appear on aerial imagery dated 2005 and 2010 attached to the same file. In addition, the Board's inspector's report on QV01.0270 includes reference to the scale of operations in the quarry having intensified by 2010 and photographs attached to that file also clearly show stockpiles of manufactured concrete blocks on site. A copy of this report and photographs are attached to the parallel application for further quarrying (ABP-304209-19). It is open to the Board to request further information on this matter, specifically to clarify the nature of the development which took place on the quarry site and the dates in which it the quarry operated. I have proceeded with my assessment below taking on board all of the information which I have available to me at this juncture and I have taken a view that some blockmaking occurred on site but the Board will note the information gap which exists.

6.4. As set out in the Planning History section above, this assessment should be read in conjunction with the parallel application for further quarrying made under Section 37L of the Act (ref. ABP-304209-19). The assessment 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 considers the principle of the development to be acceptable in the context of the Carlow County Development Plan 2015-2021 and in the event of a grant of permission a number of conditions are recommended. Equally internal reports received from Environment, Water services and the Municipal District office express no objection to the historic development subject to conditions.
- 7.4. Submissions were received from prescribed bodies (TII, IFI, Irish Water and GSI) during the course of the application. The main issues raised are summarised in Section 5.6 of this report. No objections to the granting of substitute consent were raised in any of the submissions. The details of the IFI submission are considered in detail under the heading of 'Water' within Section 8.0 - Environmental Impact Assessment of this report. No submissions were received from observers.
- 7.5. Having regard to the above, the previous quarrying development is clearly supported within the current planning policy context. It is therefore reasonable to conclude that the consequences for proper planning and sustainable development in the area are largely positive. This is contingent on ensuring that the effects on the environment of the development which took place, by itself and in combination with other development in the vicinity, was and is acceptable and that the integrity of European Sites were not adversely affected, in view of the relevant sites' conservation objectives. I have set out my considerations of these and other relevant matters in the following sections of my assessment, under the headings of Environmental Impact Assessment and Appropriate Assessment respectively.

## **8.0 Environmental Impact Assessment**

### **8.1. Introduction and Statutory Provisions**

- 8.1.1. This application was submitted to the Board after 16<sup>th</sup> May 2017, the date for transposition of Directive 2014/52/EU amending the 2011 EIA Directive. A Remedial Environmental Impact Assessment Report (rEIAR) 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 rEIAR format, methodology and an overview of the rEIAR chapters. It also includes a table setting out the names of the rEIAR study team and details of their competencies and expertise. Chapter 2 provides information on screening, scoping and alternatives which were studied by the developer. It is submitted that no alternative designs or processes were considered which I am satisfied is acceptable in relation to an application for substitute consent for a past development. Chapter 3 provides a description of the project which I have summarised under Section 3 of this report above. Chapter 4 sets out the applicable 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 remedial measures and monitoring proposed.
- 8.1.3. Directive 2014/52/EU requires that the development is assessed in terms of vulnerability to the risks of major accidents and/or disasters which are relevant to the project. Having regard to the nature and scale of the past development which took place and the nature of the receiving environment, while unplanned events and accidents cannot be ruled out, these, if they occurred would have been dealt with in their own right outside of the planning process, including adherence to Health and Safety requirements and emergency response planning. Otherwise, within the meaning of the Directive, and considering the effects on the environment, the project is not of a nature which would have resulted in it generating a risk of major accidents and/or natural disasters and no such major accidents and/or natural disasters have

been referenced so it is reasonable to assume none have occurred as a result of the past quarrying activities.

- 8.1.4. A separate volume containing appendices is included with the application. It contains a copy of An Bord Pleanála Section 261 Determination, a copy of Carlow County Council Direction to apply for substitute consent and consultation submissions. It also contains comments from the planning authority and prescribed bodies on the applicant's EIA Screening and Scoping Document in respect of both the current Substitute Consent application made to the Board under Section 177E of the Act and the parallel application for further quarrying development (ABP-304209-19) made under Section 37L of the Act and currently with the Board for consideration. In addition this separate volume contains details of borehole logs, laboratory certificates of analysis, ambient air quality standards, emission factors 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 summary details of Recorded Monuments within the study area.
- 8.1.5. Data limitations and any technical difficulties encountered in preparation of the rEIAR are detailed in the relevant chapters of the rEIAR. For an application of this nature, the main difficulty which I note is the limited baseline information available from which to assess the likely impacts of the past development and as stated above, clarity around the extent of activities which took place on site, the period of operation and whether or not concrete blocks were produced on site.
- 8.1.6. I have carried out an examination of the information presented by the applicant, including the rEIAR, 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 issue relating to EIA is that around protection of water quality in the receiving rivers and fisheries, as set out in the IFI submission in which a number of concerns were raised around the impacts of silt-laden waters and if concrete blocks were produced on site, impacts relating to elevated pH on receiving watercourses and their habitats and species. In response the applicant sets out details of the environmental protection measures which were employed in the past quarrying activities on site. Impacts which might have occurred

on the Ardristan Fen pNHA and the underlying aquifer are also prominent issues requiring assessment.

8.1.7. I am satisfied that the information provided in the rEIAR is sufficiently complete and up to date and that the rEIAR has been prepared by competent experts to ensure its completeness and quality. I am also satisfied that the information contained in the rEIAR and supplementary information provided by the developer is generally adequate identifying and describing the direct, indirect and cumulative effects of the proposed development on the environment and complies with Section 177F(1) of the Act and Article 222A of the Planning and Development Regulations 2000-2019. I have some reservations that while it is submitted by the applicant that no concrete blocks were produced on site, this is at variance with the planning history and evidence from aerial imagery which show evidence of concrete blocks on the site in the past. Therefore, while such an element has not been included on the site notice and an information gap exists, nonetheless, I have assumed that production of blocks occurred as part of the past development and I have taken this into account in my assessment of effects on the environment below.

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

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

- 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 rEIAR 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 had 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 stated under Section 11.6 (Relevant Guidance and Legislation) and Section 3.3.2.9 (Working Hours and Employment) that the quarry employed one person on a part-time basis. Given the evidence on site, including the depth of excavation of 7m across the site area and noting reference made under Section 5.2.4.2 (Economic Activity) to the applicant's quarry development at Bagnelstown, Co. Carlow providing employment for approximately 15 people directly with a further 5 people employed indirectly, I would have to doubt that employment was as low as one employee on a part-time basis. This is also so as it is evident from file photographs and from review of past aerial imagery that, while the applicant asserts otherwise, concrete blocks were likely to have been produced and stored on site. However, I am satisfied that employees engaged in such a type of development would most likely have resided locally and as such no increase in population as a result of the development would have resulted.
- 8.3.3. I would agree as generally submitted that the development would have resulted in minimal or potentially no impact on tourism and amenities in the area, having regard to the findings of the traffic assessment and that the site is naturally screened and, therefore, no further mitigation measures would have been required to address any impacts on population. No specific instances of adverse impact on the wider community are known to have arisen from the development of the substitute consent area itself.
- 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 Chapter 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 have arisen from negative

impacts to water quality and as a result of air and noise emissions would have been no greater than 'imperceptible'.

8.3.5. In relation to traffic, it is stated that there were approximately 20 Heavy Good Vehicles (HGV) movements in and out of the quarry site per day. It is concluded that this level of traffic would have had a 'slight' impact on the surrounding road network. While not concluded in the rEIAR, with such a level of traffic and noting that emissions lay within ambient air quality standards for dust, PM<sub>10</sub> and PM<sub>2.5</sub> and that noise emissions were maintained within acceptable thresholds, no impact on human health above 'imperceptible' would likely have arisen as a result of traffic generated by the quarrying activities. No remedial measures are stated to be required outside of those specified in their respective chapters.

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 rEIAR that the previous quarrying operations did not give rise to significant adverse impacts on population or human health.

#### 8.4. **Biodiversity**

8.4.1. Biodiversity is examined in Chapter 6 of the rEIAR. Ecological receptors and justification for their respective survey area extents are presented in Table 6-1.

8.4.2. The applicant's retrospective assessment included the collection of baseline ecological data, a phase one habitat survey and a fauna survey. Ecological features which existed pre-quarrying activities 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 of the site.

8.4.3. Table 6.10 presents a summary of previous habitats, two in total, which are stated would have been present within the site area prior to quarrying having taken place. These habitats are classified by reference to the Fossit Code and include GA1 (Improved agricultural grassland) rated local importance (lower Value) and GS4 (wet grassland) rated local importance (higher value). While not stated, based on a review

of aerial photography, it is likely that hedgerows (WL1), a habitat<sup>1</sup> of local importance (higher value) was also present.

- 8.4.4. No rare or protected plant species were found during the applicant's habitat survey and it is noted that there are no Flora Protection Order records within the site. Similarly, no invasive plant species was found on the site, 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.
- 8.4.5. 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.
- 8.4.6. The substitute consent area is considered to have been 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.
- 8.4.7. The substitute consent 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.
- 8.4.8. Table 6.15 sets out a Source-Pathway-Receptor-Effect (consequence) conceptual model for all potential retrospective effects of individual elements (sources) of the historical project on sensitive ecological receptors and their respective potential for

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<sup>1</sup> A hectad is an area measuring 10 km x 10 km square (100 sq. km).

significant effects. Potential retrospective effects are then set out and I consider these directly below.

#### **Potential Retrospective Effects on European Designated Sites**

8.4.9. 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 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 495m 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 Retrospective Effects on National Designated Sites**

8.4.10. No national heritage areas (NHAs) lie within the 15km potential zone of influence. Eight proposed Natural Heritage Areas (pNHAs) which lie within the 15km radius of the site area are listed in Table 6.9 contained in Chapter 6 of the rEIAR. 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 largely outside of the application site, however it slightly overlaps and extends into the area along the southwestern boundary. Ardristan Fen pNHA is fed by springs around its periphery. It is stated in the rEIAR that the site survey carried out in summer 2018 did not reveal springs, a matter which they attributed to the drought conditions during that particular summer.

8.4.11. It is stated that surface water passed through a series of five settlement ponds currently on site and that this delivered clarified water to an open ditch situated on the southern site boundary, and thereafter it drained to the Ardristan Fen pNHA and through drains within the Fen to the Roscat stream. In Chapter 8 (Water), it is stated that some of the clarified surface water would have been taken from the final pond and used on site for dust suppression.

8.4.12. It is also 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 (Chapter 8 – Water) 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 NPWS mapping. 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.

8.4.13. It is evident from a review of historic OSi mapping that this area which overlaps the application site was previously a natural part of the pNHA in the past and cannot be readily isolated from the current site and impacts on the Fen from past quarrying activities or the related blockmaking which evidently occurred on site cannot be ruled out. It is not possible to be more conclusive on this matter in the absence of historical baseline information on the ecological situation prior to quarrying and related activities took place.

8.4.14. I am satisfied that there are no hydrological surface or groundwater pathways between the application site and any other pHNAs.

#### **Potential Retrospective Effects on Existing Habitats**

8.4.15. Potential effects on pre-quarrying 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 have affected habitats within 25m and would have been minimised by the perimeter berms which were put in place and which would have reduced the airbourne emissions leaving the site.

#### **Potential Retrospective Effects on Birds**

8.4.16. It is submitted that birds which were present prior to quarrying activities were limited to general passerine species classified as being of local importance (higher value). A breeding colony of Sand Martin (*Riparia riparia*) is stated to currently exist in a large stockpile of sand and this is classified as 'exposed sand, gravel or till' (ED1), considered to be of local importance (higher value) because of the presence of the Sand Martin breeding colony. It is stated that this current colony of breeding Sand Martins would not have been present onsite prior to quarrying operations within the Substitute Consent area as the suitable habitat in the form of exposed stockpiles of sand was not available at that time. As no hedgerow removal took place within the

site, no direct or indirect impacts as a result of disturbance/displacement on breeding bird species using this habitat above 'imperceptible' is stated would likely have occurred.

#### **Potential Retrospective Effects on Non-volant Mammals**

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

#### **Potential Retrospective Effects on Bats**

8.4.18. Habitats within the site area are stated to have been of limited ecological value to bats and suitable habitat within 150m of the site does not exist. Accordingly, potential for impacts from disturbance / displacement as a result of the operations are rated as having been imperceptible in the long-term.

#### **Potential Retrospective Effects on Amphibians and Reptiles**

8.4.19. It is submitted that there was no suitable breeding and foraging habitat for amphibians and reptiles on the site and accordingly imperceptible long-term effects on amphibians and reptiles are rated as having been imperceptible in the long-term.

#### **Potential Retrospective Effects on Invertebrates**

8.4.20. Similarly given the limited availability of a suitable habitat for invertebrates within the site, any impacts which arise would have been no greater than imperceptible in the long-term.

#### **Potential Retrospective Effects on Aquatic Ecology**

8.4.21. Table 6.16 of the rEIAR sets out a summary of potential retrospective impacts of water quality deterioration on aquatic ecology. It evaluates the following potential impacts on the Roscat Stream, Ardristan Fen and Aquifer:

- Silt contained in surface-water runoff had potential to clog salmonid spawning bed, juvenile salmonids and could have blanketed plant and macro-invertebrate communities resulting in a loss or degradation of valuable habitats within the Roscat Stream;

- Surface water containing hydrocarbons had potential to impact on salmonid and plant species within the Roscat Stream;
- Removal of overburden had potential to increase the vulnerability of the underlying aquifer;
- While Otters were not recorded, it is stated that they may have been present in the Roscat Stream and could have been indirectly affected by a reduction in water quality;
- Increased run-off from the site had the potential to result in direct degradation on the adjoining Fen habitat and floral species dependent on it.

8.4.22. It has been evaluated that if unmitigated, the impacts outlined above would have been rated as 'moderate' significant.

8.4.23. Table 6.17 sets out mitigation measures relating to the protection of water quality and aquatic ecology. Measures outlined include ensuring runoff passed through a series of settlement ponds, ensuring stockpiled overburden was stable through its vegetation and proper storage of fuel, including bunding. It is stated that in the 2018 survey work, no hydrocarbons were detected in groundwater at the downgradient boundary.

8.4.24. Following the adoption of mitigation measures, the predicted impact which arose from the establishment and the follow-on past quarrying activities is deemed to have been imperceptible. Proposed remedial measures include restoring permeability to pre-works situation by mechanical ripping the quarry floor for a depth of 0.5m, spreading overburden across the floor and restoring the side slopes as per the landscape plan to accommodate breeding Sand Martins.

8.4.25. It is recommended that ongoing monitoring of water quality is undertaken on a biannual basis during the restoration works and that reports on the findings should be submitted to the NPWS, IFI and to the Planning Authority.

8.4.26. Impacts as a result of concrete block making have not been examined in the rEIAR. The level of production is not known and assessment of this matter in the absence of further information is difficult. Nonetheless, results from water sampling indicate that previous activities on site did not have a detrimental impact on groundwater or surface water receptors and there are no reported incidences of harm to fisheries or

species or habitats of importance brought to my attention. I revisit this matter under the heading of Water in my assessment below.

#### 8.4.27. Conclusion - Biodiversity

While quarrying and related activities will have inevitably impacted directly on ecological habitats, with the adoption of previous mitigation measures outlined and taking into account the remedial measures proposed, a finding of no significant residual effects on the biodiversity of the Substitute Consent site as a result of the development can be concluded. It is unclear whether or not impacts on the Ardristan Fen pNHA would have arisen because of arterial drainage, as stated by the applicant, or if it was impacted in part by the quarrying activities. Nonetheless, impacts are not so significant as to recommend a refusal of substitute consent.

### 8.5. Land, Soils and Geology

- 8.5.1. The land, soil and geological environmental factors are considered in Chapter 7 of the rEIAR. It is stated that reference was 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, the agricultural soils which originally overlaid the existing working pit, consist principally of shallow, well-drained mineral soils with alkaline signature. In-situ soils in exposed faces are recorded as thin soils which have been stripped to facilitate previous quarrying activities. The soils were stockpiled and formed into earthen bunds and are available for site restoration.
- 8.5.2. 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.
- 8.5.3. Previous operations on the existing quarry site 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.
- 8.5.4. 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 quarry or in the general vicinity of the site.

- 8.5.5. 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.
- 8.5.6. In terms of landuse, the development involved quarrying activities on an area which was suitable for agricultural use. The adjoining lands in which further quarrying activity is proposed under the parallel Section 37L application, is an area used for tillage purposes. The quarrying has resulted in a permanent loss of land, removing it's availability potentially for crop production or other agricultural use. However, I am satisfied that the loss is small by comparison to the available land in the area locally and the wider county area for similar uses. 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 its use previous to quarrying activities.
- 8.5.7. The extraction of sand and gravel has also resulted in the loss of a geological resource. However this resource is used as a raw aggregate for the construction and agricultural industry which I would agree would have been a beneficial impact to the local and regional economy and is supported by planning policy, as outlined under the heading of Planning Assessment above.
- 8.5.8. Previous potential for contamination of exposed subsoil from spillages or leakages from plant would have been likely with a resultant moderate significant impact. It is submitted that laboratory analysis of a downgradient shallow well has revealed that groundwater quality at the site has not been adversely impacted by previous operations and as such any contamination is stated to be undetectable.
- 8.5.9. Remedial mitigation measures are set out with the primary one being the delivery of the proposed landscape and restoration plan. Soils retained on site are proposed to be utilised in the restoration process. Post-remedial mitigation measures outlined above, residual impacts are assessed as been long-term and negligible.

#### 8.5.10. Conclusion – Land, Soils and Geology

The previous quarrying activities within the substitute consent has resulted in the loss of a geological resource and the loss of land for use in agricultural use, 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 have resulted in significant impacts on land, soils and geological environmental factors.

#### 8.6. Water

- 8.6.1. Surface water and groundwater are considered together in Chapter 8 of the applicants rEIAR. The site is underlain by a poor bedrock aquifer, comprising bedrock which is generally unproductive, except for local zones. Groundwater is likely to circulate and have previously circulated predominately through faults and fractures. According to GSI, 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 vulnerability classification as 'High'. Depth of overburden decreases on elevated ground with resultant vulnerability increasing to 'Extreme'. There are no groundwater source protection zones within 18km of the site. There are stated to be 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 5.9 km<sup>2</sup> 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, I am satisfied that there is or was no real risk of pluvial flooding as a result of the historic activities on site. In addition, OPW Flood maps do not contain any recorded historical flood events on or in the vicinity of the site.
- 8.6.5. In 2018 and 2019, 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 rEIAR. 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 rEIAR 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. In summary, it is submitted that results indicate previous activities which occurred on site did not have a detrimental impact on groundwater quality.
- 8.6.10. Potential impacts that may have arisen 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 had potential to degrade local surface water quality impacting Ardristan Fen and Roscat Stream;
  - runoff /recharge containing hydrocarbons could have impacted on the Ardristan Fen, Roscat Stream and Aquifer;
  - increase in vulnerability of underlying aquifer could have impacted on Ardristan Fen and Aquifer;
  - increase in surface water flow could have impacted on the Ardristan Fen;
  - increased runoff rates from the hardstand area could have caused an increase in flood risk to local watercourses;
  - decrease in yield could have impacted third party wells.
- 8.6.11. Mitigation measures stated to have been adopted are set out in Table 8.8 and are stated to have included runoff passing through a series of settlement ponds, vegetation of stockpiles to enhance stability, no storage of potentially contaminating substances on site, runoff from hardstand areas passing through a hydrocarbon interceptor. 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 reported.
- 8.6.12. Remedial measures proposed include that the 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 the settlement ponds and the Ardristan Fen, a layer of overburden would be placed

on the quarry floor to allow vegetation to establish and provide a level of protection to groundwater.

- 8.6.13. Overall, post past mitigation and proposed remediation, residual impacts have been rated as no greater than 'imperceptible'.
- 8.6.14. As stated under Section 8.3 (Biodiversity) above, the IFI raised concerns 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. These have been considered in the above assessment. IFI also raised concerns around the production of concrete blocks or other concrete products stating that uncured concrete can kill fish and macro-invertebrates by altering the pH of the water. The applicant responded by stating that no concrete production occurred on site. IFI 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. Such recommendations for further quarrying activities are considered in the assessment of the parallel Section 37L application.
- 8.6.15. I have raised concerns earlier that concrete blocks were in all likelihood produced on site. Such an activity would have required the use of cement which could have resulted in a negative impact by altering the pH of receiving waters and this matter has not been addressed in the rEIAR. Nonetheless, based on my assessment above, there is no evidence to suggest that there were previous adverse impacts on surface waters or groundwater which leads me to conclude that concrete block making was likely to have been a limited part of the activities which occurred on site and the appropriate mitigation measures were also likely to have been put in place at the time.
- 8.6.16. 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 historic quarrying activities and any related activities including are unlikely

to have resulted in significant impacts on surface waters and/or groundwater. While impacts associated with past production of blocks have not been assessed, there is no evidence to suggest that such an activity gave rise to significant adverse impacts on the receiving water environment.

## 8.7. Climate and Air Quality

- 8.7.1. Climate is addressed in Chapter 9 of the rEiAR 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 set out.
- 8.7.2. Emissions associated with the historic development arising from plant generated exhaust emissions (e.g. CO<sub>2</sub> and N<sub>2</sub>O) are assessed as having had a slight impact over the long term operational phase.
- 8.7.3. Mitigation measures are stated to have included 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 have been identified.
- 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/(m<sup>2</sup>\*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/(m<sup>2</sup>\*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 PM<sub>10</sub> and PM<sub>2.5</sub>.
- 8.7.5. The applicant's modelling investigated the deposition and concentrations of dust, PM<sub>10</sub> and PM<sub>2.5</sub> likely to have arisen. 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. Dust levels at the site boundary are expected to have peaked at 233mg/(m<sup>2</sup>\*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/(m<sup>2</sup>\*day) the quarrying operations would have contributed a maximum of 12% of the TA-Luft Limit Value. On that basis, the impact of dust deposition is considered to have been slight adverse, localised and long-term.

8.7.6. Based on a review of the applicant's scientific evidence, I am satisfied that the PM<sub>10</sub> concentration levels lied well below both the annual mean limit for protection of human health, which is 40 µg/m<sup>3</sup> and the 24-hour limit value of 50 µg/m<sup>3</sup> (measured as a 90.4<sup>th</sup> percentile). Equally it is evident that the annual target concentration level for PM<sub>2.5</sub> of 25 µg/m<sup>3</sup> would not have been breached. The impacts in relation to PM<sub>10</sub> and PM<sub>2.5</sub> have been rated as negligible and localised. While traffic-related air emissions may have generated quantities of air pollutants such as NO<sub>2</sub>, CO, Benzene, PM<sub>10</sub> and PM<sub>2.5</sub>, 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 have likely arisen and impacts on air quality from traffic generated are predicted to have been neutral in the short and long term.

8.7.7. Mitigation measures, all of a standard nature, are stated to have been implemented. The primary measures included operating vehicles at a reduced speed, road sweeping to reduce dust, spraying surfaces and stockpiled material with water during dry periods, material management to minimise exposure to wind and inspections of work areas. Remedial measures for landscape and restoration works are also set out and it is also set out that restored areas would be seeded soon after grading. It is set out that dust monitoring would be undertaken during the restoration phase.

8.7.8. It is considered that the development the subject of the substitute consent application was not of sufficient scale to have had any direct or indirect impacts on local 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 previous quarrying activities within the substitute consent area the subject of this application were unlikely to have resulted in significant impacts on air quality and climate. While the rEIAR has not considered impacts which might have arisen from the production of concrete blocks, this

production was not likely to have been on a large scale and accordingly the findings above would not be so materially different as to reach a different conclusion.

## 8.8. Noise and Vibration

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

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

8.8.2. It is set out in the rEIAR that the hours of operation at the pit were between Monday to Friday 7:00 to 19:00 and Saturday 7:00 to 17:00.

8.8.3. The assessment presents the predicted noise level for three different activities, which they refer to as scenarios. These activities include removal of overburden at the boundary of the site, extraction of sand and gravel in the middle of the site and extraction of sand and gravel at the face of the pit. Predicted noise levels for each of these activities are presented in Table 11-5 of the rEIAR.

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 likely have exceeded the limits set out.

8.8.5. Mitigation measures are stated to have included good environmental management, maintenance and operation of plant and vehicles and maintaining of haul roads to a good standard. Further remedial measures are proposed as part of future works associated with landscaping and restoration.

8.8.6. Noise monitoring is proposed to be continued at three noise sensitive locations on an annual basis during landscape and restoration phases to ensure that noise levels will fall within the recommended guideline values.



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

#### 8.8.8. Conclusion – Noise and Vibration

Overall, it is reasonable to conclude that the previous activities within the substitute consent area did not result in any significant noise and/or vibration impacts and that no significant adverse impact arose for sensitive receptors from the operations within the substitute consent area in relation to noise and vibration. While the rEIAR has not considered noise impacts which might have arisen from the production of concrete blocks, this production was not likely to have been on a large scale and accordingly the findings above would not likely have been so materially different as to reach a different conclusion.

### 8.9. Traffic

8.9.1. The applicant's examination of the retrospective traffic impacts as a result of the development is set out in Chapter 12. It is submitted that there would have been approximately 20 HGV movements in and out of the site per working day. One car is also predicted to have arrived and left the site, based on one part-time employee working at the site, which appears an overly conservative estimate, particularly as I have stated earlier in my assessment that contrary to that submitted in the rEIAR, it is evident from details on historic associated files and from historic aerial imagery that concrete blocks were produced on site.

8.9.2. It is stated that the most likely route for HGV trips to and from the existing development would have been from the direction of Tullow via the N81, involving 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 is represented on Figure 12.1, included in Chapter 12 of the rEIAR. 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 could have been improved by trimming of roadside hedges during quarrying and related activity.

- 8.9.3. A route assessment was carried out supported by an autotrack assessment. It has been demonstrated that HGVs were able to negotiate the N81/L6026 junction and the L6026 / unnamed local road junction.
- 8.9.4. Traffic likely to have been 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. It is submitted that the traffic on the N81 national road as a result of the development was slight, increasing traffic flows by a maximum of 2.1% during the AM peak hour and by 0.5% all day, in the respective assessment year of 2008. It is submitted that the increased traffic volumes on the L6026 during AM peak hour was 28.2% and 5.9% across the day.
- 8.9.6. With a daily maximum two-way flow of 50 passenger car units (PCUs) with each HGV movement being weighted by 2.4 to covert to PCUs, equating to +28.2% during the AM peak hour, and +5.9% during the day, the impact on the L6026 and the unnamed local road leading to the site was also stated to have been slight, but overall would have operated well within capacity up to the year 2008 when operations are stated to have ceased. It is clearly evident that the road network in the area was of carrying the traffic generated without generating any adverse impacts.
- 8.9.7. A junction capacity assessment was undertaken on the N81 Tullow Road / L6026 junction using the junction analysis programme PICADY. By the future year 2034, the worst case scenario 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 with the development in place, the junction operated within capacity. I would accept that the traffic generated by the historic development would likely have had a negligible impact on the capacity of this junction.
- 8.9.8. 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.

### 8.9.9. Conclusion - Traffic

The network appears to have accommodated HGV and other traffic generated without significant incidents, including significant impact on the carrying capacity of the road network, interference with traffic flows, creation of hazard and direct contribution to accidents. In light of this, it is reasonable to conclude that the impact, in traffic and transportation terms, of the quarrying and associated activities the subject of this substitute consent application were not likely to have resulted in any significant environmental impact.

### 8.10. Landscape and Visual

- 8.10.1. Chapter 13 of the rEIAR deals with the associated landscape and visual impact factors. In relation to the landscape, the assessment considers the National Landscape Strategy 2015-2025 together with the 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 land use capacity matrix contained within the Landscape Character assessment referred to above, central lowlands are shown as having a moderate capacity to absorb extractive industry. As set out earlier in my assessment, the site is located in a rural area where agriculture is the predominant land use. There are a number of single houses within the local landscape and there are approximately 56 houses within 1km of the site.
- 8.10.2. The magnitude of change in the landscape as a result of the historic development has been assessed as 'Medium' and the significance of landscape impacts of the development is assessed as 'Moderate'. The loss of previous vegetation as a result of extraction of sand and gravel undoubtedly resulted in a change at a local level, however, given the available natural screening from hedgerows and additional screening which will result from the perimeter berms, and noting the purpose of the development which was 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.

8.10.5. Conclusion – Landscape and Visual

While the quarrying activities altered the landscape locally resulting in moderate impacts at a local level, given the enclosed nature of the site which is well screened, and noting the purpose of the activity and the 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 had and currently 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. It is stated that drinking water was previously supplied from a water bowser and that bottled water provided a potable water supply in past 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.

8.11.2. Traffic increase is not envisaged to have been significant onto the road network. In terms of waste, it is stated that all material designated as waste was 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 have resulted from waste generated from the proposed development.

8.11.3. Conclusion – Material Assets

Having regard to the above, it can reasonably be concluded that quarrying within the substitute consent area had no significant impacts on 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 Rathoe 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 County Carlow. One protected structure, a five-bay, single-storey, gable-ended cottage (farmhouse) with a record no. CW470 is located c. 1km north-east of the application area and I would agree that it is 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 historic quarrying activities.
- 8.12.4. 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 arose as a result of the historic quarrying development and related on-site activities.

## 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 rEiAR. A summary of interactions is provided in Table 16-1, titled '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 which may have impacted on population and human health, hydrology and hydrogeology and the interaction with soils and geology and surface water processes, ecology, and on the landscape.

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

8.13.3. Cumulative impacts have been covered, where applicable, under the relevant chapters within the rEIAR. Existing projects that could have led 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 have arisen.

8.13.4. Conclusion on Cumulative Impacts and Interactions

In light of the assessment above, it can be concluded that no significant effects are envisaged from interactions between the historic quarrying and any associated activities and any of the 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, in particular to the rEIAR and supplementary information provided by the applicant, the report received from the Planning Authority and the submissions received from prescribed bodies in the course of the application, it is considered that the main significant direct and indirect effects of the historic development on the environment

and measures to avoid, prevent or reduce such effects are likely to have been as follows:

- **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 are stated to have been mitigated by adherence to good environmental management during the operation and restoration phases. Specific mitigation measures are stated to have included ensuring all surface water runoff passed through a series of adequately designed and sized settlement ponds, proper refuelling on the hardstand area, ensuring bunding of mobile fuel bowsers/tanks, ensuring that runoff from the hardstand area passed through a hydrocarbon interceptor prior to entering settlement ponds and ensuring stockpiled overburden was made stable through establishing vegetation. Significant impacts on fish and macro-invertebrates could have arisen by altering the pH of the receiving water in the likely event that concrete blocks were produced on site. Nonetheless, having regard to all of the information on file, there is no evidence that adverse impacts of this nature arose on the receiving water environment.
- **Land, soil and geology:** The quarrying activities within the application site have resulted in a permanent loss of a geological resource and loss of land for arable crops / tillage purposes. However, such losses are not unacceptable, having regard to the primary function of the quarrying activities to extract the resource which itself brings benefits to the construction and agricultural industries and would be imperceptible in size and scale when taken in context with the available agricultural lands in the area. The mitigation measures which were put in place included the storage of stripped topsoil within berms for later re-use in the restoration of the quarry for future agricultural use.
- **Landscape:** While the quarrying activities altered the landscape locally resulting in moderate impacts at a local level, given the enclosed nature of the site which is well screened, and noting the purpose of the activity and the restoration plan proposed, including a requirement for restoration of the site, 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 remedial Natura Impact Assessment including Chapter 5 – Stage 1- Screening for Appropriate Assessment. Three European sites are located within a 15km radius of the quarry site and are 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 site via the Roscat Stream which is located approximately 520m to the west of the 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 site and the SAC is 15.5 km, and hence lies 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 was 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 had any measurable significant effects as a result of disturbance because of noise, vibration, dust or human and/or visual disturbance. Accordingly, I am satisfied that this European site can be screened out from any further evaluation as the historic development is not likely to have given rise to any significant effect on the integrity of the Slaney River Valley SAC during its enabling or operation phases, 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 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 if the historic development was likely to have affected the integrity of this site.

It is reasonable to conclude on the basis of information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not likely have had 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 have been impacted by the historic development are set out in Table 2 directly 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 area is not within the SAC, there was no likely potential for direct impacts on their habitats and species of qualifying interest. In the absence of mitigation, there was 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 had potential to result in effects on water dependant habitats and species of qualifying interest within

the River Barrow and River Nore SAC. Furthermore, the potential for increased silt content in runoff could have led 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 have been blanketed over and this could have led to the loss or degradation of valuable habitat. In the absence of mitigation, these impacts would be classified as moderate or even significant. These concerns were raised by the IFI in their submission. In addition the IFI raised concerns around the impacts from production of concrete blocks or other concrete products stating that uncured concrete can kill fish and macro-invertebrates by altering the pH of the receiving water. The applicant responded by stating that no concrete production occurred on site. I have raised concerns earlier in my assessment above in relation to the absence of information around the production of concrete blocks in the introduction of my assessment above and in consideration of past environmental impacts. I have concluded that this activity evidently occurred on site but in all likelihood was limited in scale. Such an activity would have required the use of cement which could have resulted in a negative impact on receiving water quality by altering the pH of receiving waters and in relation to consideration of appropriate assessment, this matter has not been addressed in the rNIS.

- 9.2.3. It is stated that although Otter was not recorded during surveys, they are likely to have been present in the Roscat stream and could also have potentially been affected by indirect impacts arising from a reduction in water quality, which in turn could have led to a reduction in potential prey should fish be impacted upon as a result of hydrocarbon runoff to groundwater.
- 9.2.4. The integrity of the River Barrow and River Nore SAC could have been indirectly affected by the proposed development as a result of reduction in water quality and foraging potential for aquatic species. In turn this could have led to reduced numbers or reduced breeding success of these species which are qualifying interest of this SAC.

### **Mitigation Measures**

- 9.2.5. Measures stated to have been used to prevent and/or avoid impact have been set out in Table 6.3 of the applicants rNIS. Runoff would have passed through a series

of settlement ponds to ensure silt/sediment is settled out before leaving the site. New stockpiles of overburden removed to facilitate the enabling phase, were vegetated to ensure stability and restrict surface erosion. In terms of remedial measures, the top compacted areas of the pit floor is proposed to be broken up using a mechanical ripper and the stockpiled overburden is proposed to be ultimately re-used in the restoration process. It is stated by the applicant that potentially contaminating substances were not normally stored on site but where they were required, they were stored in designated areas isolated from surface water drains or open waters. Hazardous wastes such as waste oil, chemicals and preservatives are stated to have been stored in sealed containers.

9.2.6. I have dealt with the absence of information around concrete block making in the introduction of my assessment above. Nonetheless, based on all of the information on file, the volume of blocks produced were likely to be of a small scale and there is no evidence that the quality of receiving water, mainly the Roscat stream was impacted as a result of contaminants or a change to the pH from this type of activity such as to adversely affect this European site having regard to the sites conservation objectives. I am satisfied that such an activity was not likely to have resulted in impacts on Key Species and Key Habitats of the River Barrow and River Nore SAC.

9.2.7. Overall, I am satisfied that, subject to the past adoption of mitigation measures referenced in the rNIS, and identified above, the historic development did not adversely affect the integrity of the aforementioned European designated site, having regard to the conservation objectives for the site. No reasonable scientific doubt remains as to the absence of such adverse effects on the site as a result of the historic quarrying activity and any related development including the production of concrete blocks on site.

### **In-combination effects**

9.2.8. I note that the rNIS examines the potential cumulative/in-combination effects that could have arisen at the Stage 1 Screening Stage. Existing projects that could have led 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

whereby permission was granted by Carlow County Council (PL 07/769; ABP Ref: 01.232014). I am satisfied that the current application site would not have acted 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.

#### 9.2.9. Appropriate Assessment – Stage 2 Conclusion

On the basis of the information provided with the application, including the remedial 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 historic quarrying and any associated development, individually or in combination with other plans or projects would not have adversely affected 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 the Board grant substitute consent in accordance with the following Draft Order:

#### **Decision – Draft Order**

The Board, in accordance with section 177K of the Planning and Development Act 2000, as amended, and based on the Reasons and Considerations set out below, decided to **GRANT** substitute consent in accordance with the following conditions.

#### **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 Part XA (Substitute Consent) 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 remedial Environmental Impact Assessment Report and the remedial 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;
- (g) the planning history of the subject site and adjoining lands;
- (h) the nature, scale, characteristics and location of the historic development;
- (i) the Inspector's assessment as set out in the Inspector's Report;
- (j) the mitigation measures undertaken and the proposed remedial measures including the proposed restoration scheme.

### **Remedial Environmental Impact Assessment**

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

- (a) the nature, scale, location and extent of the development for substitute consent,
- (b) the remedial 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 remedial 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 past development on the environment. The Board is satisfied that the information contained in the rEIAR 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 remedial EIAR, and

subject to compliance with the conditions set out below, the effects of the past development on the environment, by itself and in combination with other plans and projects in the vicinity, were and 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 were 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 are stated to have been mitigated by adherence to good environmental management during the operation and restoration phases. Specific mitigation measures are stated to have included ensuring all surface water runoff passed through a series of adequately designed and sized settlement ponds, proper refuelling on the hardstand area, ensuring bunding of mobile fuel bowsers/tanks, ensuring that runoff from the hardstand area passed through a hydrocarbon interceptor prior to entering settlement ponds and ensuring stockpiled overburden was made stable through establishing vegetation. Significant impacts on fish and macro-invertebrates could have arisen by altering the pH of the receiving water in the likely event that concrete blocks were produced on site. Nonetheless, having regard to all of the information on file, there is no evidence that adverse impacts of this nature arose on the receiving water environment.
- **Land, soil and geology:** The quarrying activities within the application site have resulted in a permanent loss of a geological resource and loss of land for arable crops / tillage purposes. However, such losses are not unacceptable, having regard to the primary function of the quarrying activities to extract the resource which itself brings benefits to the construction and agricultural industries and would be imperceptible in size and scale when taken in context with the available agricultural lands in the area. The mitigation measures which were put in place included the storage of stripped topsoil within berms for later re-use in the restoration of the quarry for future agricultural use.

- **Landscape:** While the quarrying activities altered the landscape locally resulting in moderate impacts at a local level, given the enclosed nature of the site which is well screened, and noting the purpose of the activity and the restoration plan proposed, including a requirement for restoration of the site, 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 was required, and that significant effects on any other European Sites can be ruled out:

- River Barrow and River Nore SAC (Site Code: 002162).

### **Appropriate Assessment Stage 2**

The Board considered the remedial 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 SAC (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 historic development, both individually or in combination with other plans or projects, the mitigation measures set out in the remedial 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, did 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 that the integrity of European Sites were not 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 made a positive contribution in Ireland's utilising sand and gravel resources. The type of development is supported by national, regional and local planning policy and therefore the historic quarrying development was in accordance with the proper planning and sustainable development of the area.

### 11.0 Conditions

1.	<p>(a) This grant of substitute consent shall be in accordance with the plans and particulars submitted to An Bord Pleanála on the 15<sup>th</sup> April 2019 and relates solely to the area as outlined in red on the drawings submitted with the application, except as may otherwise be required to comply with the following conditions.</p> <p>(b) The grant of substitute consent relates only to past quarrying activities that have been undertaken as described in the application, and does not authorise any structures or any future development, including any further quarrying or any further excavation on site.</p> <p>Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority and the development shall be in accordance with the agreed particulars.</p> <p><b>Reason:</b> In the interest of clarity and conservation of the environment.</p>
2.	<p>A detailed plan for the restoration of the subject site, based solely on the extent of quarry extraction that has taken place to date, shall be submitted to, and agreed in writing with, the planning authority within 12 months of the</p>

	<p>date of this Order, unless, prior to that time, a planning permission has been granted for the further quarry development within the area covered by this grant of substitute consent.</p> <p><b>Reason:</b> In the interest of visual amenity and in order to enhance ecological value and to ensure public safety.</p>
3.	<p>Unless permission is granted for the further quarry development within the area covered by this grant of substitute consent has been granted prior to that date, the developer shall lodge with the planning authority, within 12 months of the date of this Order, a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory restoration of the site, coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory restoration of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.</p> <p><b>Reason:</b> To ensure the satisfactory restoration of the site.</p>
4.	<p>A programme and timescale for ongoing monitoring of water quality shall be submitted to and agreed in writing with the Planning Authority. It shall include proposals for monitoring to be undertaken to establish a baseline and for the period during the restoration works and that reports on the findings should be submitted to the Planning Authority.</p> <p><b>Reason:</b> To ensure protection of water quality.</p>

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Patricia Calleary  
Senior Planning Inspector

23<sup>rd</sup> September 2019