Inspector's Report
ABP-319198-24

Development	The demolition of existing disused buildings and the development of a dimension stone quarry with a projected lifetime of c.14 years (12-13 years operational with an additional 1 year to allow for implementation of a restoration plan) at this site of c. 9.34 hectares.
Location	Bannagagole, Old Leighlin, Co. Carlow.
Planning Authority	Carlow County Council
Planning Authority Reg. Ref.	2360042
Applicant(s)	Millford Quarries Ltd.
Type of Application	Permission
Planning Authority Decision	Refuse Permission
Type of Appeal	First Party
Appellant(s)	Millford Quarries Ltd.

Observer(s)	Eamonn and Caroline Doyle
	Andrew Dooley and others
	Marian Roche and others
	George Doyle
	Seamus Brennan
	Seamus Hayden
	Luke Meaney and others
	Brenda Morris
	Mary McDowall
	Niamh Bambrick
	Margaret Foley
	Lisa Roche
	Colin Brennan
	Gail McDowall
	Joseph Kehoe and others
	Patrick Hickey and Siobhan Kane
Date of Site Inspection	15th October 2025
Inspector	Emer Doyle
Engineer	Owen Cahill

Contents

1.0 Introduction

1.1. The proposed development is for the extraction of dimensional stone quarry. The application involves a total area of 9.34 hectares. Dimension limestone is a specialist stone product used for decorative features, monuments, memorials etc. It is found only in a very limited area in this part of Carlow and in a few other areas of the country. The glossary of technical terms in the Quarry Guidelines for Planning Authorities defines dimension stone as 'a natural stone product that has been cut or fashioned to a particular size or shape'.

1.2. The processing of the dimension stone is unique from other types of quarrying in that the aim is to extract large intact portions of dimension stone using diamond cutting saws. The process of uncovering the dimension stone and removing overburden are therefore relatively slow. In this case, it is estimated that the quarrying process for dimension stone results in up to 80% of the extracted limestone rock by volume being unusable for the purposes of producing dimension stone products due to fracturing and size.

1.3. A significant amount of the information known about the proposed quarry appears to be based on the existing adjacent quarry which is also a dimensional stone quarry. There are repeated references in the information submitted with the application, the Further Information Response and the appeal response to this adjacent quarry in terms of water, soil, blasting, noise etc. The adjacent quarry is an entirely separate applicant and is owned by Kilkenny Limestone Quarry Ltd.

1.4. <u>Adjoining Quarry</u>

1.5. Under PA Reg. Ref. 17/64, permission was granted for the continuance of use of the existing permitted quarry site and all existing ancillary facilities, regularised by the previous grant of substitute consent (PL01.SU0024). The total extraction area was increased from c. 3.4 hectares to c. 4.5 hectares. The rate of extraction is c. 30,000 cubic metres per year similar to the proposed application. The total site area is 12.4 hectares. This quarry is currently worked below the water table. Condition 2 of the grant of permission required that the depth of the quarry would not exceed 35m OD unless a subsequent permission is obtained for further extraction. Condition 4 gave

permission for 25 years only from the dated of the order (30th of March 2018) unless a subsequent permission was granted for continuance of use. Condition 9 required that the developer shall ensure that the proposed development does not affect or cause deterioration in water quality, water levels or yield in the domestic wells in the vicinity.

2.0 Site Location and Description

2.1. The subject site is located 1.5km south of the village of Old Leighlin and 5km southwest of Leighlinbridge, Co. Carlow. The proposed development is immediately south of an existing quarry limestone dimensional quarry where dimension stone is extracted (Old Leighlin Quarry). The existing quarry is operated by Kilkenny Limestone Quarries and is not associated with the proposed quarry. The M9 motorway is located to the east of the site with the closest access point being located c. 7km to the south at Junction 7.

2.2. The application site has a total area of 9.34 hectares and forms part of the applicant's wider landholding of 25.99 hectares. The application site consists of agricultural lands with forestry comprising the steeper eastern portion. The site is accessed from the L3036 which connects to the village of Old Leighlin to the north and the R448 to the east. The site is served by a laneway from the L3036 and a derelict farmhouse and a number of derelict outbuildings are located within the landholding. A large portion of the site is overgrown and inaccessible on lands to the rear of the derelict farmhouse.

2.3. The topography of the site varies from 75mAOD to 120mAOD falling from east to west. A drainage channel is located near the northeast corner of the site to which the proposed site drainage system will discharge. This drainage channel flows east via a culvert under the L3036 towards Baunleath Stream which is located c.30m southeast of the site boundary and eventually discharges to the Old Leighlin stream (also known as the Madlin River) c.2km from the site boundary at its nearest point.

2.4. The lands in the surrounding area contain areas of similar agricultural pasture to the south and east with areas with some conifer forestry to the west in the more elevated areas. An existing quarry is the dominant feature to the immediate north of the site with similar areas of agricultural pasture and conifers in the areas that surround that

operation. There are a number of individual dwellings located along the local roads that serve the wider area. The lands surrounding the site are largely agricultural in nature with a large number of one-off rural dwellings in the immediate vicinity of the site. The closest residential property is c. 40m to the northeast. The site is located at the lower east facing slope of the 'Killeshin Hills' Landscape Character Area in the current Carlow CDP 2022-2028 (moderate sensitivity rating subject to mitigation) to absorb new extractive industry development.

3.0 Proposed Development

3.1. The proposed development comprises of the following:

- Demolition of existing disused buildings and the development of a dimensional stone quarry with a projected lifetime of c. 14 years (12 – 13 years operational with an additional 1 year to allow for the implementation of a restoration plan)
- Extraction proposed over an area of 2.44 ha to a depth of 2 no. benches of c. 10m from the top of bedrock, with a final floor level of c. 56.5m above ordnance datum.
- Proposed rate of rock extraction of c.30,000 cubic metres (84,000 tonnes) per annum.
- A proposed working area of c. 1.2 hectares to the south of the extraction zone will provide for the crushing / processing of unusable stone and temporary storage of dimensional stone and will include machinery storage shed (c. 115m²), staff welfare (c. 45.7 m²), wastewater holding tank, weighbridge & Office (c. 14m²) and staff car parking area.
- A total of 4 No. phases are proposed between the years 2023-2037. The Indicative Extractive Phasing Plan shows the location of the phases within the site. During Phase 1, an initial bench will be extracted from the eastern extent of the extraction area in a westerly direction. Phase 2 will involve extraction of stone from the southern extent of the extraction area in a southernly direction.
- It is expected that a second bench will be extracted in two phases- phases 3 and 4.

- All four phases are indicated on Figure 2-1 PP09 – Indicative Extracting Phasing Plan
- The initial EIAR provided limited information on site restoration and this was addressed in the Further Information submitted.

3.2. The proposed development will also include for earthen screening berms to a height of c. 3m, a wheelwash facility; Installation of surface water attenuation and settlement ponds for the treatment of suspended solids in the floor of the quarry void; soil storage area with an average storage depth of c. 4m and all other site development works above and below ground including the restoration of the final quarry void (extractive area). Access to the proposed development will be facilitated by a HGV site entrance from the L3036 at the eastern boundary of the proposed site.

3.3. The proposed development includes a working area to the south of the extraction area which will provide for the crushing and processing of the unusable stone and storage of the dimension stone. The working area will also include parking, a staff canteen, a weighbridge and a stockpile area. Once the dimension stone is exposed in the extraction area, the stone will be cut into blocks using a diamond tipped chain or diamond wire saws. The blocks of dimension stone will be lifted by an excavator and immediately transported off-site for sale/processing elsewhere.

3.4. Further Information Response (27th November 2023) included the following:

- Cover Letter
- EIAR Addendum Report including Landscape and Visual Impact Assessment, Archaeological Impact Assessment and Mitigations and Monitoring update, Table 2-2 assesses the potential for impacts during the restoration and post restoration phases of the development.
- Memo from Project Ecologist regarding cumulative impacts.
- Additional Photomontages
- Landscaping Plans
- Restoration Plans
- Construction and Environmental Management Plan

- Blasting Safety Method Statement
- Site lighting Plan and Specifications
- Archaeological Impact Assessment
- Mitigations and Monitoring update to EIAR
- Revised drainage and phasing drawings
- Cover letter states that the two closest receptors located to the northeast of the site have been considered as one sensitive receptor in both the Air Quality and Noise and Vibration chapter due to the proximity to each other. These are denoted as SR1 and NSL15 and the distance to the site operations is 70m. The third sensitive receptor located within 100m is SR2 and NSL14.
- In relation to item 1 of the F.I Request (EI-PI) of Development Plan, it is stated that one of the customers for the dimension stone blocks will be Kilkenny Limestone Ltd. on adjacent site. It is questioned whether EI-PI is applicable to the site as the raw blocks are not classified as a material and the dimension stone is not classified as a mineral, but rather a form of limestone which is a sedimentary rock.
- It is stated that the quarrying process for dimension stone results in up to 80% of the extracted limestone rock being unusable for the purposes of producing dimension stone.
- The correct volume of overburden to be removed is estimated to be 122,345m^3. This figure is noted in Chapter 6 (Section 6.4) of the EIAR. The earlier reference to 158,928m^2 in Chapter 2 was based on an earlier calculation of a slightly larger quarry void area.

4.0 Planning Authority Decision

4.1. Decision

On the 7th of February 2024, Carlow County Council refused permission for the following reasons:

1. It is considered that the submitted Environmental Impact Assessment Report (EIAR) and subsequent addendums to the EIAR provided as further information are both deficient in information with respect to an evaluation of potential cumulative impacts between the proposed development and other plans and projects, including the existing operational quarry adjoining the site, and with respect to an assessment of potential environmental impacts including from blasting as a method of extraction and proposals to crush and process aggregate on site. Therefore, to permit the proposed development in the absence of such assessments would present a risk of significant negative environmental impacts in the area, which would be contrary to the proper planning and sustainable development of the area.

2. Having regard to the nature and extent of the proposed development, the Planning Authority is not satisfied on the basis of the Appropriate Assessment carried out in the information contained in the planning application, the Environmental Impact Assessment Report and the Natura Impact Statement, that appropriate or adequate consideration has been given to the effects of the development on the environment, in accordance with Article 6(3) of the EU Habitats Directive, or that the integrity of the Special Area of Conservation (River Barrow and River Nore SAC) would not be adversely affected by the proposed development. In these circumstances, the proposed development would contravene Policies NS P1 and NS P2 of the Carlow County Development Plan 2022-2028, which seeks to support the conservation and protection of Natura 2000 sites and would therefore be contrary to the proper planning and sustainable development of the area.

4.2. Planning Authority Reports

4.2.1. The first planners report dated 16th of May 2023 expressed concerns in relation to a number of aspects of the proposed development in particular potential adverse impacts on the River Barrow and River Nore SAC, deficiencies in information submitted with the EIAR, visual impacts of proposed development, and cumulative impacts of both the existing adjoining quarry and the proposed quarry. Concerns were also raised with regard to the principle of development.

The second planner's report dated 7th of February 2024 considered that the principle of development was acceptable. It was considered that the revised information did not adequately assess cumulative impacts of the existing quarry and the proposed development including those that may arise from blasting, noise and dust. Concern was also expressed in relation to the potential for cumulative and in-combination impacts on the River Barrow and River Nore SAC. I note that the AA Screening Determination considered that the assessment of the existing hydrology and hydrogeology did not appear to be based on sufficient site specific baseline information and that additionally no detailed evaluation has been provided with respect to potential cumulative and in-combination effects. It was concluded that notwithstanding the implementation of the mitigation measures, it cannot be excluded, on the basis of objective information that the proposed development will have a significant effect on the River Barrow and River Nore SAC, either individually or in combination with other plans or projects.

4.2.2. Other Technical Reports

Environment Services*:* Report dated 28th of April 2023 (Environmental Impact Assessment Review- Table Format summary.

Report dated 5th of May 2023 (labelled as V.2): Notes that the neighbouring quarry operation is not assessed as part of the in-combination or cumulative assessment. Further Information required to include outline construction environmental plan, outline demolition plan, details of measures to promote biodiversity, and details in relation to appropriate assessment to include an adequate scientific examination of evidence and data to the implications of the proposed development, in combination with the adjacent limestone quarry, on the conservation objectives of the River Barrow and River Nore SAC (002162).

Report dated 5th of May 2023- Appropriate Assessment Screening carried out by Environment Section - Further Information required as above. The neighbouring quarry operation is not assessed as part of the in-combination or cumulative assessment. Further Information required as follows: the applicant shall expand on the Appropriate Assessment to include an adequate scientific examination of evidence and data to the implications of the proposed development, in combination with the adjacent limestone quarry, on the conservation objectives of the River Barrow and River Nore SAC (002162).

Report dated 16th of January 2024- Additional Appropriate Assessment Screening carried out by Environment Section concluded that the Environment Section has ascertained that the project, alone or in combination with other projects, will not adversely affect the integrity of the site concerned.

Second report also dated 16th January 2024 notes the appropriate assessment screening above and the EIAR addendum and Further Information Response and included conditions in the event of planning permission.

(Note: This report is referred to in the planner's report as follow up report received on the 1st of February 2024. The Commission has contacted the Planning Authority on two occasions seeking this follow up report and it has been confirmed that there is no report dated the 1st of February 2024.)

Water Services Department/ Environment (Water Services Section): Report dated 28th of April 2023 requires further information in relation to surface water, water quality sampling measures, wastewater holding tank and mitigation measures in relation to the protection of soakaways from silt.

Report dated 2nd May 2023 states that there is no objection to impact on water services as it is not serviced by Irish Water.

Report dated 8th December 2023 recommends permission subject to conditions.

District Engineer: Report dated 5th of May 2023 indicated no objection subject to conditions.

Transportation Section: Report dated 3rd May 2023 requires further information in relation to lighting and details of construction stage. No objection to proposed haul routes, however, it is recommended that a condition is included to ensure compliance with the routes indicated.

Report dated 6th February 2024 reviewed the Further Information Response and noted that lighting and the Construction Environmental Management Plan were to the satisfaction of the Transportation Section.

4.3. Prescribed Bodies

Inland Fisheries Ireland: Report dated 13th of December 2023 raises a number of concerns in relation to the potential impact on the River Barrow and River Nore SAC. Further information is required to address these concerns.

Transport Infrastructure Ireland: Report dated 21st April 2023, states that TII has no observations to make. A second letter dated the 14th of December 2023 confirms that their position remains in accordance with the original submission.

Irish Water: Report dated 27th of April 2023 notes that the area is not serviced by Irish Water assets (bored well for water and on site waste water treatment facility).

Department of Housing, Local Government and Heritage: First report dated the 8th of May 2023 considered that the desk based archaeological impact assessment submitted as part of the EIAR was inadequate and required Further Information.

Second report dated 11th January 2024 notes the Further Information Response and recommends permission subject to conditions.

4.4. Third Party Observations

A total of 30 no. observations were received by the planning authority. The issues raised are similar to those outlined in the appeal and observations below and included concerns regarding the impact of the proposed development on ecology, traffic safety, public health, cultural heritage and water.

5.0 Relevant Planning History

None on site.

Adjoining site to the north- extensive history including:

PA Reg. Ref. 22/238

Kilkenny Limestone Quarries Ltd. granted permission for solar panels.

PA Reg. Ref. 18/450

Permission granted for the erection of a 32 tonne gantry crane and the relocation of an existing 25 tonne gantry crane and all associated works.

PA Reg. Ref. 17/64

Permission granted for the continuance of use of the existing permitted quarry site and all existing ancillary facilities, regularised by the previous grant of substitute consent (PL01.SU0024).

PA Reg. Ref. 15/239/ ABP Ref. PL01.246445

Permission granted by PA for construction of office/reception building, wastewater treatment system, car park, new splayed entrance and ancillary works. Permission refused on appeal for the following reason:

Having regard to the nature and scale of the proposed development and to the proximity of dwelling houses, the Board was not satisfied that the proposed development would not seriously injure the residential amenities of the neighbouring properties by reason of noise and general disturbance.

QC2173 - Section 261 application for continued operation of quarry. The Board confirmed with modifications the decision of the planning authority and directed the said Council to amend conditions 3 and 6 that pertained to noise and hours of blasting.

SU01.SU0024 – Substitute consent granted to Stone Development Ltd. for the quarry at Bannagogle, Old Leighlin, Co. Carlow.

6.0 Policy Context

6.1. National Policy

6.1.1. National Planning Framework First Revision, April 2025

The National Planning Framework is a high-level strategic plan for shaping the future growth and development of the county to 2040. It is a framework to guide public and private investment, to create and promote opportunities for our people, and to protect and enhance our environment - from our villages to our cities, and everything around and in between.

It references the Circular Economy and Miscellaneous Provisions Act 2022 and the National Circular Economy Strategy 2022, and that the Circular Economy as playing a much more significant role.

Aggregates and Minerals (page 30) notes that extractive industries are important for the supply of aggregates and construction materials and minerals to a variety of sectors, for both domestic requirements and for export. The planning process will play a key role in realising the potential of the extractive industries sector by identifying and protecting important reserves of aggregates and minerals from development that might prejudice their utilisation. Aggregates and minerals extraction will continue to be enabled where this is compatible with the protection of the environment in terms of noise, air and water quality, natural and cultural heritage, the quality of life of residents in the vicinity, and provides for appropriate site rehabilitation particularly with respect to opportunities that may be provided for enhancement or restoration of nature in line with EU policies, such as the Nature Restoration Law, the EU Green Deal and EU Biodiversity Strategy 2020, and legislative instruments.

National Policy Objective 30 seeks to Facilitate the development of the rural economy, in a manner consistent with the national climate objective, through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting biodiversity and the natural landscape and built heritage which are vital to rural tourism.

6.1.2. **Climate Action Plan, 2025**

The Climate Action Plan was published in June 2019 by the Department of Communications, Climate Action and Environment. The Climate Action Plan 2025 (CAP25) is the fourth annual update to Ireland's Climate Action Plan 2019. This plan is prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021, and following the introduction, in 2022, of economy-wide carbon budgets and sectoral emissions ceilings. Climate Action Plan 2025 builds upon Climate Action Plan 24 (CAP24) by refining and updating the measures and actions required to deliver the carbon budgets and sectoral emissions ceilings and it should be read in conjunction with CAP24.

6.1.3. **Climate Action and Low Carbon Development (Amendment) Act 2021**

This Act amends the Climate Action and Low Carbon Development Act 2015. It sets out the national objective of transitioning to a low carbon, climate resilient and environmentally sustainable economy in the period up to 2050. The Act commits us, in law, to a move to a climate resilient and climate neutral economy by 2050. An Bord Pleanála is a relevant body for the purposes of the Climate Act. As a result, the obligation of the Board is to make all decisions in a manner that is consistent with the Climate Act.

6.1.4. **European Union Water Framework Directive 2000/60/EC (WFD)**

The WFD was adopted in 2000 as a single piece of legislation covering rivers, lakes, groundwater and transitional (estuarine) and coastal waters and includes heavily modified and artificial waterbodies. The overarching aim of the WFD is to prevent further deterioration of and to protect, enhance and restore the status of all bodies of water with the aim of achieving at least 'good' ecological status by 2015 (or where certain derogations have been justified to 2021 or 2027).

6.1.5. **Quarries and Ancillary Activities Guidelines for Planning Authorities (2004), DOEHLG**

These guidelines note the economic importance of quarries and the demand for aggregates arising from the needs of the construction industry with particular reference to house building and infrastructure provision. It is further noted that aggregates can

only be worked where they occur and that many pits and quarries tend to be located within 25km of urban areas where most construction takes place.

Section 4.9 states that when considering whether a further permission should be granted, the planning authority should have regard (inter alia) to the extent of the remaining mineral resources and the extent of existing capital investment in infrastructure, equipment, etc.

Section 3.2 notes that extractive industries are associated with many noise-generating activities including the removal of topsoil and overburden, excavation with machinery, drilling and blasting of rock, crushing and screening of aggregates, transport of raw materials and finished products within the site and on public roads. The Guidelines set out a recommended standard of 55dB(A) L_{Aeq} (1 h) for daytime noise and 45 dBA L_{Aeq} (1 h) for night-time at the nearest sensitive receptor. The guidelines also note that it may be appropriate to permit higher noise ELVs (Environmental Limit Values) for short-term temporary activities such as construction of screening bunds, etc, where these activities will result in a considerable environmental benefit.

Section 3.3 sets out a number of best practice mitigation measures to prevent dust creation at source, one such measure includes paving road surfaces. As the predicted dust levels in all scenarios, at sensitive locations, are within the criteria set out in national guidelines, I am satisfied that the impact would not be significant and there is no requirement for the paving of roads within the quarry site.

6.1.6. **Environmental Management in the Extractive Industry, Environmental Protection Agency, 2006**

The guidelines provide a summary of environmental management practices for quarries and ancillary facilities. Key environmental management issues have been identified and addressed.

Section 3.5 notes that noise and vibration are present in many normal everyday activities. In relation to quarry developments and ancillary activities, it is recommended that noise from the activities on site shall not exceed the following noise ELVs at the nearest noise-sensitive receptor: Daytime: 08:00–20:00 h LAeq (1 h) = 55 dBA Night-time: 20:00–08:00 h LAeq (1 h) = 45 dBA.

In relation to blasting activities within quarry development, it is recommended that the following vibration and air overpressure ELVs are adopted and applied at the nearest vibration and air overpressure sensitive location (e.g. a residential property): Ground-borne vibration: Peak particle velocity = 12 mm/s, measured in any of the three mutually orthogonal directions at the receiving location (for vibration with a frequency of less than 40 Hz). Air overpressure: 125 dB (linear maximum peak value), with a 95% confidence limit.

6.1.7. OPR Case Study Paper on Quarries and the Local Authority Development Plan

In June 2025, the OPR published a case study paper- CSP07 on Quarries and the Local Authority Development Plan. The key findings from the research included a need to revise and update the Ministerial Guidelines for Planning Authorities dating to 2004.

6.2. Regional Policy

6.2.1. Southern Regional Spatial & Economic Strategy, 2020

The RSES provides a long term strategic development framework for the future physical, economic and social development of the Southern Region.

6.3. Local Planning Policy

6.3.1. Carlow County Council Development Plan 2022-2028

The operative plan for the area is the Carlow County Development Plan 2022-2028. The appeal site is located at the lower east facing slope of the 'Killeshin Hills' Landscape Character Area- moderate sensitivity rating subject to mitigation. In terms of the principal landscape type, the site is located within 'Farmed Lowland'.

The following policies and objectives are considered relevant:

Policies WQ P1, P2, P3 & P4 seek to protect ground water and surface water and ensure that the Water Framework Directive, the River Basin Management Plan and any subsequent Water Management Plans or statutory guidance are fully considered by the planning process.

Section 6.11.1 sets out air pollution policies. Polices NH P1, P2, P5 & P6 seek to protect, manage and enhance the natural heritage, biodiversity, landscape and

environment of the county and ensure development does not adversely impact on wildlife habitats and species.

Section 6.12.1 sets out noise pollution policies.

Section 6.12.1 sets out light pollution policies.

Chapter 10 deals with the Natural and Built Heritage. Policies NS. P1 and NS. P2 support the conservation, enhancement and protection of Natura 2000 sites. It is an objective under NS. 01 to strictly protect Natura 2000 sites.

Section 14.16 relates to the Extractive Industry, Aggregates and Limestone Reserves.

Policies EI.P1-8 relates to the extraction of aggregates and the protection of the environment.

Section 16.16.3 sets out the information needed to be submitted with applications to include a description of cumulative impacts when taken together with other quarries in the vicinity.

6.4. Natural Heritage Designations

6.4.1. The appeal site is not located within or adjacent to a designated site. The River Barrow and River Nore SAC (Site Code: 002162) is approximately 3km to the west of the site.

6.5. EIA Screening

Schedule 5, Part 2 of the Planning and Development Regulations 2001, as amended and Section 172(1)(a) of the Planning and Development Act 2000, as amended provides that a mandatory Environmental Impact Assessment (EIA) is required for:

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

14. Works of Demolition. Works of demolition carried out in order to facilitate a project listed in Part 1 or Part 2 of this Schedule where such works would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

15. Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

Section 1.4 of the EIAR sets out that the extraction area of the proposed development is 2.45ha which is less than the threshold for mandatory EIA. The section also states that the proposed development requires demolition of existing derelict buildings to allow for the lateral quarry extension and with reference to Classes 14 and 15, and based on this, EIAR has been carried out to assess any likely significant effects on the environment.

Class 14 requires EIA for any project where demolition is undertaken to facilitate a project listed in Part 1 or Part 2 of Schedule 5. The proposed development alone, a quarry with an extractable area of 2.45ha does not meet the criteria for an EIA to be undertaken with respect to Class 14.

However, Class 15 requires EIA for any project which does not exceed area or other limit specified in Part 2, i.e. sub-threshold, but which would be likely to have significant effects on the environment. Section 1.4 of the EIAR concludes that an EIA is required on that basis.

In consideration also of:

Class 13 – Changes, extensions, development and testing.

(a) Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would:-

(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule (Schedule 5), ***and***

(ii) result in an increase in size greater than-

-25 per cent, or

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

Class 13 is not applicable as the proposed development is for a standalone quarry. Both the existing quarry and the proposed development have been presented as separate entities. The proposed development is also not functionally dependent on the existing quarry to the north. Therefore, it cannot be considered as an extension to that existing operation and thus the changes/extension class does not apply.

In summary, the proposed development does not trigger the mandatory requirement for EIA when considered against the appropriate classes and thresholds set out in Schedule 5 of Planning and Development Regulations 2001 (as amended) (the Regulations). However, an EIAR was submitted with the application. Article 102 of the Planning and Development Regulations, 2001 (as amended) requires that 'where a planning application for sub-threshold development is accompanied by an EIAR, the application shall be dealt with as if the EIAR had been submitted in accordance with section 172(1) of the Act'.

7.0 The Appeal

7.1. Grounds of Appeal

The grounds of the First Party Appeal can be summarised as follows:

- There will be a need for blasting up to 4 times per annum and this will decrease as the quarry lifecycle progresses.
- The Planning Authority have been provided with Annual Environmental Reports from the adjacent Kilkenny Limestone Quarry and are aware of the infrequency of blasting. They are equally aware that the existing quarry has been operating without impacts for many years.
- Similarly, the process of rock crushing is infrequent and has been carried out at the adjacent quarry without incident. Unusable rock is typically allowed to stockpile before crushing equipment is brought to the site to process this material in a campaign, following which it is transported offsite.

- The Planning Authority's concerns regarding the potential for in-combination effects to the nearby SAC from dust emissions are completely unfounded. A consolidated Natura Impact Statement which includes information already submitted in a consolidated form has been attached to the appeal response in this regard.
- The effects of blasting have been described as 'brief, slight, negative' due to the infrequent occasions when blasting is necessary for a dimensional stone quarry.
- The concerns of the Planning Authority are exaggerated regarding blasting.
- Only 4 blasts have occurred for the adjoining quarry between 2016 and 2021.
- The Planning Authority is incorrect in their assertion that the submitted EIAR did not consider the cumulative impacts of the existing quarry as part of the baseline. The impacts of the proposed quarry are assessed against a baseline which includes the existing quarry.
- The Noise Impact Assessment considered the noise from activities from the existing operations, future operations, and the potential combined impact from the new and existing quarries in operation simultaneously.
- It is in the applicant's interest to keep blasting to a minimum as intact dimension stone is sold for 20 times the price of crushed stone.
- As the precise chargers are triggered at millisecond intervals, it would be virtually impossible for both this and the adjoining quarry to blast at the same time.
- Blasting at this kind of quarry would be at smaller chargers than a typical quarry to avoid damage to the target dimension stone beneath.
- The impacts of a blast would mirror those of the adjacent quarry which is well below the limits of condition 7 of Planning Reg. Ref. 17/64.
- The applicants undertake that they will carry out a full consultation with the adjoining quarry and local residents prior to blasting. This could be included in a compliance condition together with a condition regarding frequency of blasting.

- There is approximately 6m depth of unusable stone across the site. This will be crushed on an infrequent basis, stockpiled on the site, and gradually removed from the site over time.
- The level of dust expected to be omitted from the quarry activities is expected to have no impact on the SAC given the distance from the site. Significant dust mitigation measures are also proposed.

Documentation attached to the appeal includes the following:

- EIAR addendum Response to Reasons for Refusal
- Natura Impact Statement. To provide clarification, this has been updated with the mitigation measures set out in the EIAR and Further Information Responses. This is a consolidated document with no new information.
- Annual Environmental Audits for 2021 and 2022 relating to adjoining quarry.

7.2. Planning Authority Response

The planning authority notes the content of the third-party appeals and makes the following observations:

- The Planning Authority consider that the evaluation of potential cumulative impacts between the proposed development and other plans and projects, including the existing operational quarry adjoining the site, and with respect to an assessment of potential environmental impacts including from blasting as a method of extraction and proposals to crush and process aggregate on site within the submitted EIAR and subsequent addendums was not sufficient and whilst reference was made to the adjoining quarry being authorised and subject to mitigation as part of its permission, no detailed evaluation was provided. This information was required to inform a full assessment of the potential cumulative impacts.
- The Planning Authority contend that the applicants were afforded the opportunity through the initial further information request to address concerns regarding the submitted EIAR and Natura Impact Statement.

- Apart from the foregoing, the Board is respectfully referred to the details as set out in the planning reports and internal department reports for the planning application.

7.3. **Observations**

7.3.1. A total of 16 no. observations were received as previously set out in the cover page of this document.

7.3.2. The main issues raised can be summarised as follows:

- Inadequacies in EIAR- Issues concerning hydrology, hydrogeology and land stabilisation have not been addressed.
- Concern regarding destabilisation of homes on hill above quarry.
- During prolonged periods of rainfall, adjacent stream carries large amounts of sediment which in turn flows into the Barrow. Concerns that Barrow will be contaminated.
- Concerns regarding capacity of receiving waters from discharges at existing quarry operations and adequacy of the proposed drainage in the event of quarry flooding and inundation.
- There are no mitigation measures suggested by the applicant to deal with the large amount of rainfall we are experiencing over the past few years.
- Impact on private wells and water supply.
- Impact on water quality.
- Impact on traffic.
- Impact on biodiversity including impacts on bats.
- Impacts on Residential Amenity including dust, noise and vibration from blasting.
- No consultation with the local community.
- Cumulative Impact of two no. quarries operating together.

- Millford Quarries have a long history of non-compliance with planning conditions on various quarries and in particular with regard to the conducting and making available of environmental audits.

8.0 Assessment

8.1. Having examined the appeal details and all other documentation on file, including all of the submissions received in relation to the appeal, the report of the local authority and inspected the site, and having regard to relevant local / regional / national policies and guidance, I consider that the substantive issues in this appeal to be considered are as follows:

- Principle of Development
- Cumulative Impacts
- Other Issues
- EIAR
- Appropriate Assessment
- Water Framework Directive

8.2. These matters are addressed in the relevant planning, Environmental Impact Assessment and Appropriate Assessment Sections of the report.

9.0 Planning Assessment

9.1. Principle of Development

9.1.1. The proposed development is for the extraction of dimensional stone similar to the existing adjacent quarry operated by Kilkenny Limestone. Dimension limestone is a specialist stone product used for decorative features, monuments, memorials etc. It is found only in a very limited area in this part of Carlow and in a few other areas of the country. Both quarries will be independently owned and operated. The NPF and the County Development Plan recognise quarries as a national resource that are of key importance in their provision of aggregates to the construction section and in their provision of employment within the rural economy.

9.1.2. 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 2022-2028 support, in principle, the exploitation of aggregates to the construction sector and in their provision of employment within the rural economy. It is recognised that a satisfactory balance is required between the needs of the building industry and the need to protect the environment.

9.1.3. The Planning Authority raised concerns in the Further Information Request that is the policy of the Council to facilitate adequate supplies of aggregate and mineral resources to meet the future growth needs of the county and wider region where there is a proven need for a certain aggregate /mineral while addressing key environmental, traffic and social impacts and details of rehabilitation (Ref: EI. P1). The Planning Authority was not satisfied that the resource is intended to meet a local or regional need and therefore does not accord with the provisions of the Carlow County Development Plan 2022-2028. The applicant was afforded an opportunity to address the foregoing and in particular establish a proven need for limestone at a local /regional level having regard to the foregoing policy.

9.1.4. In Section 1.1 of the cover letter submitted with the Further Information Response dated the 27th of November 2023, the applicant indicated that the principal output from the proposed quarry is dimension limestone. This is an identical product to that which is currently extracted from the existing Kilkenny Limestone quarry immediately to the north of the site and exported to established markets on the continent. The dimension stone is extracted in large blocks and is refined into end products elsewhere. It is envisaged that one of the customers for the blocks will be Kilkenny Limestone Ltd. on the adjacent site, who will take the raw blocks and process into finished products.

9.1.5. The quarrying process for dimension stone results in up to 80% of the extracted limestone rock by volume being unusable for the purposes of producing dimension stone products due to fracturing and size. This rock, which is unusable as dimension stone, is however suitable for other purposes such as an aggregate following

crushing and screening. It can therefore be used to meet the future growth needs of the county and wider region. Having regard to this, the applicant considered that the proposed development complies with EI. P1.

9.1.6. The second planner's report dated the 7th of February 2024 considers that this response is generally acceptable and complies with Policy EI. P1. I share this view, given the information provided in the application documentation that there is a layer of unusable stone c. 10m deep below the existing ground level before the dimension stone is reached and c. 80% of the extracted limestone rock by volume will be used in the region. It is stated that this 80% figure is based on the applicant's knowledge of existing dimension stone quarrying process in the adjacent quarry. Section 14.16.1 of the Development Plan acknowledges that aggregates are a significant natural resource and by their nature can only be worked where they occur.

9.1.7. In conclusion, in terms of the principle of development, I accept that the dimension stone is a very precious and unique product which needs to be worked where it occurs. I consider that the majority of material processed on site will be used locally. Having regard to the above, I am satisfied that in principle, the proposed development can be considered as being acceptable and in general compliance with national, regional and local policies.

9.2. Cumulative Impacts

9.2.1. I consider that cumulative impacts is an important factor in the consideration of this proposed development.

9.2.2. A large number of submissions made to the Planning Authority and observations submitted to the Commission related to cumulative impacts with regard to the proximity to the adjacent quarry to the north. The case made by the applicant is that the proximity of the proposal to the existing quarry is largely a function of the underlying geology of the area. The dimension stone proposed to be extracted from the quarry is unique to this area and a few other parts of the country. The case made by the applicant is that there will not be any significant effects in terms of additional traffic movements, noise or other impacts. Specifically in relation to Appropriate Assessment and impacts on the River Barrow and Nore SAC, the case made by the applicant in the EIAR memorandum from the project ecological submitted to the

Planning Authority dated the 27th of November 2023 is that the adjacent limestone quarry was permitted under PA Reg. Ref. 17/64 (substitute consent) with condition 3 requiring that all environmental mitigation measures identified in the remedial EIS and remedial NIS to be put in place. All such measures with regard to water management have been put in place and therefore taken together with the proposed mitigation measures for the proposed development, there is no cumulative impact.

9.2.3. The concerns raised by the observers relate to the cumulative impacts of the both quarries operating at the same time (but as separate entities and in separate ownership) in relation to noise, air quality, traffic, visual impact, water quality, structural stability of the site, appropriate assessment and impacts on River Barrow and Nore SAC.

9.2.4. Both the planning and environmental section reports expressed concern in relation to the cumulative impacts of the proposed development and the adjacent quarry.

The first reason for refusal was as follows:

It is considered that the submitted Environmental Impact Assessment Report (EIAR) and subsequent addendums to the EIAR provided as further information are both deficient in information with respect to an evaluation of potential cumulative impacts between the proposed development and other plans and projects, including the existing operational quarry adjoining the site, and with respect to an assessment of potential environmental impacts including from blasting as a method of extraction and proposals to crush and process aggregate on site. Therefore, to permit the proposed development in the absence of such assessments would present a risk of significant negative environmental impacts in the area, which would be contrary to the proper planning and sustainable development of the area.

9.2.5. The Further Information Response submitted by the applicant states that the approach of Enviroguide in preparing the report was to establish the baseline, assess the potential impact of the proposal in combination with this baseline and then to assess the potential impact of the proposal in combination with any other planned or approved projects in the area.

9.2.6. It is stated that the approach of the Planning Authority is disagreed with as the proposed development has already accounted for the existing operational quarry to the north of the site and the potential for cumulative effects have been assessed.

The appeal response makes specific reference to the cumulative impacts of blasting and noise having regard to the reason for refusal set out above. I note that an additional noise impact assessment has been submitted. In relation to cumulative impacts, it is reaffirmed that the Planning Authority has misinterpreted the meaning of cumulative impacts as defined in the legislation and various guidance and the impacts of the proposed quarry have been assessed against a baseline including the adjoining quarry. Therefore the impacts of both quarries in operation simultaneously have been assessed and is the basis of the EIAR.

9.2.7. I draw the attention of the Commission to the intention of the applicant as stated in the Further Information Response that the dimension stone blocks will be transported offsite for processing at established facilities, one of which will be the existing Kilkenny Limestone Quarry directly to the north. It is stated that the operations of this existing quarry have already been assessed and approved from an Environmental perspective and any further environmental assessment of that facility, or any other location where dimension stone blocks are to be processed is outside the scope of this application. The existing permission for the adjacent site does not provide for the importation or processing of additional material from outside the site and as such to some extent would be outside the remit of this application.

9.2.8. Nevertheless, the cumulative impacts of the existing quarry and the proposed quarry do require further consideration.

9.2.9. In terms of the cumulative impacts, I refer the Commission to the following aspects of the EIAR assessment below where concern has been expressed in relation to baseline information and cumulative impacts arising from same:

- Hydrology and Hydrogeology
- Noise
- Structural Stability- (Possibility of Landslides)
- Appropriate Assessment

9.2.10. These aspects have been dealt with in detail in the relevant sections below and I refer the Commission to the EIAR Assessment and Appendix 1 (Appropriate Assessment) in order to avoid repetition.

The observers have also referred to concerns regarding landscape and traffic in relation to the cumulative aspect of two quarries operating side by side. The report from the Transport Section considers that the traffic counts presented in the EIAR in the EIAR are representative of the on the ground situation. I note that additional traffic is proposed, but I do not consider that it would be such so as to have a significant negative cumulative impact. In terms of landscape, I note that the existing quarry is visible mainly from intermittent locations in close proximity to the site. I note it is not unduly visible from any protected views or scenic routes. I consider that the cumulative impact of two quarries operating in close proximity to each other will not have an unduly visible impact on the landscape.

9.2.11. In sum, I consider that the approach taken by the applicant in terms of the inclusion of the existing quarry in the baseline information is generally acceptable where the information submitted is robust and evidence based. However, in the sections where concerns have been raised in relation to baseline information as outlined above and as detailed in the relevant sections of the EIAR Assessment, the applicant has made assumptions that the proposed quarry will be similar to the existing quarry with limited scientific information to back this up. Consequently any assessment of cumulative effect which relies on this data is insufficiently robust and does not in my view stand up to scrutiny. Whilst the applicant's argument as set out appears to dismiss concerns in relation to cumulative impacts, no evidence to substantiate this conclusion have been submitted. As such, I consider that cumulative impacts are a relevant consideration in this case and I am not satisfied that the aspects outlined in the bullet points above have been adequately considered.

9.3. **Other Issues**

Climate Act

Under Section 15 (1) of the 2015 Climate Act (as amended by section 17 of the Climate Action and Low Carbon Development (Amendment) Act 2021, the Commission is required to perform its functions in a manner consistent with its functions in a manner consistent with climate objectives 'in so far as is practicable'.

I have carefully considered the State's climate objectives in this regard. I note that local provisions are in line with the national climate framework. In this regard the

County Development Plan is a recent document (2022 to 2028) and the provisions in relation to quarries are in line with the principles of sustainable development and environmental management. Chapter 7 outlines the approach taken to climate change together with policies and objectives in relation to climate change mitigation and adaptation in a local context. The Carlow Climate Action Plan 2024-2029 recognises the challenges of addressing climate change and sets out a number of goals and actions to address climate change mitigation and climate change adaptation.

The National Planning Framework 2025 recognises that quarries by their nature are of key importance in their provision of aggregates to the construction section and in their provision of employment within the rural economy.

I am satisfied that the quarry proposed is of a small scale with limited traffic and limited machinery and it is likely that emissions will be marginal in terms of overall greenhouse gas emissions (GHG). It is likely that the extractive industry will evolve over time to reduce emissions in line with national targets for climate policy.

I consider that aggregates are a significant natural resource and a satisfactory balance is required between the needs of the building industry and the requirement for the Commission to perform its functions in a manner consistent with climate objectives. Having regard to this and considering the small scale of the proposed development and the mitigation measures included in relation to the reduction of emissions from transport vehicles in the EIAR, I am satisfied that the proposed development would not be contrary to the State's climate objectives.

Public Consultation

The observers raised concerns that the quarry operator did not engage with the local community. While meaningful consultation may be to the benefit of both parties, there is no statutory requirement to undertake such engagement.

Appeal Response

I note that the appeal response includes a document named as 'EIAR Addendum Response to Reasons for Refusal'. I have examined this document and consider that the document is very specific and limited in scope and information. The main purpose

of the document is to address the two reasons for refusal. I note that Appendix 1 contains a Noise and Vibration Assessment.

In my view, having regard to the very limited information submitted, there is no statutory requirement to readvertise this document. I note that none of the observations submitted have raised this as an issue.

10.0 Environmental Impact Assessment

10.1. Statutory Provisions

I refer the Commission to Section 6.5 of this report.

10.2. EIA Structure

This section of the report comprises the environmental impact assessment of the proposed development in accordance with Planning and Development Act 2000 (as amended) and the associated Regulations, which incorporate the European directives on environmental impact assessment (Directive 2011/92/EU as amended by 2014/52/EU).

Section 171 of the Planning and Development Act, 2000 (as amended) defines EIA as:

> a. consisting of the preparation of an EIAR by the applicant, the carrying out of consultations, the examination of the EIAR and relevant supplementary information by the Board, the reasoned conclusions of the Board and the integration of the reasoned conclusion into the decision of the Board, and
>
> b. includes an examination, analysis and evaluation, by the Board, that identifies, describes and assesses the likely direct and indirect significant effects of the proposed development on defined environmental parameters and the interaction of these factors, and which includes significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters.

Article 94 of the Planning and Development Regulations, 2001 and associated Schedule 6 set out requirements on the contents of an EIAR.

This EIA section of the report is, therefore, divided into two sections. The first section assesses compliance with the requirements of Article 94 and Schedule 6 of the Regulations. The second section provides an examination, analysis and evaluation of the development and an assessment of the likely direct and indirect significant effects of it on the following defined environmental parameters, having regard to the EIAR and relevant supplementary information:

- population and human health,
- biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive,
- land, soil, water, air and climate,
- material assets, cultural heritage and the landscape,
- the interaction between the above factors, and
- the vulnerability of the proposed development to risks of major accidents and/or disasters.

The assessment provides a reasoned conclusion and allows for integration of the reasoned conclusions into the Commission's decision, should they agree with the recommendation made.

10.3. Issues Raised in Respect of EIA

The observers raised a number of concerns regarding the EIAR. These are addressed under each of the relevant chapters. The main concern is that the EIAR is misleading and inadequate.

10.4. Compliance with the Requirements of Article 94 and Schedule 6 of the Regulations 2001

Compliance with the requirements of Article 94 and Schedule 6 of the Regulations is assessed below.

Article 94 (a) Information to be contained in an EIAR (Schedule 6, paragraph 1)

A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development (including the additional information referred to under section 94(b).	The proposed development is comprehensively described in Chapter 2 of the EIAR and depicted in the associated drawings. Information is included on the site, design, size and features of the development. The EIAR also describes the operation and restoration phases of the development. I am satisfied that adequate detail has been provided to enable decision making.
A description of the likely significant effects on the environment of the proposed development (including the additional information referred to under section 94(b)).	A description of the likely significant effects on the environment are included in each of the technical chapters of the EIAR.
A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development (including the additional information referred to under section 94(b).	These are included in each of the technical chapters of the EIAR and the associated appendices and are brought together in Chapter 14 of the EIAR.
A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment (including the additional information referred to under section 94(b))	Chapter 2 of the EIAR considers alternatives in respect of alternative locations, designs / layout. It provides the main reason for selecting the proposed option. The do nothing scenario is also outlined. I consider, therefore, that the description of alternatives is reasonable, in the context of the proposed development, and satisfactory.
Section 94(b) Additional information, relevant to the specific characteristics of the development and to the environmental features likely to be affected (Schedule 6, Paragraph 2)	

A description of the baseline environment and likely evolution in the absence of the development	A detailed description of the baseline environment is included in each of the technical chapters of the EIAR.
A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved.	The methodology employed in carrying out the EIA, including the forecasting methods is set out in each of the individual chapters with a general description of the methodology outlined in Table 1-2. Difficulties encountered are also outlined in each of the individual chapters.
A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it.	Likely significant effects of the development on the environment, arising from its vulnerability to risks of major accidents and/or disasters are addressed in Chapter 13.
A summary of the information in non-technical language.	A non-technical summary of the EIAR is provided by the applicant and satisfactorily describes the likely environmental effects of the development.
Sources used for the description and the assessments used in the report.	Sources used for the description and assessment of environmental effects are included in each technical chapter of the EIAR.
A list of the experts who contributed to the preparation of the report.	Experts and relevant qualifications are identified in section 1.9 of the EIAR.

10.5. Consultations

A number of observers raise concerns that there was no consultation with the local community at any stage.

The application has been submitted in accordance with the requirements of the Planning and Development Act 2000 (as amended) and the Planning and

Development Regulations 2001 (as amended) in respect of public notices. Submissions have been received from statutory bodies and third parties and are considered in this report, in advance of decision making.

I am satisfied, therefore, that appropriate consultations have been carried out and that third parties have had the opportunity to comment on the proposed development in advance of decision making.

10.6. **Compliance**

Having regard to the foregoing, I am satisfied that the information contained in the EIAR, and the supplementary information provided by the development is sufficient to comply with article 94 of the Planning and Development Regulations, 2001. Matters of detail are considered in my assessment of likely significant effects, below.

10.7. **Alternatives**

The issue of alternatives is addressed in Chapter 2 of the EIAR. I note that Article 5(1)(d) of the 2014 EIA Directive requires:

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

Annex IV of the Directive (Information for the EIAR) provides more detail on 'reasonable alternatives':

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

Section 2.5 of the EIAR outlines 5 no. alternatives considered by the applicant. These are outlined below:

- Do Nothing Scenario

- Alternative Locations
- Alternative Uses
- Alternative Designs / Layouts
- Alternative Process

The planning authority raised concerns that the alternatives section in the EIAR is largely generic with no real consideration of reasonable alternatives. The Further Information Response provides greater detail in relation to design and processing.

I accept the Planning Authority concerns in relation to the generic nature of the EIAR regarding alternatives as minimal detail is provided. Notwithstanding this, it would appear that the dimension limestone is located in very limited areas in the vicinity of the site and a few other parts of the country and the processing and extraction techniques are required to be very specific to order to protect existing limestone reserves and optimise the extractable dimension stone. The main reason for site selection is therefore based on the reserve location.

Having regard to the circumstances outlined above and the additional detail provided in terms of design and processing, I am satisfied that the consideration of alternatives provided by the applicant complies with the Directive and are satisfactory.

10.8. Assessment of Likely Significant Effects

10.8.1. In accordance with section 171A of the Act, this assessment includes an examination, analysis and evaluation of the application documents, including the EIAR, the associated drawings, documents / appendices and the submissions received, and identifies, describes and assesses the likely direct and indirect significant effects, including cumulative effects, of the development on the environmental parameters set out in the Regulations and the interaction of these. Each topic section is therefore structured under the following headings:

- Issues raised in the appeal.
- Examination of the EIAR.
- Analysis, Evaluation and Assessment: Direct and Indirect effects.

- Conclusion: Direct and Indirect effects.

The EIAR has been assessed by Engineer with the Commission, Owen Cahill and Emer Doyle, Planning Inspector.

Engineer with the Commission, Owen Cahill, has assessed the following:

- Population and Human Health
- Land, soil, and geology
- Hydrology and Hydrogeology
- Air Quality and Climate
- Noise and Vibration
- Interactions

Emer Doyle, Planning Inspector, has assessed the following:

- Biodiversity
- Material Assets, Traffic, Waste and Utilities
- Archeaology and Cultural Heritage
- Landscape and Visual Assessment
- Cumulative Effects
- Risk Management

10.9. Population and Human Health

Issues Raised

The observers raised concerns in relation to loss of outdoor amenity owing to intensification on the local road network, health effects associated with impacts on air quality, errors in mapping of residential dwellings, hours of operation, potential increased residential development and a lack of community consultation and engagement.

Examination of the EIAR

Chapter 4 addresses the impact on Population and Human Health and considers any direct or indirect effects arising from the proposed development. The chapter outlines the legislative and policy context, the baseline environment, the key characteristics of the proposed development, the potential effects, methodology used and sources of information.

Other matters which would have a direct bearing on population and human health such as soils and geology, water, air quality and climate, noise and vibration, traffic and landscape are addressed under the corresponding headings below. Invariably there is overlap and I recommend that they be read in tandem.

The EIAR notes that no particular difficulties were encountered in the preparation of this chapter of the EIAR.

The Planning Authority raised concerns on a number of matters which have relevance to population and human health and are set out and summarised in the sections that follow which consider the factors; soils and geology, water, landscape air quality and climate, noise and vibration.

The planning authority also invited the applicant to assess and respond to the various third-party submissions received. The applicant prepared a response which addressed the issues raised in population and human health where the emphasis was on effects on the community. The response detailed the findings of the EIAR and the conclusion of no significant effects along with reference to the already established quarrying operation in the area. A number of other points raised by third parties in relation to safety, traffic and other development in the area were either rendered unclear for the applicant to surmise or dismissed as unsubstantiated concerns.

The planning authority found there to be a lack of information in regard to potential impacts from the crushing and processing of aggregates in the response to the third party submissions on site and the cumulative impacts were not adequately assessed.

Baseline

The site is located in a rural area with one-off residential development on the L-3036 and surrounding local roads. An existing and operational quarry is located

immediately north of the proposed development site. The predominant land use in the wider surrounding area comprises agriculture and forestry. The EIAR sets out the population trends for the area in the most recent census of 2022 for the town of Muinebeag (Bagenalstown) which is located 5km southeast of the proposed development. The latest census data shows that the population demographics for the area are in line with national trends. Other data on population statistics in the EIAR included the range of industry in which people from the area are employed with wholesale and retail trade being the industrial group that provides most employment in the area. The health status of residents in the area from the 2016 census data was also presented which shows very good and good health accounting for c.86% of people.

Potential Effects

The EIAR identifies the potential for a range of environmental effects on Population and Human Health. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 1 below. Minor effects are not identified, except where there is potential for significant impact interactions, cumulative effects or where concerns have been expressed by parties to the application.

Table 1: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development were not to proceed, the site would remain as an undeveloped greenfield site, continuing to be used for agriculture and commercial forestry. The existing environment would remain unaltered.
Construction	Noise generated during the demolition works. Risk to human health in terms of effects on water quality, (from) noise and air quality. Workplace health and safety risks. Unplanned events During Construction the proposed development will lead to the creation of 5 no. new jobs.

Operation	Contact with naturally occurring radon gas on site and in enclosed welfare/administration facilities. Socio-economic benefits through the generation of employment. Risk to human health as a result of a deterioration of groundwater and surface water quality. Health effects from a reduction in air quality as a result of dust emissions. Landscape and visual alterations impacting amenity which can impact the human health of those living and working in the area. Risk to human health associated with noise and vibration from the various operational phase quarrying activities. Workplace health and safety risks Unplanned events. Once operational, the proposed development will provide 3 no. new jobs.
Restoration	No significant effects envisioned.
Cumulative	Cumulative effects with other planned and permitted development, no for specific factors and human health are dealt with in the chapters for water, traffic, noise and air quality & climate. No significant effects envisioned.

Mitigation Measures

Mitigation measures to avoid, reduce or offset any potential adverse impacts on population and human health are outlined in Section 4.6 of the EIAR as well as in all the associated documents prepared for the application and subsequent appeal. Many of the mitigation measures are embedded in the design process and based on current best practice guidelines. Notable measures during the construction and operational phases include:

- Construction and operational phase working hours to be followed.

- Training and awareness for the prevention of engine revving, unnecessary noise generation and the shutdown of engines not in use or idling.
- Maintaining a speed limit on site and measures for the suppression of dust during prolonged periods of dry weather.
- Engineering controls such as local exhaust ventilation or containment measures.
- Use of appropriate PPE including protective respiratory equipment.
- Training in relation to potential risks associated with dust containing silica.

Residual Effects

Subject to adherence to appropriate mitigation measures to avoid or reduce adverse impacts, the EIAR considered that the proposed development would have an imperceptible, positive and medium-term residual effect on population and socioeconomic aspects securing future employment and contributing positively to economic activity for residents living in the area.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 4 of the EIAR and all the associated documents, including the applicant's response to the further information request, and submissions on file in respect of Population and Human Health. I am satisfied that the information submitted in the EIAR demonstrates an understanding of some elements of the baseline environment. However, there are some aspects of the development which I feel have not been adequately assessed in relation to population and human health. The EIAR in its assessment of impacts on population and human health examines the impacts on water quality, noise and risk. I provide further detail on the concerns I have in regard to water quality, noise and the risks in relation soil and subsoils storage which have not been adequately investigated, in the sections that follow.

The EIAR provides a range of mitigation measures in Sections 4.6 to reduce any potential effects on population and human health. This addresses some of the

potential effects that are anticipated for the proposed development and have been summarised above.

Some direct and indirect positive effects will arise from the local economic benefits. Direct jobs will be created by the proposed development at construction and operational phase. Indirect jobs will also be created through the increased use of support services and logistics. In terms of impacts on population, I do not believe that the proposed development will result in a noticeable change in population trends for the area. The proposed development has the potential to generate new employment for the area, but I consider the number of jobs to be modest and in all likelihood would remain consistent throughout the proposed operational lifetime of 14 years thus not generating a greater demand for employment resources. It is also unlikely that the development alone would result in an increase in development in the already rural surrounding area.

There is potential for effects in terms of soils and geology, water, dust, noise and traffic. An assessment of these effects has been undertaken in the various sections of the EIAR. I have considered the potential effects associated with dust and overall air quality as a result of the various phases of the development in Section 10.13 of this report. I am satisfied that the appropriate mitigation has been set out for the control and management of dust levels at the site along with the opportunity for improvement and greater reduction as operations develop. Therefore, I am satisfied that any effects on population and human health as a result of impacts on air quality would not be significant.

My analysis, evaluation and assessment of soils & geology, water and noise have raised a number of concerns in the sections that follow (Sections 10.11, 10.12 & 10.14) in this report. I summarise each here in consideration of implications or potential for significant effects on population and human health.

Soils and Geology

The assessment of soils and geology has concluded that there are questions in regard to stability both on the site and lands in the surrounding area which are classified as having a high susceptibility to landslides along with potential interactions with the proposed blasting operations.

I have also raised concerns in relation to the implications that effects on soils and geology may have an effect in terms of interactions with water where there is the potential to contribute to a deterioration in water quality.

Water

The assessment of hydrology and hydrogeology has concluded that information is lacking on the potential impact on the underlying groundwater resource and any effects that may result on water supply to nearby residents. I have also highlighted concerns on how surface water quality will be managed and maintained as part of the discharge proposed.

Noise and Vibration

I believe it is necessary that any conclusion on the consideration of significant effects for population and human health as a result of noise impacts needs to be based on a noise assessment which is robust and representative of the area for which the assessment is being undertaken. I provide details in Section 10.14 below as to why I believe this has not been provided.

Conclusion: Direct and Indirect Effects

I have considered all of the written submissions, and any specific points made in relation to population and human health as well as the submitted application documents. I am not satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the design of the proposed development and the proposed mitigation measures. I am therefore not satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of population and human health.

10.10. **Biodiversity**

Issues Raised

Issues raised in respect biodiversity relate to the loss of habitat and the impacts on birds, bats and mammals. It is also considered that hedgerow which is in good condition would be destroyed.

Examination of the EIAR

Chapter 5 of the EIAR addresses biodiversity. It describes the flora and fauna present at the site. The information outlines the baseline ecological environment, provides a prediction of the likely effects, details mitigation measures and describes any residual ecological effects. Appropriate Assessment Screening and a Natura Impact Statement were prepared as standalone documents. To avoid any repetition the potential impact on the designated sites is addressed in Section 10 and Appendix 1**.**

The assessment of effects on biodiversity had regard to legal requirements and European, national and industry best practice guidelines. The assessment methodology included a review of a number of surveys that were carried out previously on the site, field surveys and other ecological data.

- Habitat Survey on the 6th of June 2022
- Invasive Species Survey on the 6th June 2022
- Mammal Survey consisting of site walkover and camera trap on the 6th of June 2022 (camera retrieved on 11th August 2022).
- Breeding Bird Survey on the 6th of June 2022
- Bat Survey (no survey carried out but during the walkover survey a general habitat assessment for bats was completed.)
- Amphibians and Reptile Survey (Site surveys for potential amphibian breeding habitat)
- I note that the Table 5-1 states the date of the 3rd of June 2022 for the above surveys whilst the written sections within section 5.4.4 state the date of the 6th of June 2022. This is a minor error and does not impact on my assessment.
- It was not possible to survey the extreme south or most of the western fringe of the site for mammal dens, as the scrub was impenetrable.

Baseline

The site of the Proposed Development is located in the Barrow River surface water catchment within (14) of the Southeastern River Basin District.

On a local scale, the site is located in the Barrow_110 sub-catchment (Barrow_SC_110) and the Old Leighlin stream_020 river sub-basin. Further to the

south, the southern section of the overall landholding is located in the Barrow_190 river sub-basin.

The site walkover surveys revealed the presence of a drain and culvert which enters a small ditch and flows eastwards along a hedgerow northeast of the northern corner of the site.

The appeal site lies in a rural area, within the existing and permitted Quarry to the south. The site area is predominantly conifer plantation, containing Scot's pine Pinus sylvestris and some commercial species, (WD4) and improved agricultural grassland (GA1), while treeline and hedgerows, (WL1 and WL2), constitute the main ecological value of the site. Also present are grassy verges, dry meadows and improved agricultural grasslands (GS2 and GA1). No invasive species are present apart from Sycamore Acer pseudoplatanus. Table 5-8 outlines the habitats on the site including the inaccessible area (WD4).

Hedgerows (WL1) and Treelines (WL2) comprise the primary ecological value of the site, and function as active boundaries internally and external to the site.

Figure 5-11 presents an example of an abandoned and vacant property within the site among overgrown 'weedy' vegetation, with ivy encroaching along exterior walls.

One species of invasive flora listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011, as amended) was recorded at the site. Sycamore is a naturalised invasive species, but with ecological benefits. Sycamore was observed in the treeline habitat along the local road to the east.

Mammal signs in the form of scat, flattened grassy areas, and trails leading into hedgerow vegetation were recorded throughout the site. The observed indicators suggest possible badger, fox Vulpes vulpes, and hedgehog activity. In addition, the camera trap footage recorded both badger and Fox activity (Table 5-9, Figure 5-12 and Figure 5-13). No badger setts, latrines or snuffle holes were observed within the site.

During the field surveys 27 no. species of bird were recorded. These are detailed in Table 5.10 of the EIAR.

There were no direct observations of amphibians and/or reptiles at the site during field survey in June 2022.

Potential Effects

Likely significant effects of the development are summarised in Table 2 below. Potential effects have regard to the detailed species / habitat surveys carried out. I note that the assessments carried out did not identify any significant limitations.

Table 2: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development were not to proceed, the site would remain as a greenfield site, continuing to be used for agriculture and commercial forestry. The treelines and hedgerows would continue to provide foraging, roosting, and commuting habitat for birds, bats, and small mammals.
Construction	Potential construction impacts include habitat loss or damage, habitat fragmentation, increases in noise and dust emissions, direct mortality of protected species, runoff of sediment or other water borne pollutants into surface waterbodies and designated sites located downstream or light pollution.
Operation	Habitat and Flora: Disturbance or displacement or species. Localised impact on flora and fauna. Birds: Noise and dust pollution has the potential to cause disturbance to the local breeding bird population. Bats: Potential for a negative, permanent, moderate local impact on bats in the vicinity of the site. Amphibians and Reptile: No impacts anticipated.
Restoration	The restoration phase would provide for spoil material to be placed in the quarry void and the creation of a gradual shopping shoreline and the placing of soil on residential

	quarry benches to foster a variety of wildlife. Native planting is also proposed.
Cumulative	Due to the proximity of the site to the existing quarry, there is potential for cumulative impacts to arise with regards to hydrology.

Mitigation Measures

Mitigation measures to avoid, reduce or offset any potential adverse effects on biodiversity are outlined in Section 5.7 of the EIAR. Notable measures include the following:

- The removal of areas of vegetation will not take place within the nesting bird season (March 1st to August 31st inclusive) to ensure that no significant impacts (i.e., nest/egg destruction, harm to juvenile birds) occur. Where any removal of vegetation within this period is deemed unavoidable, a qualified ecologist will be instructed to survey the vegetation prior to any removal taking place. Should nesting birds be found, then the area of habitat in question will be noted and suitably protected until the ecologist confirms the young have fledged.
- It is recommended that seasonal bat activities are undertaken.
- All trees within the site identified for removal to facility the proposed extraction works must firstly be surveyed by a qualified individual to assess their potential for roosting bats.
- Prior to commencement of construction works, a badger activity survey will be carried out by a suitably qualified badger specialist to establish current status and activity levels.
- Water quality protection measures.
- Derelict buildings on site must firstly be assessed by a suitably qualified individual to determine their potential for bat activity and as bat roost sites.

- To offset the loss of trees and other roosting features potentially on site, a series of bat boxes will be erected on suitably large trees along the boundaries of the site to provide future roosting opportunities.

Residual Impacts

Table 5-14 provides a summary of the impact assessment for biodiversity and details the nature of the impacts identified, mitigation measures proposed and the classification of any residual impacts. Negative impacts will occur on local ecology but are likely to be reversible once the quarry is appropriately managed and the restoration plan implemented following cessation of quarrying activities.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 5 and all the associated documents and submissions on file in respect of Biodiversity. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of some elements of the baseline environment. However, I have concerns that the baseline environment in relation to bats has not been adequately assessed.

The EIAR provides a range of mitigation measures in Section 5.7 to reduce any potential impacts on ecology. These address some of the potential effects that are anticipated for the proposed development and have been summarised above.

Habitat: The habitats and vegetation which occur within the site are generally considered to be of low botanical value. The landscaping and restoration plans submitted to the Planning Authority dated the 27th of November 2023 indicate significant planting which would mitigate the loss of trees proposed. The development would ultimately result in a quarry lake with landscaped planting. The lake has the potential to be of at least moderate local biodiversity value, which in my opinion would have a positive effect on habitats.

Having regard to the present condition of the site, with no special concentrations of flora or fauna, I am satisfied that the impact of the proposed development would not be significant.

Mammals: The loss of habitat would result in some reduced foraging opportunities for mammals. However, similar habitats are widely available in the surrounding rural landscape. In the long term the restoration phase is likely to create replacement habitats. The loss of habitat may affect some common mammalian species and standard pre-construction surveys / inspections are recommended in the EIAR.

Given the nature and characteristics of the appeal site I am satisfied that the impact on terrestrial mammals would not be significant.

Bats: The observation submitted by Patrick Hickey and Siobhan Kane states that 'there is local knowledge that bats are in abundance in the area and that they are literally visible to the naked eye across this landscape daily.'

There are very significant areas of the site that are inaccessible and have not been surveyed as identified by WD4 on the habitat map- Figure 5-6. These areas include large amounts of tree and shrub coverage. I note that there are a number of old outbuildings and a derelict dwelling which may provide suitable habitat for bats. I note that records were derived from National Grid Squares which indicate that the area surrounding the site carries an overall bat suitability sore of 29.22 out of 100. Section 5.5.4.5 identifies that the boundary features, namely woodland edge, linear woodland and hedgerows provide good commuting corridors for bats across the site and within the wider landscape. Furthermore, it is stated that these habitats in combination with dry meadow, offer suitable foraging habitat for a variety of bat species, Trees and hedgerow and the buildings on site may provide suitable roost features for bats.

Having regard to the above I am of the view that the site offers high suitability roost features. I note that the predicted impacts on bats set out in Section 5.6.1.3.3 include the loss of high suitability foraging and commuting habit for bats and that the felling of trees and/ or demolition of buildings may place any roosting, breeding or hibernating bats at risk of injury or death. I note that significant mitigation measures have been proposed including pre-construction surveys.

Given that the EIAR acknowledges that the trees and derelict buildings on the site offer high suitability roosting features and that the observation states that bats are a daily feature of the site, I consider that this approach is inadequate. Bats are listed as strictly protected species on Annex IV of the Habitats Directive and this approach

providing for post consent survey work fails to provide the necessary baseline data for impact assessment (CIEEM, 2018, Section 7.6) and risks failure of legal compliance with Section 51 of the European Communities (Birds and Natural Habitats) Regulations 2011-2021. In addition, where a derogation under Section 54 is required in order to accommodate certain aspects of a development such as the removal or disturbance of a bat roost, that derogation should accompany the planning application (DHLGH20252.). I note that this application was submitted prior to these regulations being in place and may be considered by the Commission to be a new issue. Notwithstanding this, I am of the view that the Commission cannot rely on the post consent measures set out and there is a lack of reliable information regarding bat activity on this site.

Birds: The proposed development could potentially reduce feeding opportunities for bird species due to the loss of open fields and vegetation and could lead to disturbance due to noise and vibration.

Overall, I am satisfied that the species recorded in the vicinity of the site were common species and that the proposed scheme would not have a significant impact on the local conservation status of any of the bird species associated with the site. It is further noted that there is suitable nesting habitat adjacent to the site and many of these common and widespread species can avail of similar habitats typical in rural environments.

Conclusion

I have considered all of the written submissions, and any specific points made in relation to biodiversity. I consider that daytime and nocturnal bat surveys are required on this site to assess the impact on bats and the Commission may wish to seek further information in relation to same. There is potential for cumulative impacts having regard to the proximity to an existing quarry adjacent to the site which will be examined in other sections of this report. In the absence of bat surveys and an examination of cumulative impacts, I am not satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of this scheme. I am therefore not satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on biodiversity.

10.11. Lands, Soils and Geology

Issues Raised

The observers raised a number of concerns in relation to soils and geology. These are summarised as follows:

- Ground stability and structural impacts on residential dwellings and a lack of suitably qualified geotechnical input.
- Failure to consider the area to the west of the site which has been classified by the Geological Survey of Ireland (GSI) as having a high susceptibility to landslides.
- Underestimation of soil and subsoil and no assessment of the placing of large volumes of topsoil on elevated ground by a suitably qualified geotechnical engineer.

Examination of the EIAR

Chapter 6 addresses the impact on Land, Soils and Geology and considers any direct or indirect effects on these resources arising from the proposed development.

The chapter outlines the legislative and policy context, the baseline environment, the key characteristics of the proposed development, the potential effects, methodology used and sources of information.

The EIAR notes that no particular difficulties were encountered in the preparation of this chapter of the EIAR.

The following appendices are relevant also to Chapter 6:

- Appendix C Geological Logs.
- Appendix D Geophysical Report.

Chapter 6 makes various references to an Appendix 7.2 which was not included within the EIAR. This has been assumed a typo and the information that the EIAR refers to being in Appendix 7.2 is in fact in Appendix D.

The Planning Authority raised a number of concerns in relation to soils and geology with a particular emphasis on cumulative impacts arising from structural stability with other development in the area including the existing quarry operations to the north,

the assessment of impacts during restoration and decommissioning phases, the adequacy of the restoration plan submitted, clarification in relation to overburden volumes and management, the lack of appropriately scaled drawings for the proposed phasing, structural stability impacts with a particular emphasis on the local road to the east of the quarry. The planning authority also invited the applicant to assess and respond to the various third-party submissions received.

In response, the applicant provided the following:

- A summary of the requirements to undertake cumulative assessment and the misinterpretation of the same by the planning authority. The response was also accompanied by an EIAR Addendum which examined Landscape and Visual Impact Assessment, Archaeological Impact Assessment and provided a Mitigation and Monitoring Summary. The EIAR Addendum also assessed the potential impact of the restoration and decommissioning phases.
- A revised and detailed restoration plan and clarifications in relation to overburden volumes noting an error in the EIAR as well as confirmation that the import of materials to site is not required.
- Revised extraction phase drawings.
- Clarification in relation to soils and subsoils excavation and bedrock composition and extraction at the site and cross-sectional drawings to demonstrate setback from the public road and the implementation of standardised slopes in the quarry design to address structural stability concerns.
- A categorised response to the submissions raised by the third parties. This included a response to the topics with relevance to land, soils and geology:
    - Detail in regard to extraction and protection of the rock resource.
    - Proximity to the neighbouring quarry.
    - Landslides.
    - Sinkholes.
    - Blasting issues.
    - Longer term reinstatement and restoration.

- The use of unsuitable stone.

The planning authority considered that some elements of the further information request were adequately addressed however, they considered that the third-party submissions in regard to crushing and processing aggregates on site and the cumulative impacts were not adequately assessed.

Baseline

Land: The site currently comprises agricultural pastures which are actively in use for that purpose. The lands in the surrounding area contain areas of similar agricultural pasture to the south and east with areas with some conifer forestry to the west in the more elevated areas. An existing quarry is the dominant feature to the immediate north of the site with similar areas of agricultural pasture and conifers in the areas that surround that operation. There are a number of individual dwellings located along the local roads that serve the wider area. The site levels as outlined on the *Existing Site Layout Map* vary from 75mAOD to 120mAOD falling from west to east.

Soils: The Geological Survey of Ireland (GSI) and Teagasc have categorised the soil type at the site as AminPD soil deep (poorly drained mineral (mainly acidic)) with areas of BminSW (basic shallow well-drained mineral soils) in the west of the site The surrounding lands comprise AminSW (acidic shallow well-drained mineral soils) and BminPD (basic deep poorly drained mineral soils).

The subsoils at the site comprise Namurian sandstones and shales (TNSSs). The surrounding lands comprise, bedrock outcrop/subcrop (Rck), till derived from limestones (TLs).

Geology: The site falls within two bedrock geological formations, the Clongrenan Formation and the Ballyadams Formation. The site is primarily underlain by the medium-coarse grained thick limestones beds with variable presence of shales from the Clongrenan Formation with a smaller area of medium to dark-grey thick-bedded to massive crinoidal calcarenite wackestones and packstones from the Ballyadams Formation. The area to the west of the site boundary comprises mudstone and shale with chert and limestone from the Luggacurren Shale Formation and grey argillaceous siltstones or silty mudstones with lesser amounts of sandstone and shale from the Killeshin Siltstone Formation.

Potential Effects

The EIAR identifies the potential for a range of environmental effects on Land, Soils and Geology. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 3 below. Minor effects are not identified, except where there is potential for significant impact interactions, cumulative effects or where concerns have been expressed by parties to the application.

Table 3: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development were not to proceed, the site would remain as a greenfield site, continuing to be used for agriculture and commercial forestry.
Construction	Land and land use effects and changes to the topography. Excavation and loss of overlying soil and subsoil across the development footprint. Potential contamination of soil and subsoil from accidental leaks or spills. Erosion of exposed soil and subsoils.
Operation	Excavation and permanent loss of bedrock resource Potential contamination of bedrock from accidental leaks or spills.
Restoration	The restoration plan includes allowing the quarry void to naturally fill with water with some of the void backfilled with spoil from the surrounding berms. Soil storage areas will be seeded and allowed to revert to scrubland and the proposed set down area and shed will be cleared and restored to scrubland. The remainder of the site will be planted with trees. No significant effects on the land, soil and geological environments during the restoration or post-restoration phase are envisioned.
Cumulative	Cumulative effects with other planned and permitted development, no significant effects envisioned due to the lack

	of significant residual impacts from the development that would affect the wider geological environment.

Mitigation Measures

Mitigation measures to avoid, reduce or offset any potential adverse impacts on land, soils and geology are outlined in Section 6.6 of the EIAR as well as in all the associated documents prepared for the application and subsequent appeal. Many of the mitigation measures are embedded in the design process and based on current best practice guidelines. Notable measures during the construction and operational phases include:

Construction Phase

- The preparation of a restoration plan for the site which will include replanting proposals for the site and restoration to scrubland.
- Refuelling and fuel management procedures for plant and equipment, provision of fuel interceptors and routine maintenance of all plant.
- Provision of emergency spill kits and absorbent materials for clean up in the event of accidental spillage.
- Environmental Management Plan for the construction phase.
- Installation of soil berms around extraction areas, appropriate soil storage and measures to encourage revegetation of bare and exposed areas.

Operational Phase

- Refuelling and fuel management procedures for plant and equipment, provision of fuel interceptors and routine maintenance of all plant.

Residual Effects

Subject to adherence to appropriate mitigation measures, design standards and an environmental management plan, the EIAR considered that any residual effects from the proposed development range from imperceptible to slight in terms of land, soils and geology.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 6 of the EIAR and all the associated documents, including the applicant's response to the further information request, and submissions on file in respect of Land, Soils and Geology. I am satisfied that the information submitted in the EIAR demonstrates an understanding of some elements of the baseline environment. However, there are some aspects of the development which I feel have not been adequately assessed in relation to soil and subsoils storage and stability which I will expand on in further detail in the sections that follow.

The EIAR provides a range of mitigation measures in Sections 6.6 to reduce any potential effects on land, soils and geology. This addresses some of the potential effects that are anticipated for the proposed development and have been summarised above.

As the proposed quarrying of bedrock would occur below the groundwater table, there is some overlap between Land, Soils and Geology with Hydrology and Hydrogeology. In the interest of clarity, this assessment is focused on the impact on Land, Soils and Geology and the impact on Water is addressed below in Section 10.12.

Land: The proposed development will comprise the removal of soils and overburden to facilitate the development and operation of a limestone quarry. The loss of the land resource is permanent and irreversible from a practical sense. It is acknowledged that the site is not a geological heritage site although the recommended designation for the existing quarry to the north as well as the opportunity that the proposed development may facilitate in terms of increased opportunity for further analysis are all noted. Considering this and the various mitigation measures proposed including the development of an appropriate restoration plan, I am satisfied that the proposed development would not result in significant effects on land use.

Soils and Subsoils: The proposed development will result in the removal of soils and subsoils permanently from their current location to facilitate the development of the quarry. The excavation of soils will occur above the groundwater table and it is therefore not anticipated that any interaction with groundwaters will occur during this phase. This is discussed in further detail in Section 10.12.

The observers raised concerns that the EIAR has neglected to examine the overall landslide risk in the area. The Planning Authority, in a request for further information sought clarity in relation to structural stability in the area and in particular on the adjoining local road (L-3036) which runs adjacent to the eastern boundary of the site. The Planning Authority were satisfied with the response to their further information request as set out in the Planners Reports dated 07.02.2024. In addition, the Planning Authority in the further information requested invited the applicant to assess and respond to the various third-party submissions received which included reference to the potential susceptibility of lands to the west of the proposed development to landslides. As this area has been classified by the GSI as having a high susceptibility to landslides, I believe this requires further investigation. It is acknowledged that the site itself does not fall within this area of high susceptibility, however an examination of the GSI mapping shows the site to contains areas of Moderately High and Moderately Low susceptibility The applicant has made no comment on this in the response to further information or grounds of appeal, and any documents prepared as part of the application prior to that. The response to the third-party submissions around this matter made continued reference to the response provided for the further information request item regarding the stability of the public road to the east of the site. In essence, I believe this remains unanswered and a geotechnical analysis or assessment as to how the proposed development might interact with this area which has been classified as susceptible to landslide, noting the baseline situation that has been influenced by the existing quarry, is lacking. The interaction with blasting as a proposed extraction methodology also requires further consideration.

I also have concerns with regard to the volume of overburden material, c.120,000m^3 which is being proposed for permanent storage in an area of 3.1ha to the west of the proposed quarry void with an average fill depth of 4m. Whilst the EIAR has set out the expected standard mitigation for the placement, containment and revegetation of such material, it has not provided a detailed geotechnical analysis which considers the suitability of the underlying soils for the placing of such material as well as any consideration of the terrain for where it is proposed which in its current state comprises an east-west ground level increase of 20m across the soil storage area. An overall design for the proposal is also lacking with no detail on the design of this

repository. The risk of any movement of soils from the soil storage area or potential risk to the area already classified as being susceptible to landslide has not been adequately investigated.

Therefore, I agree with some of the concerns raised by the observers and I am not satisfied that significant effects on soils or the interactions that may occur with other factors such as water can be discounted. I am not satisfied that the EIAR has adequately addressed the direct and indirect effects of the proposed development on the receiving environment.

Geology: The site is not located in a geological heritage area however, the existing quarry immediately north of the site has been designated as a County Geological Site (CGS) and is recommended for designation as a National Geological Heritage Area (Site Code: CW004). The County Geological Site Report prepared for the existing quarry to the north does not highlight any management/promotion issues with the existing quarry however it does highlight that were the quarry to cease operations that it would be desirable that access for geologists be maintained. It is anticipated that were the proposed development to proceed, a requirement to facilitate similar access would be necessary at all phases and particularly in advance of the final restoration proposals which would make the exhausted quarry void inaccessible.

Considering the scale of the proposed quarry and again noting the restoration proposals, I am satisfied that the proposed development would not result in significant effects on the geology of the area.

Conclusion: Direct and Indirect Effects

I have considered all of the written submissions, and any specific points made in relation to land, soils and geology as well as the submitted application documents. I am not satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the design of the proposed development and the proposed mitigation measures. My main concerns relate to the lack of investigation in relation to the potential effects on the area to the west of the proposed development which has a high susceptibility to landslides. I am also concerned about the proposal to stockpile material for permanent storage in an area

where appropriate geotechnical analysis has not been undertaken and an appropriate design for such a soil repository has not been provided.

I am therefore not satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of land and soil.

10.12. **Hydrology and Hydrogeology**

Issues Raised

The observers raised a number of concerns in relation to water. These are summarised as follows:

- Inadequate drainage proposals, silt deposition (existing quarry) in watercourses and no consideration of the contribution of rainfall to site run-off volumes.
- Impact on groundwater resource and supply for private wells from groundwater drawdown as part of dewatering and from water usage in quarry operations and potential contamination of the resource.
- Flooding issues at private dwelling garden areas.
- Capacity issues at receiving waters from discharges at existing quarry operations and adequacy of the proposed drainage in the event of quarry flooding and inundation.
- Inadequate hydrological baseline data provided and consideration of neighbouring wells.
- Lack of a comprehensive qualitative assessment of the groundwater resource or potential risk to local water supply and to determine the aquifer importance / groundwater vulnerability.
- Inaccurate or unknown quantities of surface water discharge.
- Failure to adequately investigate potential areas of permeability in the bedrock profile.
- Lack of data that confirms dewatering proposals are achievable.

- Overreliance on the operation of the existing quarry in the absence of a robust assessment of the proposed quarry. No detail in relation to the management and treatment of waters used for dust suppression.

Examination of the EIAR

Chapter 7 addresses the impact on Hydrology and Hydrogeology and considers any direct or indirect effects on this resource arising from the proposed development. The chapter outlines the legislative and policy context, the baseline environment, the key characteristics of the proposed development, the potential effects, methodology used and sources of information.

The EIAR notes that no particular difficulties were encountered in the preparation of this chapter of the EIAR.

The following appendices are attached to Chapter 7:

- Appendix E Laboratory Certificates for Surface Water Monitoring.
- Appendix F Flood Risk Assessment
- Appendix G Water Framework Directive Assessment (WFD) Compliance Report

The Planning Authority raised a number of concerns in relation to water with a particular emphasis on the assessment of impacts during restoration and decommissioning phases, clarity on drainage details for site drainage and wastewater proposals, details on coolants proposed for use in the extraction process, the provision of a Construction and Environmental Management Plan (CEMP) and clarification regarding groundwater levels. The planning authority also invited the applicant to assess and respond to the various third-party submissions received.

In response, the applicant provided the following:

- An EIAR Addendum which assessed the potential impact of the restoration and decommissioning phases.
- Proposals for a water management system including details of all drainage infrastructure and discharge controls. The response also included details on

the construction of the proposed settlement ponds as well as the use of temporary sumps within the quarry void and soakaway design.

- Confirmation of wastewater management proposals and the servicing of the same as well as the provision of a high-level alarm.
- Details in regard to the water monitoring plan and the responsibility for implementation.
- Clarification on the use of coolants and the provision of a CEMP,
- Details of the measured ground water levels and cross section drawings showing the settled ground water level in the restored quarry void.
- A categorised response to the submissions raised by the third parties. This included a response to the topics with relevance to hydrology and hydrogeology:
    - Detail in regard to extraction and protection of the rock resource
    - Proximity to the neighbouring quarry
    - Water supply and water pollution
    - Flooding
    - Landslides
    - Sinkholes

The planning authority considered that some elements of the further information request in relation to water were addressed however, they considered the matters in relation to the third-party submissions in regard to crushing and processing aggregates on site were not adequately assessed.

Baseline

Surface Water and Groundwater

The nearest surface waterbody to which the site of the proposed development has connectivity to is the Baunleath stream (EPA Code: 14B95) which is located c.30m southeast of the site boundary. This stream discharges to the Old Leighlin stream (EPA Code: 14O02) (also known as the Madlin River) at a location c.2km from the

site boundary at its nearest point. The Old Leighlin stream discharges to the River Barrow c.2.8km from the site boundary at its nearest point.

The bedrock aquifer underlying the site is classified as a (Rkd) Regionally Important Aquifer – Karstified (diffuse). The site is underlain by the Bagenalstown Lower (IE_SE_G_157) groundwater body. The groundwater vulnerability across the site ranges from Extreme (X) in the west of the site to High (H) and Moderate (M) in the east of the site.

Water Supply

The site does not overlie a public water supply source protection area. However, the Paulstown Public Water Supply (PWS) is located c.1.8km to the west of the site with the Castlewarren Group Water Scheme (GWS) source protection area located c.2.7km to the west.

It is stated in the EIAR that a survey of third-party wells on the GSI database did not identify any private wells in the vicinity of the site. A number of public supply abstraction boreholes were identified at various locations up to a distance of 2.5km northeast of the site. A supply well at the existing quarry to the north of the proposed development was also identified and found to be not mapped on the GSI database.

Wastewater

The proposed development is not located in an area serviced by a public sewer system with neighbouring private dwellings reliant on domestic septic tanks and/or wastewater treatment systems. The proposed development will utilise a sealed tank into which all wastewater from the welfare facilities will be directed to. This tank will be emptied by vacuum tanker and the contents transferred to a suitably licenced wastewater facility for treatment and disposal.

Flood Risk

The Office of Public Works (OPW) National Indicative Flood Mapping (NIFM) which models flood zones for areas not captured under the National Catchment Flood Risk Assessment and Management (CFRAM) Programme. It identifies a number of medium and low probability flood zones to the northeast within 1km of the site along the Old Leighlin stream and the Baunleath stream. The EIAR notes that no fluvial flood zones encroach upon the site. The NIFM mid-range and high-end future

scenario as modelled by the OPW show no considerable change from the present-day scenario.

The GSI historical groundwater flooding data shows flooding in the existing quarry to the north. The existing quarry is operating below the groundwater table and the area floods historically when de-watering pumps are turned off. There are no high, medium or low probability groundwater flood zones at the site or immediate surrounds.

Water Framework Directive (WFD):

The Old Leighlin stream (IE_SE_14O020700) waterbody status is designated as having good status (2019-2024). The EIAR appears to pre-date the latest data from the EPA which provides the status for the period 2016-2021. For the period 2016-2021, the status was moderate. It is also considered 'At risk' of meeting the objectives of the WFD to achieve overall "good" status by 2027

The River Barrow (IE_SE_14B012820) waterbody status is designated as having moderate status (2019-2024) which is unchanged from the period 2016-2021. The risk status for meeting the objectives of the WFD for the River Barrow are currently under review.

The Bagenalstown Lower (IE_SE_G_157) groundwater body is designated as having good status (2019-2024). For the period 2016-2021, the status was also good as reported in the EIAR. It is also considered 'Not at risk' of meeting the objectives of the WFD to achieve overall "good" status by 2027. The groundwater vulnerability across the site ranges from Extreme (X) in the west of the site to High (H) and Moderate (M) in the east of the site.

Potential Effects

The EIAR identifies the potential for a range of environmental effects on Water. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 4 below. Minor effects are not identified, except where there is potential for significant impact interactions, cumulative effects or where concerns have been expressed by parties to the application.

Table 4: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development were not to proceed, the site would remain as a greenfield site, continuing to be used for agriculture and commercial forestry. The site drainage would remain unaltered from its current drainage patterns.
Construction	Sediment run off into drains discharging to the Baunleath stream. Potential pollution of groundwaters from accidental leaks or spills from fuels, oil, lubricants and cement-based products.
Operation	Sediment run off into drains discharging to the Baunleath stream and increased surface water discharge volumes. Impact on groundwater quality from accidental leaks or spills from fuels and any chemicals used. Unplanned events such as accidents at the site or disasters outside of the operator's control such as traffic collisions.
Restoration	The restoration plan includes allowing the quarry void to naturally fill with water with some of the void backfilled with spoil from the surrounding berms. Soil storage areas will be seeded and allowed to revert to scrubland and the proposed set down area and shed will be cleared and restored to scrubland. Potential Impact on groundwater quality from accidental leaks or spills from fuels and any chemicals used. No significant effects on water during the restoration or post-restoration phase envisioned.
Cumulative	Cumulative effects with other planned and permitted development, no significant effects envisioned subject to the implementation of good construction practices for the proposed development and for other permitted development listed for the area.

Mitigation Measures

Mitigation measures to avoid, reduce or offset any potential adverse impacts on water are outlined in Section 7.6 of the EIAR as well as in all the associated documents prepared for the application and subsequent appeal. Many of the mitigation measures are embedded in the design and based on current best practice guidelines. Notable measures during the construction and operational phases include:

Construction Phase

- Carrying out the necessary maintenance and servicing of plant and equipment.
- Refuelling of plant and equipment in a controlled manner by appropriately trained staff and the provision of contingency plans and procedures for accidental spillages set out in an Environmental Management Plan.
- Installation of embedded silt fencing downgradient of works areas.
- Scheduling of works during favourable weather conditions avoiding periods of heavy rainfall.
- Promoting revegetation of bare soil areas or soil storage areas.

Operational Phase

- Provision of a water management system which will comprise surface water attenuation and settlement ponds on the quarry floor.
- Maintaining greenfield run off rates in accordance with a discharge licence and the provision of a hydrocarbon interceptor.
- No storage of hydrocarbons on site with all refuelling carried out directly from a fuel delivery vehicle.
- All servicing, maintenance and repairs to take place off site limiting such on-site work to emergency mechanical repairs.
- Controls in relation to refuelling which will include the provision of a designated fuel pad area with no refuelling within the quarry void and the provision of drip trays, spill kits and absorbent matting for accidental spillages.

- Carrying out the necessary maintenance and servicing of plant and equipment including regular leak detection checks.
- The provision of an Environmental Management Plan

Residual Effects

Subject to adherence to appropriate mitigation measures, design standards and an environmental management plan, the EIAR considered that any residual effects from the proposed development range from imperceptible to moderate in terms of water.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 7 of the EIAR and all the associated documents, including the submissions on file and the applicant's response in respect to Water. I am satisfied that the information submitted in the EIAR demonstrates an understanding of some elements of the baseline environment. However, there are some aspects of the development which I feel have not been adequately assessed in relation to groundwater and surface water which I will expand on in further detail in the sections that follow.

The EIAR provides a range of mitigation and monitoring measures in Sections 7.6 and 7.9 respectively to reduce any potential effects on water. This addresses some of the potential effects that are anticipated for the proposed development and have been summarised above.

Groundwater: The observers raised concerns in regard to possible contamination of groundwater and an overall impact on the groundwater resources in terms of yield during the construction and operation of the proposed development. The potential for contamination of groundwater is primarily related to the use of fuels, oils and other chemicals used during all phases. During construction, the removal of soils and subsoils which provide an element of protection to the underlying groundwater body will increase the exposure which ultimately increases the probability of risk to the groundwater body. This is an unavoidable circumstance of this nature of development where the primary activity involves the removal of such material. However, appropriate mitigation for all phases of the works in relation to fuel control, maintenance of plant and equipment and the provision of an Environmental Management Plan has been set out to ensure the risk associated with this is

addressed during construction and operation. I consider blasting in relation to noise and vibration impacts separately in Section 10.14 below. However, in regard to water and potential interactions with any blasting operation and residues associated with blasting materials, I would have concerns in relation to potential impacts on groundwater quality also. This has not been adequately considered within the EIAR. However, the specifics in regard to blasting methodology and blast design as well as materials used may have been dealt with by way of an agreed condition.

In relation to the groundwater resource and impact on the yield, it has been well established that the proposed quarry will operate below the groundwater table as it develops towards the maximum excavation depth. This will result in there being a need to dewater the void by pumping groundwater as required. The EIAR makes reference to the existing quarry to the north of the proposed development which currently operates below the groundwater table. The reliance of dewatering of that quarry void is also noted and the EIAR makes numerous references to the low volumes / minimal volumes of groundwater ingress at that quarry. The EIAR provides an estimated volume of groundwater ingress for the proposed development at $50m^3$/day which is considered conservative. This figure appears to be based on observations from the neighbouring quarry as well as the interpretation of the underlying geological profile of the site and wider area noting a lack of karst features which facilitate groundwater movement as informed by the site investigation. The EIAR and subsequent grounds of appeal documents has utilised data from the existing quarry which has been made available to the applicant. A notable absence from the data of the existing quarry is the volumes of water discharged from the site which would comprise both surface water and groundwater. The existing quarry operates under a discharge licence which will have a daily discharge threshold in accordance with the Local Government (Water Pollution) Act 1977, as amended with an expectation that monitoring of such flows are a condition of the licence. A commitment to the installation of a flow meter was made in the planning documents submitted as part of Planning Ref. 17/64 for the continued use of the adjacent quarry site. Whilst that data may not have been available to the applicant, it may have provided a more accurate estimation of the discharge that could be considered representative of the proposed development and its wider area.

The site investigation carried out as part of the application included the installation of 5 no. groundwater monitoring wells for which groundwater levels were monitored by manual dipping and using data loggers for providing continuous data in two of the monitoring wells. This provided information on ground water levels and confirmation of groundwater flow direction. I would also note the varied geological profile of the underlying bedrock which has been mapped by the GSI. The site varies between Clongrenan and Ballyadams formations. I refer to the Bagenalstown GWB: Summary of Initial Characterisation as provided by the GSI. An examination of the key properties for the geology and aquifers highlights quite a varied transmissivity. This provides further evidence of the need for a more robust site investigation to confirm the actual characteristics of the underlying geology. Considering the concerns raised by the observers, a more accurate estimation of the volumes of groundwater ingress to the proposed quarry void, which are ultimately a groundwater loss from an active resource is required. This is necessary to assess both local impacts as well as impact on the whole groundwater body from the proposed development and noting the baseline situation as influenced by the existing quarry to the north. In the absence of a more detailed site investigation and analysis such as a groundwater abstraction feasibility study, I am not satisfied that significant effects can be ruled out for this aspect. I provide further examination of impacts on groundwater quantity from the perspective of meeting WFD objectives below.

Surface Water: The risk of potential contamination of surface waters during the construction and operation of the works has been raised by the observers. The EIAR has set out drainage proposals and measures for the treatment of silt laden water and a drainage design inclusive of hydrocarbon interceptors and a controlled discharge. The EIAR also provides details on the proposals for surface water settlement ponds along with provision for additional temporary settlement ponds to react to changing situations and ground conditions and to ensure at least a 24hr holding time for settlement. The EIAR also provides for the planning of works around rainfall events, drainage proposals such as silt fencing and programmes of inspections to ensure the adequacy of the mitigation is monitored throughout the works. I am satisfied that the principles for site drainage, settlement, removal of hydrocarbons and attenuation prior to discharge are well established and in accordance with best practice.

However, and notwithstanding the concerns in regard to groundwater ingress volumes as set out above, I have concerns in regard to surface water volumes that the proposed drainage system will be required to manage. In addition to estimated groundwater ingress, the EIAR calculates the volume of surface waters for the site based on rainfall data. The volume presented is 26.87 m^3/day. The EIAR does not provide for the scenario of an extreme rainfall event (e.g. 1 in 100-year rainfall event). The response to the further information request does however refer to storm events where excess water can be stored and attenuated on the quarry floor so that discharge can be limited to ensure no effects occur in terms of surface water quality / quantity downstream. This is interpreted as effectively flooding the quarry and using it as a temporary sump during such a scenario. Considering the lack of analysis or quantification of storm water for such an event, albeit accepting the likelihood of occurrence is rare, the reliance on such a means of stormwater management requires greater examination. I note the comments of an observer in their submission in regard to the ability of the proposed drainage infrastructure to cope with such a scenario. It is also not clear that the hydrobrake would be shut off in such a situation although I make the assumption that it would.

It can be accepted that such contingencies could be set out in an Emergency Response Plan for the site by way of condition. However, considering the reliance on managing stormwater in this manner, the lack of information on the true anticipated discharge coupled with the destination of the discharge which ultimately has connectivity to the River Barrow and River Nore SAC (Site Code: 002162), I believe it necessary that the procedure for such a scenario is provided as part of any assessment of likely significant effects. This is also necessary from the perspective of Appropriate Assessment (Section 12) and the objectives of the Water Framework Directive (see below). Such a procedure should include details on the steps taken to effectively shut off the discharge and provide an estimation of the storage volume of the site based on the extraction phase and workings that exist at the quarry. It should also provide details of a dewatering procedure setting out the process for settlement and by what means in such a scenario, discharge rate and a timeline for a complete dewatering of the site and return to the intended drainage system. It is acknowledged that such a procedure would vary as the quarry develops and would

be a working document that must be adaptable to variations that will occur within the quarry void.

Therefore, I am not satisfied that significant effects on water or the interactions that may occur with other factors such as soils can be discounted. My concerns relate to a lack of clarity on the true anticipated volumes of surface water volumes that the proposed drainage system will be required to manage. This relates specifically to a failure to consider the scenarios presented by extreme rainfall events and the increased surface water volumes that will be required to be managed and discharged.

I provide further examination of impacts on surface water quality from the perspective of meeting WFD objectives below.

Flood Risk: The observers raised concerns that the proposed development would result in flooding in the area creating issues at private dwellings and with the capacity at the receiving waters from the discharge. One submission suggested that public drains (drainage channels) were already at capacity and prone to overflowing during prolonged rainfall. Whilst I have raised concerns about the volumes and overall containment of waters at the site as required and the subsequent discharge, I am satisfied that the drainage proposals which include settlement lagoons and a hydrobrake system to control the discharge and mirror greenfield run-off rates in normal conditions is in line with best practice. Where an issue with drain capacity at a local level exists in the baseline environment, a discharge that will mirror the existing greenfield run-off rates is unlikely to contribute to a further deterioration.

Water Framework Directive

I have assessed the proposed development and considered the objectives as set out in Article 4 of the Water Framework Directive to protect and, where necessary, restore surface and ground waterbodies in order to reach good status (meaning both good chemical and good ecological), and to prevent deterioration.

I have completed a Stage 1 Screening and Stage 2 Assessment to determine compliance with the objectives of the Water Framework Directive (WFD) (Appendix 1) the findings of which are summarised in the sections that follow.

Surface Water

The proposed development will discharge to a drain which is connected to the Old Leighlin Stream_020 which ultimately discharges to the Barrow_190. A site drainage design has been proposed which will ensure silt laden water passes through the appropriate settlement prior to discharge. The discharge will pass through a silt trap and an oil interceptor prior to discharge to the Old Leighlin Stream_020. However, concerns remain as regard the volume of surface water that will be managed at the site and the influence of groundwater and additional stormwaters as a result of extreme weather events have not been considered adequately.

Groundwater Quality

The proposed development will comprise a quarry which will be excavated to a level below the groundwater table. Therefore, direct interaction with groundwater will occur. The various mitigation control measures proposed for hydrocarbon storage, refuelling, the provision of spill kits for accidental spillages and the provision of a hydrocarbon interceptor are satisfactory for addressing any risk associated with this during construction, operation and decommissioning/restoration phases.

Groundwater Quantity

The proposed dewatering of the quarry void along with the volume of groundwater ingress from the surrounding area is a loss of the groundwater resource. The EIAR and WFD assessment has relied on knowledge or observations from the existing quarry to the north. It may be the case that whilst there is potential for impacts for groundwater quantity at a local level as discussed above, it may not be substantial enough to impact on the status of the whole groundwater body as outlined by the EPA in their Methodology for Establishing Threshold Values, and the Assessment of Groundwater Status and Pollution Trends. However, a more robust site investigation and analysis is required to determine the true loss to the groundwater resource in order to determine if the objective of ensuring a balance between abstraction (in this case groundwater losses from dewatering) and recharge is being met. The EIAR has assumed that every private dwelling in the area has a well and has acknowledged that groundwater wells can be negatively impacted by drawdown. However, the assessment relies on the findings of their site investigation that reveals an absence of karst features, conduits or preferential flow paths in the bedrock aquifer beneath the site and thus groundwater inflow into the extraction area will be minimal and as a

result the proposed development will not have a significant impact on local groundwater levels. There is a lack of clarity on the actual characteristics of the underlying geology. A variation exists in the underlying bedrock formation across the site as evidenced in the GSI data for the area and there is a need for a more robust site investigation.

Water Framework Directive Conclusion

In conclusion, I am not satisfied that the necessary information has been provided or an adequate assessment has been undertaken to determine as to whether the proposed development would not result in a risk of deterioration of surface water and groundwater. Concerns remain as regard the volume of surface water that will be managed at the site, the influence of groundwater and additional stormwaters as a result of extreme weather events and the impact on the groundwater resource have not been assessed adequately.

Lakes, transitional and coastal waterbodies are not applicable to the proposed development

Based on the information provided, it cannot be excluded from further assessment to determine whether the proposed development would jeopardise a surface water and groundwater waterbody in reaching its WFD objectives.

Conclusion: Direct and Indirect Effects

I have considered all of the written submissions, and any specific points made in relation to water as well as the submitted application documents. I am not satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the design of the proposed development and the proposed mitigation measures.

My main concerns relate to the lack of investigation to confirm the actual characteristics of the underlying geology and a more accurate estimation of the loss from the groundwater resource as a result of the required dewatering. There is also a lack of accurate information on the volume of groundwater ingress that will occur within the quarry void that the proposed drainage system will be required to manage.

I am also concerned by the failure to consider extreme rainfall events in the estimation of surface water volumes that will be generated within the quarry void and will also be managed by the proposed drainage system.

Finally, in the absence of the above information, it cannot be determined as to whether the proposed development would jeopardise a surface water and groundwater waterbody in reaching its WFD objectives.

I am therefore not satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on hydrology and hydrogeology.

10.13. **Air Quality and Climate**

Issues Raised

The observers raised concerns in relation to impacts on air quality from the proposed development as well as the impacts from dust emissions on animal welfare in the area. It was also suggested that analysis of impacts of air quality fails to consider appropriate guidelines with no analysis or modelling of air for pollutants in accordance with the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC). The interpretation of dust monitoring data from the existing quarry operation was also deemed to be inaccurate.

Examination of the EIAR

Chapter 8 addresses the impact on Air Quality and Climate and considers any direct or indirect effects arising from the proposed development. The chapter outlines the legislative and policy context, the baseline environment, the key characteristics of the proposed development, the potential effects, methodology used and sources of information.

The EIAR notes that no particular difficulties were encountered in the preparation of this chapter of the EIAR.

The Planning Authority raised concerns that the EIAR failed to consider the cumulative impacts from all other existing projects and/or proposed projects in relation to impacts arising from air/dust. The applicant was also requested to include provisions for a sprinkler system along the access road as a means of providing

adequate dust suppression noting that the proposed wheel wash was not considered sufficient.

In addition, the planning authority also invited the applicant to assess and respond to the various third-party submissions received.

In relation to the assessment of cumulative impacts, the response included a summary of the requirements to undertake cumulative assessment and the misinterpretation of the same by the planning authority. The response was also accompanied by an EIAR Addendum which examined Landscape and Visual Impact Assessment, Archaeological Impact Assessment and provided a Mitigation and Monitoring Summary with no further assessment of Air Quality and Climate other than reproducing the same mitigation and monitoring that had been provided in the EIAR. The applicant also provided details of a proposed sprinkler system along the access road.

The planning authority considered that the matters in relation to the cumulative impacts were not adequately assessed.

In relation to the submission raised by the observers on air quality and climate, a response was prepared by the applicant which addressed the issues raised by category. For air quality and climate, the response again included the same mitigation and monitoring that had been provided in the EIAR

The planning authority found there to be a lack of information in regard to potential impacts from the crushing and processing of aggregates on site and the cumulative impacts were not adequately assessed.

Baseline

A total of 16 no. sensitive receptors were identified within a 400m buffer from the site boundary. These sensitive receptors are all residential dwellings, and the applicant has confirmed that the location labelled as SR15 in Figure 8-4 of the EIAR represents two dwellings which are equidistant from the site boundary and are also the nearest dwellings to the site at 45m to the boundary and 70m to the edge of the proposed quarry void at their nearest points.

The site is located within Zone D as defined by the Air Quality Standards Regulations 2011 (as amended). Data from EPA monitoring stations was provided

within the EIAR with an estimate of the background concentration in the region of the proposed development for Nitrogen Oxides (NO_2) and Particulate Matter (PM_{10}).

Meteorological data from the nearest operational Met Eireann weather station at Oak Park, Co. Carlow identified the prevailing wind direction to be from the southeast with wind speeds averaging 7 to 10 knots. The average temperature for the area ranges from 5.1° C in January to 15.6° C in July with annual rainfall for the east of the country ranging from 750 – 1000mm.

Potential Effects

The EIAR identifies the potential for a range of environmental effects on Air Quality and Climate. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 5 below. Minor effects are not identified, except where there is potential for significant impact interactions, cumulative effects or where concerns have been expressed by parties to the application.

Table 5: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development were not to proceed there would be no change to the existing environment. Any existing dust or transport related impacts on the air quality in the area would remain unaltered. The macro and microclimate would remain consistent with local and national trends.
Construction	Air quality impacts during construction activities from: • Dust deposition. • Elevated PM_{10} and $PM_{2.5}$ from dust generating activities. • Increased concentrations of volatile organic compounds, nitrogen oxides, and sulphur oxides from plant, equipment and vehicle exhaust emissions. • Greenhouse gas from onsite machinery and traffic.
Operation	Dust Impacts. Traffic-Related Air Emissions.

	Greenhouse gas from onsite machinery and traffic.
Restoration	No significant effects envisioned.
Cumulative	Cumulative effects with other planned and permitted development, no significant effects envisioned subject to the implementation of good construction practices for the proposed development and for other permitted development listed for the area.

Mitigation Measures

Mitigation measures to avoid, reduce or offset any potential adverse impacts on air quality and climate are outlined in Section 8.6 of the EIAR as well as in all the associated documents prepared for the application and subsequent appeal. Many of the mitigation measures are embedded in the design process and based on current best practice guidelines. Notable measures during the construction and operational phases include:

Construction and Operational Phase

- Dust suppression using water bowser and sprinkler systems during dry weather for both access routes, haul roads and stockpiles.
- A wheel wash system to prevent dust transfer to the public road network and daily visual inspections for dust levels and an escalation procedure for occasions where high dust levels are identified.
- Regular use of a road sweeper unit as required at the site entrance and public road network.
- Strategic siting of stockpiled material taking account of wind exposure and the duration of time that the material will be stockpiled for.
- Engine and exhaust routine maintenance and the protocols to ensure engines running and idling are avoided.
- Covering of material that has the potential to generate dust when being transported within or off the site.

Residual Effects

Subject to adherence to appropriate mitigation measures to avoid or reduce adverse impacts, the EIAR considered no residual effects from the proposed development in terms of air quality and climate are anticipated.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 8 of the EIAR and all the associated documents, including the applicant's response to the further information request, and submissions on file in respect to Air Quality and Climate. I am satisfied that the information submitted in the EIAR, and all the associated documents adequately demonstrates an understanding of the baseline environment, the potential impacts and provides a suitably comprehensive range of mitigation and monitoring measures in Sections 8.6 and 8.8 respectively of the EIAR to reduce any potential effects on Air Quality and Climate.

The EIAR states that during the construction phase the greatest potential for impact on air quality is from construction dust emissions. The primary sources are listed as soil excavation works, material transportation including loading, unloading, stockpiling, cutting/filling and various vehicular movement within and to/from the site. For the operational phase the potential impact from dust has even greater prominence due to the nature of the works that will be carried out within that phase. The EIAR provides an analysis of the potential impacts associated with dust emissions.

The assessment is based largely on Institute of Air Quality Management (IAQM) Guidance (2016) and takes account of wind speed and direction for the area. The percentage of the various prevailing wind directions relative to the sensitive receptors likely to be affected in the area was presented in Table 8-9 of the EIAR which show the highest numbers of houses are situated down wind of an East prevailing wind which has a frequency of occurrence of 0.79% for wind speeds of >5m/s. The assessment shows that there are no receptors within 400m downwind of the prevailing wind from the south and south-west which has the highest frequency of occurrence. The sensitive receptors which are located downwind of the prevailing wind in a west and north-west which has the next highest frequency of occurrence are SR14, SR15 and SR16. Overall, the sensitive receptors fell within the *Infrequent*

and *Moderately Infrequent* categories for the prevailing wind from the dust source. Table 8-11 provides a characterisation of receptor distance from source which outlines that SR14 and SR16 fall within the *Intermediate* and *Distant* categories respectively with SR15 falling within the *Close* category as it is located <100m from the source.

Table 8-13 consolidates the characterisation of receptor distance from source with the frequency categories which concludes that the effectiveness of the pathway for all sensitive receptors examined ranged from *Ineffective* to *Moderately Ineffective* which when applied to the criteria in Table 8-14 gives a dust impact risk of *Low Risk* to *Negligible Risk* when applying the *Medium* scale to the Residual Source Emissions. This *Medium* scale was chosen in order to assess the worst-case scenario as outlined in Section 8.5.1.2.1.1.1 of the EIAR. These dust impact risks were then applied to the receptor sensitivity for the area to determine the magnitude of dust effects. The sensitivity for all receptors was considered *High* and therefore resulting in a magnitude of dust effects that ranges from *Slight Adverse Effect* to *Negligible Effect*. The summary table (Table 8-16) under Dust Impact Risk and Magnitude of Dust Effect columns list all sensitive receptors to be negligible. I would argue that this ranges between Low and Negligible Risk for Dust Impact Risk and Slight Adverse Effect to Negligible Effect for the Magnitude of Dust Effect. Irrespective of this minor conflicting interpretation, I am satisfied that the examination is robust and does present favourable outcomes in terms of the number of dwellings downwind from the most frequent prevailing winds and that the effectiveness of pathways to the sensitive receptors is predominantly ineffective.

The observers raised concerns in relation to the IAQM Guidance (2016) and their application both in general and in an Irish context considering they were designed specifically for use in England. The observation also highlighted that the guidelines require that local topography and local wind patterns must be taken into account and that the assessment relies on data from a Met Eireann weather station which is a considerable distance from the site. Whilst the points raised are understood, I also understand the practicalities associated with collecting weather data which is reasonably site specific given the locations of Met Eireann weather stations across the country. I consider that the choice of a *Medium* scale for the Residual Source Emissions when the site and proposed operations are more aligned to a Low scale is

some means of compensation for any potential shortcomings in the assessment methodology owing to the weather data used or any concerns in regard to its applicability to an Irish setting.

The observers also raised concerns in relation to the absence of any modelling of air for pollutants in accordance with the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC). I have examined the EIAR which considers traffic related emissions. The assessment refers to TII Guidance which recommends that concentrations of nitrogen dioxide, PM_{10} and $PM_{2.5}$ should be predicted in line with the methodology set out in the guidance where Annual Average Daily Traffic (AADT) flows near to sensitive receptors is predicted to have an increase of >10%. The EIAR refers to its own Chapter 12 for Traffic which provides estimated average traffic volumes for the construction phase which is stated to be a <10% increase and therefore a detailed air quality assessment is not required for that phase. For the operational phase, the requirement for an air quality assessment from construction traffic has also been screened out using an interpretation of IAQM Guidance (2017). I am satisfied that impacts on air quality with respect to traffic associated with all phases of the proposed development have been considered and the methodology applied for screening out for any further assessment is reasonable.

The potential impact on climate is also considered in the EIAR which examines the emissions from combustion engines used during the construction phase. The EIAR concluded that due to the scale and duration of the construction phase and the mitigation proposed in relation to plant and equipment maintenance, the contribution to national greenhouse gas emissions will be insignificant and therefore will have no considerable impact on climate. For the operational phase, the assessment considers the minor increases predicted for traffic movement and the limited scale and quantity of machinery to be used in the proposed development in concluding that emissions will be marginal in terms of overall national GHG emission estimates, and therefore unlikely to have an adverse effect on climate. I recognise that the current practices within the extractive industry will be required to evolve greatly in order to satisfy the objective of the Climate Action Plan to reduce embodies carbon in cement and concrete. I am though of the view that plant and equipment which emit greenhouse gases can evolve in accordance with moves to decarbonise the transport and land use sectors as set out in the National Mitigation Plan. I am

satisfied that with advances in technology for plant and equipment associated with the quarrying and haulage of the quarried product are likely.

Considering the scale of the proposed development and the annual output, the development is likely to represent a very low percentage of the 2030 Sectoral Budget for Transport.

The current proposal and likely extraction and transport methodologies will utilise plant and equipment which will utilise known emitters of greenhouse gases. Although I note that the predicted GHG emissions associated with the proposed development have not been provided, I am satisfied that any effects arising from standard and well-maintained plant and equipment would be, not significant.

The applicant provided another EIAR Addendum – Response to Reasons for Refusal (EIAR Appeal Addendum) as part of the first party appeal documents to address the Planning Authorities reasons for refusal in relation to what was considered to be an inadequate assessment of the cumulative impacts. This document provided a summary of the dust assessment prepared as part of the EIAR. The EIAR Appeal Addendum provided detail on the rationale for assessing dust impact for receptors within 400m in accordance with information provided by IAQM guidance all of which was previously set out in the EIAR. It refers to the closest receptor being 70m west of the site which I consider is a typo and should be listed as east of the site. I also refer to my own interpretation of the correct set back distance to the site boundary/quarry void provided in the Baseline section above. It stated also that the greatest potential for high rates of dust deposition and elevated PM_{10} concentrations is for areas within 100m of the source. The dust assessment concluded a negligible impact on sensitive receptors. There is a reliance on the surrounding terrain and natural features to provide a barrier, reduce concentrations, lengthen pathways, affect air flow, increase and inhibit dispersion and dilution of dust generated by the proposed development. The EIAR Appeal Addendum provided the expected standard mitigation measures for the management and control of dust to ensure significant adverse cumulative impacts do not occur.

For impacts from dust, the case presented in the appeal documents refers to the fact that crushing and processing of unusable stone will be infrequent and will not be a continuous source of dust. I would consider that as the quarry develops to a greater

depth, the extraction operations will benefit from the enclosure provided by the surrounding quarry wall in terms of dust control. It is also noted that at greater depths, the dimensional stone will be more prevalent and thus less unusable stone for processing.

The first party appeal documents provided an analysis of the dust monitoring that has been carried out at the existing quarry to the north of the proposed development. This provided an interpretation of the results for dust monitoring undertaken at 3 no. locations over 2021 and 2022. The results show the quarry to be largely in compliance with a 350mg/m^2/day threshold with the exception of some samples which had been either damaged or soiled with organic matter.

Whilst the results from the monitoring of the existing quarry provide useful data to demonstrate that a quarry has been able to operate in the area in general compliance with a dust level threshold, it does not provide any guarantee that with the introduction of a second operation in the area that this can be continued. I acknowledge the difficulties in providing any accurate or credible modelling on the dust levels that will occur once a second quarry comes operational due to the changing nature of the operation throughout its phases. I am though satisfied that appropriate mitigation exists for the control and management of dust levels at such quarrying operations and that the operation and implementation of the same can be effectively measured by a dust monitoring condition. I would also stress that the operation of the proposed development would also be subject to providing greater detail on processing and if it could be facilitated within the developing quarry void as extraction continues. It would also be helpful to demonstrate how ongoing operations will evolve and promote changes in processing and work methods to provide greater control of dust generating activities and a reduction in dust levels.

Conclusion: Direct and Indirect Effects

I have considered all of the written submissions, and any specific points made in relation to air quality and climate as well as the submitted application documents. I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed

development would not have any unacceptable direct, indirect or cumulative effects in terms of air quality and climate.

10.14. Noise and Vibration

Issues Raised

The observers raised concerns in relation to impacts from as a result of noise on animal welfare in the area, the adequacy of the noise impact assessment and the scope of the assessment with respect to the true volumes of processing on site, inaccuracies in noise predictions with respect to errors in the mapping of residential dwellings and impacts associated with blasting and the interaction with areas susceptible to landslides and the groundwater supply.

Examination of the EIAR

Chapter 9 addresses the impact from Noise and Vibration and considers any direct or indirect effects arising from the proposed development. The chapter outlines the legislative and policy context, the baseline environment, the key characteristics of the proposed development, the potential effects, methodology used and sources of information.

The EIAR notes that no particular difficulties were encountered in the preparation of this chapter of the EIAR.

The Planning Authority raised concerns in relation to a lack of clarity on the proposed methods of extraction with references to both blasting and hydraulic breaking with some sections (Chapter 9) referring to hydraulic breaking only. The applicant was requested to clarify if blasting would be employed as an extraction methodology and that it be fully assessed in the EIAR. The Planning Authority also felt that the EIAR failed to consider the cumulative impacts from all other existing projects and/or proposed projects in relation to noise.

In addition, the planning authority also invited the applicant to assess and respond to the various third-party submissions received.

In response, the applicant provided confirmation that blasting was to be considered as an extraction methodology but was dependent on ground conditions that required such a methodology to be employed and concluded that the effects would be brief,

slight and negative. The response was also accompanied by a safety method statement for blasting.

The planning authority considered that the relevant sections of the EIAR had not been amended to take account of the full potential impact of blasting as an extraction methodology and had also failed to assess the potential impacts of processing aggregates on site.

In relation to the assessment of cumulative impacts, the response included a summary of the requirements to undertake cumulative assessment and the misinterpretation of the same by the planning authority. The response was also accompanied by an EIAR Addendum which examined Landscape and Visual Impact Assessment, Archaeological Impact Assessment and provided a Mitigation and Monitoring Summary with no assessment of noise and vibration other than reproducing the same mitigation and monitoring that had been provided in the EIAR.

The planning authority considered that the matters in relation to the cumulative impacts were not adequately assessed.

In relation to the submission raised by the third parties on noise and vibration, a response was prepared by the applicant which addressed the issues raised by category. For noise and vibration, the response made reference to information within the EIAR regarding screening berms and attenuation assumptions as a reduction factor. On the matter of blasting, the applicant again made reference to the ground conditions that might require blasting to be employed, its infrequent use as an extraction methodology and the likely effects. The planning authority found there to be a lack of information in regard to potential impacts from blasting and the crushing and processing of aggregates on site and the cumulative impacts were not adequately assessed.

Baseline

An examination of the receiving environment has identified 16 no. noise sensitive receptors at distances up to 400m from the site boundary in various directions.

A number of clarifications were made in the subsequent Further Information response with regard to the correct distance between some properties and the boundaries of the proposed development site. I have interpreted that Noise Sensitive

Location (NSL)15, which represents the location of two dwellings, are the nearest noise sensitive receptors at 45m to the boundary and 70m to the edge of the proposed quarry void at their nearest points.

The area has not been identified as a Quiet Area using the screening process set out in the EPA's noise guidance document (NG4). The criteria in which the area does not meet is proximity to an urban area with a population of >10,000, not being 3km away from any local industry and not being >7.5km away from any motorway or dual carriageway. The EIAR refers to the NG4 guidance which recommends that baseline noise monitoring be conducted to determine if areas which are not a Quiet Area have a low background noise. Baseline noise monitoring has not been undertaken for the proposed development. The EIAR goes on to provide a list of the NG4 average background noise levels for daytime, evening and night-time for areas of low background noise but provides no clarity as to whether it considers the site to be in an area of low background noise area.

Potential Effects

The EIAR identifies the potential for a range of environmental effects from Noise and Vibration. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 6 below. Minor effects are not identified, except where there is potential for significant impact interactions, cumulative effects or where concerns have been expressed by parties to the application.

Table 6: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development were not to proceed, the site would remain as a greenfield site, continuing to be used for agriculture and commercial forestry. Noise and vibration levels would remain unchanged onsite and at nearby sensitive receptors.
Construction	Noise impacts generated from: Plant and equipment used for site preparation including demolition, excavation and development works.

	Construction traffic on the public road network.
Operation	Plant and equipment used for extraction works during the operational phase. Vibration impacts associated with blasting. Noise from operational traffic on the public road network.
Restoration	No significant effect envisioned.
Cumulative	Cumulative effects with other planned and permitted development, no significant effects envisioned subject to the implementation of good construction practices for the proposed development and for other permitted development listed for the area.

Mitigation Measures

Mitigation measures to avoid, reduce or offset any potential adverse impacts from noise are outlined in Section 9.6 of the EIAR as well as in all the associated documents prepared for the application and subsequent appeal. Many of the mitigation measures are embedded in the design process and based on current best practice guidelines. Notable measures during the construction and operational phases include:

- Plant selection, set-up, siting and appropriate usage such as avoiding excessive engine revving and switching off engines when not in use.
- Routine maintenance and upkeep of plant and equipment.
- Maintaining internal haul routes and avoiding the development of steep gradients.
- Good materials management and avoiding material movement or dropping from heights that may generate increased noise levels
- Use of alternative systems for reversing alarms on plant and appropriate panelling on plant and equipment to avoid noise generation.
- Monitoring of noise levels during critical periods.

Residual Effects

Subject to adherence to appropriate mitigation measures to avoid or reduce adverse impacts, the EIAR considered no residual effects from the proposed development in terms of noise and vibration are anticipated.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 9 of the EIAR and all the associated documents, including the applicant's response to the further information request, and submissions on file in respect to Noise and Vibration. I have concerns that the information submitted in the EIAR, and all the subsequent appeal documents do not adequately present an understanding of the baseline environment or the potential impacts. I will expand on in further detail in the sections that follow. I have noted the mitigation and monitoring measures in Sections 9.6 of the EIAR to reduce any potential effects on surrounding sensitive noise receptors.

I have set out in the section above on Baseline that a baseline noise survey to the establish the background noise environment has not been undertaken. I consider this to be a notable shortcoming in the overall assessment of noise. I have set out above that the EIAR has screened the site out as being in a Quiet Area in accordance with NG4. However, the assessment has failed to carry out a baseline noise survey as per the recommendation of NG4 to establish if the area in question is an area of low background noise.

The EIAR provides an examination of the noise impacts from the proposed demolition activities and the operational phase with predicted noise levels for each plant item provided from distances ranging from 10 – 755m for demolition activities and 10 – 395m for the operational phase.

For demolition activities, the predicted noise levels at 10m from the point source, as would be expected shows an exceedance of the noise thresholds provided by the EPA Guideline Document for the Extractive Industries (2006) which was reproduced in Table 9-2 (on page 250 of the EIAR). The predicted exceedance at this distance was for each item of plant as well as the cumulative figure provided which is a worst-

case scenario that considers all plant operating at the same time. As there are no noise sensitive receptors located within such a short distance, this does not raise an issue. The next band of noise predictions is provided at 215m which is consistent with the separation distance between the structures proposed for demolition and the nearest NSLs to these demolition works. The predictions show compliance for the plant items both individually and cumulatively.

For operational phase traffic, it has been concluded in the EIAR that the traffic routes are not expected to experience an increase of more than 25% therefore, in line with the Design Manual for Roads and Bridges (DMRB), the change in noise levels associated with traffic will be <1db which would be an imperceptible effect.

For the operational phase, the predictions for certain items of plant show exceedances both individually up to a distance of 120m and cumulatively to a distance of 170m. The EIAR notes these predicted exceedances in relation to cutting equipment and associated haulage to site and refers to the presence of hedgerows between the works areas and receptors that may abate the noise effects. The EIAR also relies on an expectation that the noise levels at the nearest Noise Sensitive Location (NSL) will be lower than that predicted.

The observers raised concerns in regard to adequacy of the noise impact assessment. I would have similar concerns in relation to the methodology employed both for the establishment of background noise and the overall consideration of background noise for the predicted levels provided in the EIAR. It is not clear how these have fed into the analysis, if at all. The absence of baseline noise survey is also a considerable omission from the overall analysis. It is noted that subsequent analysis has been undertaken which are examined in the sections that follow.

The documents submitted as part of the first party appeal included an EIAR Appeal Addendum to address the Planning Authorities reasons for refusal and included an appended Noise Impact Assessment. This EIAR Appeal Addendum provided further mitigation to avoid significant noise impacts and to minimise cumulative blasting impacts which included minimising air overpressure, warning sirens prior to blasts, regular blast monitoring, avoiding concurrent blasts with the neighbouring quarry, advance notice to neighbours and maintaining a complaints log. The EIAR Appeal Addendum also provided information for the existing quarry operation to the north.

This included compliance monitoring data which had been collected through noise surveys at monitoring locations in that quarry as required by a condition of its planning permission. The assessment provided a noise impact prediction model using the measured data from the monitoring campaign to calibrate modelling. The predictions were provided for 19 no. NSLs and demonstrated compliance with the noise thresholds set by the condition of the planning permission.

Modelling was also undertaken for the proposed development both individually for the proposed development and cumulatively with the existing operation to the north. This involved using the measured data from the compliance monitoring campaign from the existing quarry to calibrate modelling for the proposed development. The methodology employed an assumption that noise sources would be doubled by the introduction of the proposed new quarry in addition to the existing operation.

The assessment also considered operational traffic which provided a similar conclusion to that of the EIAR in that an increase of <20% traffic volumes would result in a <1db increase in noise levels and not have any negative noise impact on the development although I note that the correct percentage in the DMRB in regard to traffic increase is 25%.

The information provided in the first party appeal response included a more considered examination of the noise with a somewhat more competent methodology than that attempted in the EIAR. The use of modelling software and some attempt to establish the background noise levels provides some confidence in the assessment. However, the use of compliance monitoring data from the existing quarry to establish the background noise level is questionable for a number of reasons. The locations N1 – N3 are all within the confines of the existing quarry. The proposed development brings quarrying activity much closer to dwellings south of the proposed development such as NSLs 9-14 and NSL 17 as set out in Figure 1 of the Noise Impact Assessment. It is difficult to see how the data collected from N1 – N3 to provide background noise levels can be considered representative of these locations. It also results in there being a lack of information on the magnitude of change for these receptors which is a key consideration when determining the significance of any impact both individually from the proposed development and cumulatively with all permitted and proposed development in accordance with criteria set out by the Institute of Acoustics / Institute of Environmental Management and

Assessment (IOA/IEMA) *Guidelines for Environmental Noise Impact Assessment*. I am also concerned as to how it would be intended to demonstrate compliance at the proposed development considering the methodology adopted to determine background noise levels. The existing quarry has, in the Audit Reports for 2021 and 2022 as provided in the first party appeal to the proposed development, demonstrated compliance with the noise condition and whilst it may be possible to demonstrate the same for the proposed development, both the information and methodology for doing so has not been presented in this appeal.

In relation to blasting, greater clarity as to its intended use as an extraction methodology has been provided at various stages of the application and subsequent appeal. The Noise Impact Assessment (Appendix 1 of the EIAR Appeal Addendum), Section 5.1 examines the potential impact from blasting. The examination is largely based on the findings of the monitoring of blast events from the existing quarry. The data from the monitoring of these blast events has been included in the appeal documents. It is acknowledged that there are difficulties in completing accurate and representative modelling of the extent of vibration associated with blasting. The data that demonstrates compliance with the conditions of the existing quarry are encouraging in this regard however, the addition of an enlarging footprint of blasting cannot be overlooked. I acknowledge that if blasting were to be adopted it could be carried out under strict condition with a requirement to adhere to vibration levels which would be the subject of monitoring. A condition could also be adopted that prevents concurrent blasting in both quarries and I note a such a restriction was suggested by the applicant in this regard as set out in the first party appeal documents. A provision for carrying out test blasting to optimise the overall blast design and to provide further comfort that blasting can be completed within the thresholds outlined in the EPA Guideline Document for the Extractive Industries (2006) would also be required, as a minimum. However, I am not satisfied that significant effects from interactions that may occur with other factors such as soils and water from any blasting operations can be discounted. This is discussed in further detail in Sections 10.11 and 10.12 above and Section 10. 20 below.

Conclusion: Direct and Indirect Effects

I have considered all of the written submissions, and any specific points made in relation to noise and vibration as well as the submitted application documents. I am

not satisfied that any potential impacts in relation to noise and vibration have been adequately established. I believe the approach to the assessment in both the EIAR and subsequent appeal documents fails to follow the basic principles of noise assessment by not undertaking a baseline noise assessment, especially where it is considered a requirement in accordance with NG4. This brings in to question the entire validity of assessment and whether it is representative of the proposed development. In the absence of this it cannot be determined if the impacts can be avoided, managed and mitigated by the measures which form part of the design of the proposed development and the proposed mitigation measures. I am therefore not satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of noise and vibration.

10.15. **Material Assets, Cultural Heritage and the Landscape**

The format of my assessment follows the headings as set out in the Planning and Development Act, 2000 (as amended). Having regard to the information provided in the applicant's EIAR, the following sub-headings are used:

- Traffic
- Waste and Utilities
- Archaeology and Cultural Heritage
- Landscape and Visual Assessment

Traffic

Issues Raised

The observations raised concerns regarding increased traffic on local roads and the cumulative impact of same taken together with the existing quarry at this location.

Environmental Impact Assessment Report

Chapter 12 considers the levels of traffic currently using the adjacent public road network. It assesses the impact of construction and operational traffic generated by the proposed development on the receiving environment. The chapter outlines the methodology used, sources of information and the assessment criteria.

The EIAR was informed by an assessment of the existing conditions and the surrounding road network undertaken in January 2023 and a 24 hour automatic traffic count undertaken in November 2022. Appendix H provides for a traffic survey of existing traffic.

The EIAR notes that no particular difficulties were encountered during this chapter.

Baseline

Access to the site will be via the L3036 local road. This is a two way local road that runs in an approximately north-south alignment to the east of the subject site between Old Leighlin to the north and the R448 to the southeast. In the vicinity of the site, this road has a relatively straight horizontal alignment towards the north, with a straight alignment initially to the south followed by a series of bends.

The L7117 is c. 5m wide and is noted to feature numerous changes to both its vertical and horizontal alignment. The R448 is a two way regional road (formerly the N9 national primary road. In the vicinity of the application site, the R448 is c. 12-13 metres wide with a single lane in each direction. It accommodates c. 1.5m wide cycle lanes on both sides of the vehicular carriageway. The M9 motorway is located close to the site with the nearest junctions being junction 7 to the south and junction 6 to the north (c.10km straight line distance).

A 24 hour traffic count was undertaken on Wednesday the 23rd of November on the L3036 adjacent to the site. The results are attached to Appendix H and summarised in Table 12-2.

The survey indicates that the peak hours were identified to be 09:00-10:00 hrs AM and 16:00-17:00 hrs PM. The traffic counts indicated low levels of vehicular traffic with a total of 403 vehicles during a 24 hour period.

Potential Effects

Likely significant effects of the development are summarised in Table 7 below.

Table 7: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	If the proposed development does not proceed, the lands will continue to be used for agricultural purposes, and no additional traffic would be generated.
Construction	Construction period of 6 months. Average of 5 no. construction workers will be based on the site each day with a maximum of 5 contractor staff vehicle trips or 2 trips if car sharing occurs. Daily average of 5 no. HV trips and 2 no. LV (delivery vans) trips Construction vehicles will use the haul routes (separate access and egress routes) illustrated in Figure 12-11.
Operation	3 no. staff on site during core hours. A total of 6 no. staff trips generated. Total volume of material is 84,000 tonnes. A typical payload departing the site will be 25 tonnes. This equates to an average of 15 No. HVs arriving and 15 No. HV's departing the site each day. Table 12-6 outlines proposed vehicular traffic with the total two way flow outlined as 36 movements per day. The proposed haul route is outlined on 12-11 together with an illustration of projected trip distribution. Table 12-7 show that traffic volumes on the L3036 in the developments assumed year of opening (assumed as 2024) would increase by 8.7% with a net increase of 7.6% by 2039 (Assumed year of opening +15).
Restoration	The quarry would no longer operate and therefore would not generate any vehicular trips.
Cumulative	The baseline traffic counts capture the existing traffic levels including those of the adjoining quarry.

Mitigation

Prevention and mitigation measures are provided in Section 12.1.6 of the EIAR. They include adherence to a routing policy to mitigate against the undue impact of heavy vehicles on the town of Old Leighlin, parking availability on site during the construction period and road cleaning.

Residual Impacts

The predicted residual impact of the proposed development is that there will be a marginal increase in LV's and HG's on the adjoining road network due to the operation of the proposed development.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 12 and all associated documents, including the applicant's response to the further information request, and all submissions on file in respect of Traffic. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts on the surrounding road network.

Third parties raised concerns that the local road infrastructure is not capable of accommodating the traffic proposed taken together with the existing traffic in the vicinity of the site associated with the adjacent quarry. Concerns are raised in particular regarding the impact of additional traffic on Old Leighlin village and the impact on pedestrians and cyclists.

I note that the projected increase in traffic is outlined in Table 12-6 with total traffic movements expected during the operational period outlined as 36 for two way traffic. Tables 12-7 and Tables 12-8 provide modelling for 'Do Nothing' and 'Do Something' scenarios with regard to traffic volumes on the L3036. The opening year figure is 35 HV movements in a 'Do Nothing' scenario. This would increase by 30 to 65 in a 'Do Something' scenario. The construction period is expected to have a 6 month duration and it is estimated that a daily average of 5 no. HV trips are required together with 2 No. LV trips, and a maximum of 5 no. contractor trips. I note that the Area Engineer and Roads Department have raised no objections subject to conditions. It is acknowledged that the identified figure in the traffic count of 403 vehicles in a 24 hour period is in line with Carlow County Council information. It is also acknowledged that the predicted traffic volumes (increase of 8.7% year of

opening and increase of 7.6% opening year + 15) are below the 10% threshold set out in Section 2.1 of the TII's Traffic and Transport Assessment Guidelines for production of a Traffic and Transport Assessment.

I concur with the views of the Area Engineer and Transport Department. The existing traffic volumes are very low and these volumes include traffic associated with the existing quarry at this location. I am satisfied that the baseline as it relates to traffic includes the existing traffic using the road network. There will be a minimal increase in traffic during both the construction and operational periods. The traffic haul routes for both these periods are identified in Figure 12-11 to avoid the village of Old Leighin and all heavy goods vehicle operators will be issued with maps of sanctioned haul routes to and from the site. Compliance with haul routes will be monitored with spot checks carried out at Old Leighlin to ensure that any construction vehicles follow the haul routes prescribed.

I am satisfied that the information provided is evidence based and robust and that traffic generated by the proposed development during the construction and operational phase of the development would not have a significant effect on the capacity of the surrounding road network.

Conclusion: Direct and Indirect Effects

I have considered all of the written submissions, and any specific points made in relation to traffic as well as the submitted application documentation. Having regard to the available capacity on the surrounding road network, the low levels of traffic volumes proposed during the construction and operational periods and the intended haul route which avoids the nearby village of Old Leighlin, I am satisfied that the potential for effects on traffic during the construction and operational phases can be avoided, managed and mitigated by measures that form part of the proposed development. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of traffic.

10.16. **Waste and Utilities**

Issues Raised

No issues raised with regard to waste or utilities.

Examination of the EIAR

Context

Chapter 12 of the EIAR also provides an assessment of the potential impacts of the proposed development on Material Assets of physical resources in the environment of human origin including built services and infrastructure comprising:

- Electricity Supply
- Gas Supply
- Information and Communications Technology
- Surface Water Drainage Infrastructure
- Water Supply and Demand
- Wastewater Management and,
- Waste Management

Baseline

In terms of existing utilities, it is outlined that the site is a greenfield site at present. Section 12.2.3.6 outlines that there is no on site electricity supply at present. Section 12.2.3.7 outlines that there is no onsite gas supply at present. Section 12.2.3.8 outlines that there is no fixed connection to any telecommunications infrastructure. Section 12.2.3.9 outlines that the site is not connected to a municipal water supply and there is no demand for potable water on the site. Section 12.2.3.11 outlines that the site is currently a greenfield site and therefore has no foul loading. In terms of waste management, Section 12.2.3.12 outlines that the site is currently a greenfield site and therefore has no waste management requirements. The development would be constructed and continue to operate in accordance with European, National and Regional Legislative waste requirements. It is stated that no difficulties were encountered when compiling the information in this chapter.

Potential Effects

Likely significant effects of the development are summarised in Table 8 below.

Table 8: Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects

Do Nothing	No impact is predicted as the site would remain in agricultural use.
Construction	Adherence to good construction practices would ensure that the predicted effect on the environment would be short-term, imperceptible and neutral.
Operation	There is potential for impacts on surface and groundwater quality pre-mitigation. There will be no impact on any water mains infrastructure, electricity supply, gas supply or ICT infrastructure. The quantity of waste generated will be small in scale and it is not considered that there will be any impact on waste management facilities in the area. All structured approach to waste management would promote resource efficiency and waste minimisation. subject to the implementation of mitigation measures the impact of the operational phase would be long-term, imperceptible and neutral.
Restoration	No significant effects envisioned.
Cumulative	The cumulative impacts on surface water, foul water disposal, potable water supply, natural gas supply, electricity supply, telecoms and municipal waste will be negligible.

Mitigation

As the use of material assets for the proposed development is considered to be minimal, it is not foreseen that any avoidance, remedial or mitigation measures will be required for the proposed development. It is stated that specific avoidance, remedial and mitigation measures have been detailed in other Chapters of the EIAR to ensure that there will be no significant impact on the surrounding environment and associated sensitive receptors.

Residual Impacts

It is stated within Section 12.2.7 that the increased vulnerability to the water environment, land and soil will be mitigated with the restoration of the quarry post extraction. Once extraction activities have ceased, the site will be subject to a long term restoration plan, which will be subject to an additional application in the future.

The implementation of best environmental practice will ensure that there will be no significant adverse residual impacts on Material Assets associated with the proposed development.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 12 of the EIAR and all the associated documents and submissions on file in respect of material assets. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current plan. Having regard to the nature and duration of the proposed development and the application documentation, it is considered that the Chapter adequately demonstrates an understanding of the potential impact of the proposed development on material assets and I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

10.17. **Archaeology and Cultural Heritage**

Issues Raised

A number of concerns were raised in the initial submissions to the Planning Authority regarding impact on Archaeology. No concerns were raised in the appeal regarding impact on Archaeology and Cultural Heritage.

The Department of Housing, Local Government and Heritage made a submission to the Planning Authority and required Further Information in relation to an Archaeological Impact Assessment. It was considered that the EIAR included a desk based study only and required an Archaeological Impact Assessment.

Environmental Impact Assessment Report

Chapter 11 of the EIAR addresses Archaeology and Cultural Heritage. It identifies the nature of the archaeological, architectural and cultural heritage resources in and within the vicinity of the proposed development area, provides a prediction of the likely effects, details mitigation measures and describes any residual effects.

The methodology used included a desk study of archaeological, historical and cartographic sources. The EIAR notes that there were no difficulties encountered in the preparation of this chapter of the EIAR.

Baseline

There are no known archaeological, architectural or cultural features within the site. There are 25 no. recorded monuments within a 2km radius of the site. There are all identified within Section 11.3.1 of the EIAR. The National Inventory of Architectural Heritage was reviewed in order to identity any buildings / features of architectural significance within 2km of the site. There are 2 buildings of architectural heritage within 2km of the site. There are no Architectural Conservation areas within 10km of the site. There are no protected structures on the site.

Potential Effects

Likely significant effects of the development are summarised in Table 9 below.

Table 9: Summary of Potential Effects

Project Phase	**Potential Direct, Indirect and Cumulative Effects**
Do Nothing	The site would remain in agricultural use.
Construction	Potential for impacts on previously undiscovered sub-surface archaeological features.
Operation	Potential for impacts on previously undiscovered sub-surface archaeological features.
Restoration	Not addressed in EIAR.
Cumulative	No impacts are anticipated.

Mitigation

Mitigation measures are outlined in Section 11.6. Should archaeological features or deposits be revealed, any further work would be subject to further licensing with approval from the Department of Arts, Heritage and the Gaeltacht.

Residual Impacts

Based on the preliminary desk study screening, there are no perceived negative impacts on registered features of archaeological and cultural heritage.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 11 and all the associated documents and submissions on file in respect of Archaeology and Cultural Heritage. I have inspected the site and the surrounding area. I also had regard to relevant policy and objectives of the Carlow County Development Plan 2022-2028. I am satisfied that the information submitted in the EIAR and the Further Information Response adequately demonstrates an understanding of the potential impacts that the proposed development could have on cultural heritage and archaeology.

There are no known archaeological or cultural heritage features within the site or in close proximity to the site. The Further Information Response to the Planning Authority from the applicant is thorough and the Planning Authority report has not raised any further concerns. I am satisfied that the proposed development would not have an adverse impact on the archaeological or cultural heritage of the area subject to a similarly worded condition to the Department of Environment and Heritage Report.

Conclusion: Direct and Indirect

I have considered all the written submissions, and any specific points made in relation to archaeology and cultural heritage as well as the submitted application documentation. I am satisfied that any potential impacts would be mitigated by the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of archaeology and cultural heritage.

10.18. **Landscape and Visual Assessment**

Issues Raised

A number of concerns were raised with the Planning Authority regarding the impact on the landscape, the character of the area and the cumulative visual impact of two quarries operating side by side.

Examination of the EIAR

Chapter 10 of the EIAR comprises a Landscape and Visual Impact Assessment (LVIA). It describes the landscape context of the appeal site and assesses the likely impacts of the scheme on the receiving environment. The chapter outlines the methodology used, sources of information and the assessment criteria. The EIAR includes a separate booklet containing 5 no. viewpoints providing a comparison of the existing site and the proposed development with and without mitigation / screening.

In response to the Further Information Request, a further 7 No. photomontages were submitted to the Planning Authority, bringing the total number of photomontages submitted to 12. A view from the scenic area of Mount Leinster was also submitted. A restoration plan was also submitted at Further Information Stage together with revised drawings and an EIAR addendum.

The EIAR notes that no particular difficulties were encountered in the preparation of this chapter of the EIAR.

I am satisfied that the applicants submitted photomontages provide a reasonable representation of how the proposed development would appear to allow for a full assessment of the potential impact.

Baseline

The Landscape Character Assessment as set out in the development plan identifies the site as being located within the 'Killeshin Hills' landscape character area and 'Farmed Lowland' landscape type. The Development Plan Sensitivity Rating (Carlow Landscape Sensitivity Map) has graded this area with a 2-3 sensitivity factor. The Killeshin Hill's area is almost entirely a rural landscape with a moderate level of sensitivity and moderate capacity to absorb different types of development. Table 10-13 considers that the landscape character area has a moderate capacity to absorb extractive industry in line with the Land Use Capacity Matrix of the Carlow County Council Development Plan. There are no protected views or prospects crossing the appeal site.

The study area comprises a 3km radius around the appeal site. The setting is predominantly rural with surrounding land uses of agriculture, forestry and a number

of one off houses. The existing topography of the site can be seen in Figure 10-9. There is a difference of 45m between the eastern and western part of the site. Section 10.3.6 summarises the existing landscape. The closer landscape is dominated by the existing quarry. The site is currently a mix of conifer plantation and a greenfield site. Forestry plantation forms the western boundary of the site. The setting is rural with surrounding land uses of agriculture, forestry and a number of one off dwellings. farmland. There are a number of protected views and scenic routes within the wider landscape. These are shown in Figures 10-16 and 10-17. The closest protected view is 'Protected View 29- View south, of River Barrow 3km from site.

Potential Effects

Likely significant effects of the development are summarised in Table 10 below.

Table 10: Summary of Potential Effects

Project Phase	**Potential Direct, Indirect and Cumulative Effects**
Do Nothing	The site would continue to be used for agriculture.
Construction	Minor to moderate, neutral to negative and short term impacts on the landscape character of the site envisaged during construction phase mainly due to the removal of existing vegetation.
Operation	It is envisaged that the operational phase will cause some negative landscape impact in the short to medium term within the site.
Restoration	The restoration plan proposed is detailed in Section 10.4.2 of the EIAR and updated in the Further Information Response submitted by the applicant. It is proposed that most of the eastern, northern and south eastern hedgerows will be kept within the proposed development and new local tree/ shrub species are proposed. The quarry void will be left to naturally infill with groundwater, which will settle around 7om AOD. The berms provided for in the construction phase will be planted with trees and shrubs which will have a 14 year growth, functioning as mitigation screening. Restoration will commence within 1 year after the beginning of the operational phase. All plant and machinery would be removed.

Cumulative	In the context of the existing operational quarry on the adjacent site, there is potential for cumulative impacts to arise however, it is not considered to give rise to any significant cumulative impacts having regard to the context of the existing landscape and the rural nature of the location.

Mitigation

Section 10.6 of the EIAR outlines mitigation measures to minimise the visual impacts of the proposed development. The main mitigation measures are the provision of berms of varying heights together with planting on the berms. The heights have been chosen to restrict views. Excavation below existing ground levels will also reduce potential views. Mitigation measures will be put in place to retain existing trees and hedgerow.

Residual Impacts

The proposed development is not considered to give rise to any negative residual impacts.

Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated the information provided in Chapter 10 and the additional viewpoints (bringing the total to 13 No. viewpoints), submitted in the EIAR addendum and submissions on file in respect of landscape and visual impact. I have inspected the site and the surrounding area. I also had regard to relevant policy and objectives of the Carlow County Council Development Plan 2022-2028. I am satisfied that the information submitted in the EIAR and EIAR addendum adequately demonstrates an understanding of the potential impacts that the proposed development could have on the surrounding landscape and visual amenity of the area.

Landscape

The surrounding landscape is undulating, and the existing quarry is located on a hilltop. The Landscape Character Assessment as set out in the development plan

identifies the site as being located in the Killeshin Hills Landscape Area and part of the Farmed Lowland Landscape Type. The Carlow Landscape Sensitivity Map in the Development Plan rates this location with a 2-3 Landscape Sensitivity factor. Killeshin Hills is almost entirely a rural agricultural landscape with a moderate level of sensitivity and moderate capacity to absorb different types of development. Table 10-13 of the Development Plan - Land Use Capacity Matrix identifies that this landscape Character Area has a 'moderate' capacity to absorb extractive industry. Viewpoints 1, 2, 3 and 11 are short distance views taken both to the rear of the site and the local road adjoining the site from distances ranging from 150m to 690m. There will be some impact from the local road, but generally there is a large amount of existing screening at this location. The existing adjacent quarry is already visible from the local road at various points and despite it's much larger footprint than the proposed quarry, I consider that it very much forms a part of the local landscape and does not unduly dominate it. I agree with the EIAR that the significance of the impact for the proposed development is minor to moderate.

The Planner's report expressed concern that the 5 viewpoints submitted in the EIAR were in too close range and additional viewpoints were submitted in response to this. Additional landscaping proposals and a more detailed restoration plan were also submitted.

Viewpoints 4, 5, 6, 7, 9, 10, and 12 are medium to long distance views ranging from 1km to 2.6km from the site. I note that viewpoint 8 appears to have been inadvertently omitted from the photomontages. An additional viewpoint from Mount Leinster (Viewpoint 13) has been included but this only illustrates the base view and does not illustrate the proposed view. It would appear to me that it is not possible to see the existing quarry from viewpoint 13 so it is unlikely that the proposed quarry would be unduly visible.

The site is most visible in the short distance views, similar to the existing quarry at this location. Due to the nature of quarrying activity, it will have a physical impact on the landscape. There will be permanent physical effects on the landscape, relating to the proposed development. However, none of the affected landcover or vegetation features are rare or decisive in forming the overall landscape character of the area. No protected views or scenic route will be unduly impacted. I do not consider that the

cumulative impact in terms of the proximity to the existing quarry would be unduly impacted due to the existing high levels of screening in the area and the intermittent nature of the views which would be largely screened by both proposed berms and existing vegetation.

I am satisfied that the longer distance views outlined above addressed the Planning Authority concerns and provided for views from a wider context including the M9, the R448, and Closutton (view 4 and 7 c. 1km to the south east of the site). No further concerns were raised by the Planning Authority in their second report. I note that once the operational lifespan of the quarry is completed, it will be subject to a restoration plan.

Conclusions: Direct and Indirect

I have considered all of the written submissions made in relation to landscape and visual. The planning authority expressed concern in their first report and required additional viewpoints from greater areas. This was addressed in the Further Information Response, and the Planning Authority were satisfied with the response. I am satisfied that whilst there would be some visibility from short distance views, views would be intermittent and generally limited to glimpses only. I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on the landscape and visual amenities. Further, I consider that the viewpoints represent locations in the vicinity where there is a potential impact to arise from the proposal. Having regard to the surrounding context of local roads and agricultural uses, and taken together with the visual impact of the existing quarry, the proposed development would have no significant direct or indirect effects on the landscape, visual amenity of the area or on any protected view or scenic route. I am satisfied that potential impacts would be managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of landscape.

10.19. **Risk Management**

Issues Raised

A number of observations have raised the issue of land stability in the area.

Examination of the EIAR

Chapter 13, Table 13-3 deals with the risk of major accidents and/or natural disasters.

Potential Effects

Likely significant effects of the development are summarised in Table 10 below.

Project Phase	**Potential Direct, Indirect and Cumulative Effects**
Do Nothing	The site would continue to be used for agriculture.
Construction/ Operation/ Restoration	Table 13-3 outlines a wide range of major accidents and disasters reviewed. The only major accident or disaster considered relevant to this project is a pandemic.

Direct and Indirect Significant Effects

I have examined, analysed and evaluated Chapter 13 of the EIAR, all of the associated documentation and submissions on file in respect of risk of major accidents and/ or natural disaster.

Having regard to the nature and location of the development in a remote rural area, removed from centres of population, and to the technical information on file, I am generally satisfied that there are no significant adverse effects on the environment deriving from its vulnerability to major accidents or to natural disasters.

However, I refer the Commission to the technical assessments including in this report (Land, Soil and Geology Section) from the Inspectorates Engineer and his comments regarding land stability and the absence of a geotechnical assessment. I note that Table 13-3 does not consider this relevant to the proposed development as

the area is in a ‘low’ landslide susceptibility rating and no landslide events were recorded on the GSI database. I have examined the GIS Maps and note part whilst a large area of the site is within the ‘low’ rating for landslide susceptibility, a small section of the site is within the ‘moderate’ rating. However, lands to the west are within the ‘high’ rating. I note that no geotechnical site specific investigations have been carried out. Neither has the cumulative impact of both quarries operating together or the impact of blasting on land stability been investigated. As such, I am not satisfied that the vulnerability of the development to landslide has been adequately addressed.

Conclusions: Direct and Indirect

Having regard to the above and the location of the site in are area where lands immediately to the west are located within the ‘high’ rating for landslide susceptibility and the absence of geotechnical site specific investigations, there are potential significant negative effects having regard to the potential for landslide. Further, I am not satisfied that there has been any assessment of the likely effects of climate change or rainfall patterns and the implications for stability risk.

10.20 **Interactions**

The interaction between effects on the different environmental factors have been considered across the EIAR in chapters 4-13. Chapter 14 of the EIAR addresses the principal interactions between effects with a matrix provided in Table 14-1. I would agree that the most notable interactions pertain to land, soils and water with other interactions between population and human health, biodiversity, archaeology & traffic and between air quality & climate, noise, landscape, archaeology & traffic. I note inconsistencies in the presentation of interactions in Table 14-1. For example, where an Interaction between Land and Soils with Biodiversity has been identified, I would not have then expected to see No Interaction between Biodiversity with Land and Soils in the same table. I also refer to the EPA *Guidelines on the information to be contained in Environmental Impact Assessment Reports* which states that the requirement for the EIAR to consider ‘Interactions’ addresses this issue by ensuring that effects are cross-referenced between topics, thus avoiding the need to duplicate coverage of such topics. There also appears to be an inconsistency between Table

14-1 and Table 14-2 and the tables that follow. Where interactions have been identified in Table 14-1 (not withstanding my initial observation), different potential interactions appear to be listed in Table 14-2 with that trend continuing to the tables that follow. I would note also, the welcome introduction of construction and operational phases, but this is not reflected in Table 14-1 or at least clarity of the intention is not provided.

I have considered the interrelationships between factors and whether they might, as a whole, affect the environment. For some factors, whilst the effects may be acceptable when considered on an individual basis, in my assessment of some factors I have, identified potential effects on soils and geology, water, dust and as a result of noise, where the potential residual effects have not been assessed adequately.

In my assessment of each environmental topic, I have considered the likelihood of significant effects arising as a consequence of interrelationships between factors. I acknowledge that I have been in a position to consider the interactions between population and human health and air quality and climate and I do not foresee any likelihood of the interrelationship between these factors giving rise to significant effects on the environment

However, owing to the concerns I have raised in terms of the assessment of the other factors, I am not satisfied that any likelihood, of any of the interrelationships between other factors giving rise to significant effects on the environment can be dismissed.

In conclusion, having considered the effects and mitigation measures proposed across all factors assessed, I am not satisfied that it has been adequately demonstrated that no significant residual effects from interactions between any of the disciplines will occur.

Cumulative Effects

The cumulative effects of the proposed development alongside other proposed/permitted development in the vicinity of the site has been addressed in each chapter of the EIAR, and it has been concluded that the cumulation of effects from the planned and permitted development and the proposed development would

not be likely to give rise to significant effects on the environment other than those that have been described in the EIAR and considered in this EIA.

The approach taken by the applicant in the Further Information and the appeal responses is that the applicant has provided a baseline and wishes to avoid 'double counting'. It is stated that the baseline assessment has already accounted for the existing operational quarry to the north of the site. I am sympathetic to this approach in a general sense where the environmental impacts are not problematic and where sufficient baseline information has been provided by the applicant.

However, I am of the view that the operations of both quarries need to be simultaneously assessed cumulatively for specific factors in the EIAR to confirm if the combined operations of both quarries will result in significant effects for particular factors. I note that the applicant appears to contradict the general approach set out above in terms of the cumulative assessment undertaken in the appeal response for noise between the existing and proposed quarry. Notwithstanding this cumulative assessment in relation to noise, I have concerns in relation to the methodology used in the assessment.

In conclusion, I do not consider that the EIAR has adequately addressed the cumulative impacts of the proposed development when operating with the existing adjoining quarry to the north. In particular, I have concerns in relation to noise, land stability, hydrogeology and hydrogeology and the cumulative impacts of these factors when considered in combination with the existing permitted quarry to the north of the site and the specific concerns in relation to these aspects are considered in the relevant sections of the EIAR Assessment. I also refer the Commission to the planning assessment and Appendix 1 – Appropriate Assessment.

11.0 Reasoned Conclusion on the Significant Effects

Having regard to the examination of environmental information set out above, to the EIAR and other information provided by the developer, and to the submissions from the planning authority, prescribed bodies, third parties and observers in the course of the application and appeal, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- **Population and Human Health:** Potential negative effects on sensitive receptors proximate to the site include emissions of dust, noise and vibration during construction and operation. Potential impacts in relation to dust and vibration will be mitigated by measures to control emissions and thereafter by the adoption of specific measures including those forming part of the operation of the development including those forming the operation of the development including monitoring proposals. Having regard to the methodology of survey work, insufficient information has been submitted to allow for a complete assessment with regard to noise.

- **Biodiversity:** Potential significant effects on water dependent species having regard to the inadequate baseline information provided in relation to hydrology and hydrogeology. Having regard to the methodology of survey work and the reliance on post consent survey work there is insufficient information to allow for an assessment of the impact on bats.

- **Water:** Potential significant effects on hydrology and hydrogeology by reason of the absence of robust information informing the baseline data including uncertainty in relation to the volume of surface water that will be managed at the site and the influence of groundwater and additional stormwaters as a result of extreme weather events. In the absence of adequate baseline data, it is not possible to conclude that the proposed development would not have any unacceptable direct, indirect or cumulative effects on hydrology and hydrogeology.

- **Lands, Soils and Geology:** Potential significant negative effects having regard to the potential for landslides both on the site and in the surrounding area which is classified as having a high susceptibility to landslides along with potential interactions with blasting operations and cumulative impacts when considered together with the existing quarry to the north. Potential significant negative effects having regard to interactions with water where there is potential to contribute to a deterioration in water quality.

- **Air and Climate:** Significant direct negative effects for air quality during construction and operational phase would be mitigated by a suite of appropriate

construction and operation phase management measures, including dust minimisation measures.

Having regard to the foregoing, I consider that the EIAR has not provided a sufficient level of information in relation to the assessment of impacts on population and human health, biodiversity, hydrology and hydrogeology, land stability and the interaction between these factors.

12.0 Appropriate Assessment

I refer the Commission to Appendix 1 attached to this report in relation to Appropriate Assessment.

Screening Determination- Finding of significant effects

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of objective information provided by the applicant, I conclude that the proposed development could potentially result in significant effects on the River Barrow and River Nore SAC (Site Code: 002162) in view of the conservation objectives of certain qualifying interest features associated with this site. It is therefore determined that Appropriate Assessment (Stage 2) [under Section 177V of the Planning and Development Act 2000, as amended] of the proposed development is required.

Natura Impact Statement (NIS) Conclusion of Integrity Test

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on the River Barrow and River Nore SAC (Site Code: 002162) in view of the conservation objectives of this Site and that Appropriate Assessment under the provisions of S177V / 177AE was required.

Following an examination, analysis and evaluation of the NIS all associated material submitted, and taking into account the appeals, submissions and observations, I consider that adverse effects on site integrity of the River Barrow and River Nore

SAC (Site Code: 002162) cannot be excluded in view of the conservation objectives of this Site and that reasonable scientific doubt remains.

My conclusion is based on the following:

- a detailed assessment of construction and operational impacts,
- the technical assessment prepared by the Inspectorate's Engineer,
- the effectiveness of the mitigation measures proposed, and
- that the proposed development would potentially affect the attainment of conservation objectives for the River Barrow and River Nore SAC (Site Code: 002162).

13.0 Water Framework Directive

I refer the Commission to Appendix 2 and Section 10.12 of this report in relation to Water Framework Directive Assessment. I also refer the Commission to Appendix G of the EIAR Report- Water Framework Directive Compliance Report.

I am not satisfied that the necessary information has been provided, or an adequate assessment has been undertaken to determine as to whether the proposed development would not result in a risk of deterioration of surface water and groundwater. Concerns remain as regard the volume of surface water that will be managed at the site, the influence of groundwater and additional stormwaters as a result of extreme weather events and the impact on the groundwater resource have not been assessed adequately.

As such, I am not satisfied that the necessary information has been provided or an adequate assessment has been undertaken to determine as to whether the proposed development would not result in a risk of deterioration on any waterbody, rivers, lakes, groundwaters, transitional and coastal, either on a temporary or permanent basis or otherwise jeopardise any waterbody in reaching its WFD objectives and consequently it cannot be excluded from further assessment based on the information provided.

14.0 **Recommendation**

It is recommended that permission be refused for the following reasons and considerations.

15.0 **Reasons and Considerations**

1. The Commission is not satisfied that the Environmental Impact Assessment has adequately assessed the likely effects of the proposed development on biodiversity, bats, noise, land stability, hydrology and hydrogeology and the interaction of these factors together with the cumulative impacts of these factors when considered in combination with the existing permitted quarry to the north of the site. Accordingly, the Commission is not satisfied that the development will have significant adverse impacts on sensitive environmental receptors. The proposed development would, therefore be contrary to the proper planning and sustainable development of the area.

2. The subject site is located proximate to the Old Leighlin Stream_020 which has a current 'at risk' status and the Barrow_190 where the status is currently 'under review'. In addition, the Bagenalstown Lower Groundwater Body (Groundwater Body Code IE_SE_G_157) underlies the site, and although this groundwater body is stated as being 'not at risk', there is insufficient information presented as part of the planning application and appeal to definitely determine where or not the proposed development would not result in a deterioration of the existing Water Framework Directive quality status of these said sites. Consequently, the Commission is not satisfied that the proposed development would not impact negatively on the aforementioned waterbodies to achieve the relevant water quality status required under the Water Framework Directive. The proposed development would therefore be contrary to the proper planning and sustainable development of the area.

3. The Commission is not satisfied, on the basis of the information provided with the application and appeal that the proposed development individually, or in combination with other plans or projects would not adversely affect the integrity of the River Barrow and River Nore SAC (Site Code 002262), in view of the site's Conservation Objectives. Accordingly, the proposed development would be contrary to Objective NSP1 and NSP2 Of the Carlow County Development Plan 2020-2028. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

_____

Emer Doyle
Planning Inspector

13th March 2026

Appendix 1 Appropriate Assessment Stage 1 and Stage 2

Appropriate Assessment

Stage 1 Screening Determination

I have considered the proposed development in light of the requirements of section 177U of the Planning and Development Act 2000, as amended.

Description of the Project

The proposed development is for a dimensional stone quarry. A full description of the project is provided in Section 2.0 above. The subject lands are located in a rural area and are bordered by an existing quarry to the north.

A drainage channel is located near the northeast corner of the site into which the proposed site drainage system will discharge. This drainage channel flows east via a culvert under the L3036 towards Baunleath Stream which is located c.30m southeast of the site boundary and eventually discharges to the Old Leighlin stream (also known as the Madlin River) before entering the River Barrow.

Documentation submitted with application and appeal

A screening report and Natura Impact Statement were submitted with the application. The Natura Impact Statement was revised by information submitted with the Further Information Response and a consolidated version submitted with appeal documentation. No new information has been submitted with the appeal documentation. As set out in Section 2.2 of the appeal, the NIS Report has been updated with the mitigation measures set out in the EIAR and the Further Information Responses. The updated NIS is attached to Appendix 2 of the appeal.

Consultation & Submissions

Submissions have been made by third parties in relation to Appropriate Assessment and the potential for the proposed development to have significant effects on the qualifying interests associated with the River Barrow and Nore SAC in terms of impacts on water quality and the cumulative impact of both the existing quarry on the adjacent site and the proposed quarry.

A report from Inland Fisheries Ireland raises concerns in relation to the impact on the River Barrow and Nore SAC.

The Planning and Environment Sections of Carlow County Council expressed concerns in relation to the potential for cumulative and in-combination impacts on the River Barrow and River Nore SAC. I note that the AA Screening Determination considered that the assessment of the existing hydrology and hydrogeology did not appear to be based on sufficient site specific baseline information and that additionally no detailed evaluation had been provided with respect to potential cumulative and in-combination effects.

The Planning Section concluded that notwithstanding the implementation of the mitigation measures, it cannot be excluded, on the basis of objective information that the proposed development will have a significant effect on the River Barrow and River Nore SAC, either individually or in combination with other plans or projects.

Potential Impact Mechanisms from the Project

Potential Impacts

- There is a potential pathway (i.e. hydrological connection which could act as a route for potential impacts) from the source site. Therefore, the Qualifying Interests of this SAC could be affected.

- Potential negative impacts include impacts on surface water/ ground water quality due to construction related emissions, increased sedimentation and construction related pollution.

Effect Mechanisms

- Deterioration of water quality as a result of sediment, pollution, dust, oil/hydrocarbon, hard surface run off etc., during construction and operational phases.
- Potential damage to the habitats and species dependent on water quality - an impact of sufficient magnitude could undermine conservation objectives.

European Sites at Risk

Table 1: European Sites at risk from impacts of the proposed project

Impact Mechanism	**Impact pathway/zone of influence**	**European Site**	**Qualifying /conservation features at risk**
Deterioration of water quality	Indirect impact via hydrogeological pathway as identified in the description of the project set out above.	River Barrow & River Nore SAC (site code: 002162)	Water habitats & species

I am satisfied that the River Barrow & River Nore Special Area of Conservation (SAC) (site code : 002162) as identified in the submitted AA screening and Natura Impact Statement (NIS) is the only European site of relevance which could be impacted by the proposed development applying the source-pathway-receptor model.

Table 2: Identification of likely significant effects on the European site 'alone'.

European Site & Qualifying feature	Conservation Objectives To maintain favourable conservation condition (M) and to restore favourable conservation condition (R)	Could the conservation objectives be undermined (Y/N)? Deterioration of water quality
River Barrow & River Nore SAC (site code: 002162)		
Estuaries	Maintain favourable condition	No
Mudflats & sandflats	Maintain favourable condition	No
Reefs	Maintain favourable condition	No
Desmoulin' Whore Snail	Maintain favourable condition	No
Salicornia and other annuals colonising mud and sand	Maintain favourable condition	No
Atlantic salt meadows Mediterranean salt meadows	Restore favourable condition	No
Water courses of plain to montane levels	Maintain favourable condition	No
European dry heaths	Maintain favourable condition	No

Hydrophilous tall herb fringe communities	Maintain favourable condition	No
Petrifying springs	Maintain favourable condition	No
Old sessile oak woods	Restore favourable condition	No
Alluvial forests	Restore favourable condition	No
Freshwater Pearl Mussel	Restore favourable condition Restore condition of suitable habitat Restore water quality Restore appropriate hydrological regime	Yes
White-clawed Crayfish	Maintain favourable condition Target- no reduction from baseline. EPA Q value at least 3-4 for all sites sampled	Yes
Sea, Brook, River Lamprey	Restore favourable condition Target- No decline in extent or distribution of spawning beds.	Yes

Twaite Shad	Restore favourable condition	No. This species is known to spawn at St. Mullins, 26.8km from the site. There is a significant distance and riparian buffer between this location and any other recorded locations of this species and the site.
Salmon	Restore favourable condition Target - no decline Water quality at least Q4 at all sites sampled	Yes
Otter	Restore favourable condition No significant decline in distribution Target- no significant decline	Yes
Killarney Fern	Maintain favourable condition	No

Appropriate Assessment: Stage 1: Conclusion- Screening Determination

In accordance with section 177U of the Planning and Development Act 2000 as amended, and on the basis of objective information, having carried out Appropriate Assessment screening (Stage 1) of the project, it has been determined that the project may have likely significant effects on the River Barrow & River Nore SAC (site code: 002162) in view of the sites' conservation objectives and qualifying interests. It is therefore determined that Appropriate Assessment (stage 2) under

Section 177V of the Planning and Development Act 2000 of the proposed development is required.

An Appropriate Assessment (Stage 2) is therefore required.

Appropriate Assessment

Stage 2

Taking account of the preceding screening determination, the following is an appropriate assessment of the implications of the proposed development in view of the relevant conservation objectives of River Barrow and Nore SAC (Site Code: 002162) based on scientific information provided by the applicant and in considering expert opinion set out in the sections of this report prepared by the Commissioner's Engineer – specifically the sections in relation to water and soil and the Water Framework Directive Screening.

The information relied upon includes the following:
Appropriate Assessment Screening Report and Natura Impact Statement
Environmental Impact Assessment Report
Environmental Impact Assessment Report Addendum
Construction Environmental Management Plan
Further Information and Appeal Responses

Submissions/ Observations

See AA Screening above.

Assessment of Issues which could give rise to adverse effects in view of conservation objectives:

Table 3 of the NIS identifies a number of water dependent species that could be effected. These species are set out in Table 2 of the AA Screening above together with their Conservation Objectives. The key element is the potential impact on

surface water quality and potential impacts on ground water quality as a consequence of an increase in siltation and discharges of polluting substances which could impact on the aquatic species of the SAC.

Conservation objectives relating to water quality or disturbance of the following species could be undermined:

White clawed crayfish
Sea, brook, river lamprey
Freshwater pearl mussel
Salmon

There are a number of aspects of the proposed development where insufficient information has been presented to the Commission in relation to groundwater and surface water as follows:

Inadequate information on the true volume of groundwater ingress and groundwater resource losses.
Inadequate information regarding contingency measures in place for the management of extreme weather events- In such a scenario there is potential that the discharge could temporarily effect the Barrow and Nore SAC and the conservation objectives of the aquatic species set out above.

The Commission will note that where a conservation objective is set to restore favourable conservation status, the AA must demonstrate that the proposal will not interfere with or delay the attainment of such measures and that the proposal will not add to the threats and pressures already being exerted on the SAC or ecological processes required to support the integrity of the site. The NIS submitted with this application and appeal does not consider this.

Q values of at least 3-4 are a conservation objective target of white clawed crayfish and Q values of at least 4 are a conservation objective for salmon. The impact of the proposed development on the achievement of these targets is not considered in the NIS.

In the absence of baseline information on the site, I consider that there are concerns regarding water quality degradation. Reasonable scientific doubt is raised in the assessment from the Commissioner's Engineer in relation to water quality deterioration.

Mitigation Measures

A large number of mitigation measures have been outlined in the consolidated version of the NIS submitted in the appeal. I refer the Commission to Section 5 of the NIS. Section 7 of the NIS concluded that following mitigation measures, the proposed development will not have a significant effect on the above European Site.

The Commission will note that the test for Stage 2 Appropriate Assessment is the exclusion of adverse effects on site integrity.

In-Combination Effects

Section 5.3 of the AA Screening Report and Section 4.3.2 of the NIS addresses In Combination Effects.

I am not satisfied that in-combination effects has been assessed adequately in the Applicant's AA Screening and NIS. The application site is adjacent to an existing quarry. Both quarries will operate below the water table. Insufficient data has been presented in relation to impacts on water and soil. It is considered that more robust

information needs to be provided to confirm the characteristics of the underlying geology and water environment. I note that the appeal response contains audits from the existing quarry relating to 2021 and 2022, but it is considered that this information on it's own is insufficiently robust. Consequently, any assessment of in-combination effects without accurate baseline data is insufficiently robust.

Findings and conclusions

The Applicant determined that, following the implementation of mitigation measures, the construction and operation of the proposed development alone, will not adversely affect the integrity of this European site. However, based on the information provided, I am not satisfied that adverse effects arising from aspects of the proposed development can be excluded for the European Site screened in and considered as part of the Appropriate Assessment.

No direct impacts are predicted. However, it is considered that there could be indirect impacts in the absence of the baseline information set out above, the mitigation measures described are not sufficient to prevent the degradation of water quality. This would have the potential to have significant adverse effects for the European Site River Barrow and Nore SAC.

In conclusion, I am not satisfied that the proposed development individually, or in combination with other plans or projects, would not adversely affect the integrity of this European Site (River Barrow and Nore SAC) in view of the site's Conservation Objectives. In such circumstances, I consider the Commission is precluded from granting permission and the proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

Appropriate Assessment Conclusion: Integrity Test

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on River Barrow and Nore SAC (Site Code:002162) in view of the conservation objectives of this Site and that Appropriate Assessment under the provisions of S177V / 177AE was required.

Following an examination, analysis and evaluation of the NIS all associated material submitted, and taking into account the appeals, submissions and observations, I consider that adverse effects on site integrity of the River Barrow and Nore SAC (Site Code: 002162) cannot be excluded in view of the conservation objectives of this Site and that reasonable scientific doubt remains.

My conclusion is based on the following:

- a detailed assessment of construction and operational impacts,

- the Specialist Report prepared by the Inspectorate's Engineer,

- the effectiveness of the mitigation measures proposed, and

that the proposed development would potentially affect the attainment of conservation objectives for the River Barrow and River Nore SAC (Site Code: 002162).

Inspector: _____ **Date**: _____

Appendix 2 Water Framework Directive

WFD IMPACT ASSESSMENT STAGE 1: SCREENING			
Step 1: Nature of the Project, the Site and Locality			
An Coimisiún Pleanála ref. no.	**319198-24**	**Townland, address**	Bannagagole, Old Leighlin, Co. Carlow
Description of project		Demolition of existing disused buildings and development of a dimension stone quarry with a projected lifetime of c. 14 years.	
Brief site description, relevant to WFD Screening,		The topography of the site varies from 75mAOD to 120mAOD falling from west to east. The site comprises poorly drained mineral soils with some well drained areas in the west of the site. A drainage channel is located near the northeast corner of the site into to which the proposed site drainage system will discharge. This drainage channel flows east via a culvert under the L3036 towards Baunleath Stream which is located c.30m southeast of the site boundary and eventually discharges to the Old Leighlin stream (also known as the Madlin River) c.2km from the site boundary at its nearest point.	

	The lands in the surrounding area contain areas of similar agricultural pasture to the south and east with areas with some conifer forestry to the west in the more elevated areas. An existing quarry is the dominant feature to the immediate north of the site with similar areas of agricultural pasture and conifers in the areas that surround that operation. There are a number of individual dwellings located along the local roads that serve the wider area.
Proposed surface water details	Surface water from the quarry void which will include groundwater ingress from the surrounding area into the void will be managed through a series of temporary sump/settlement ponds and a permanent settlement pond which will also through a hydrocarbon interceptor prior to a controlled discharge from a hydrobrake to an existing drainage channel.
Proposed water supply source & available capacity	No details provided. It is therefore assumed that the water requirement for welfare facilities and potable water will be via a groundwater well or tankered to site Considering the number that would be employed at the site during operation (3 no.), it is not anticipated that the volume of any groundwater abstraction required to serve the site with such low staffing numbers would have an impact on the available capacity of the groundwater resource.

Proposed wastewater treatment system & available capacity, other issues	Not applicable
Others?	Not applicable

Step 2: Identification of relevant water bodies and Step 3: S-P-R connection

Identified water body	Distance to (m)	Water body name(s) (code)	WFD Status	Risk of not achieving WFD Objective e.g.at risk, review, not at risk	Identified pressures on that water body	Pathway linkage to water feature (e.g. surface run-off, drainage, groundwater)
River Waterbody	30m	Old Leighlin Stream_020	Good	At risk	No pressures	Hydrologically connected to the surface watercourse via the drainage

						channel to which stormwaters will discharge to in the east of the site.
River Waterbody	2.8km	Barrow_190	Moderate	Under review	No pressures	Hydrologically connected via the Old Leighlin Stream.

Groundwater waterbody		Underlying site	Bagenalstown Lower IE_SE_G_157	Moderate	Not at risk	No pressures	Infiltration and seepage.
Step 4: Detailed description of any component of the development or activity that may cause a risk of not achieving the WFD Objectives having regard to the S-P-R linkage.							
CONSTRUCTION PHASE							
No.	**Component**	**Water body receptor (EPA Code)**	**Pathway (existing and new)**	**Potential for impact/ what is the possible impact**	**Screening Stage Mitigation Measure***	**Residual Risk (yes/no) Detail**	**Determination** to proceed to Stage 2. Is there a risk to the water**

							environment? (if 'screened' in or 'uncertain' proceed to Stage 2.
1.	Surface	Old Leighlin Stream_020	Drainage and uncontrolled run off during works	Siltation in the watercourse. Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	No	Screened out
2.	Surface	Barrow_190	Drainage and uncontrolled run off during works	Siltation in the watercourse. Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	No	Screened out

3.	Ground	Bagenalstown Lower (IE_SE_G_157)	Drainage	Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	No	Screened out
OPERATIONAL PHASE							
1.	Surface	Old Leighlin Stream_020	Drainage and uncontrolled run off during works	Siltation in the watercourse. Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	Yes – increased volume of discharge owing to developing quarry void and potential increase in groundwater ingress requires further consideration.	Screened in

2.	Surface	Barrow_190	Drainage and uncontrolled run off during works	Siltation in the watercourse. Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	Yes – increased volume of discharge to the Old Leighlin stream owing to developing quarry void and potential increase in groundwater ingress requires further consideration.	Screened in
3.	Ground	Bagenalstown Lower (IE_SE_G_157)	Drainage	Hydrocarbon Spillages. Reduction in groundwater quantity and impact on the yield.	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	Yes – potential increase in groundwater ingress to the developing quarry void and overall groundwater	Screened in

						resource losses from dewatering requires further consideration.	
DECOMMISSIONING/RESTORATION PHASE							
1.	Surface	Old Leighlin Stream_020	Drainage and uncontrolled run off during works	Siltation in the watercourse. Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	No	Screened out
2.	Surface	Barrow_190	Drainage and uncontrolled	Siltation in the watercourse.	Standard Construction Measures /	No	Screened out

			run off during works	Hydrocarbon Spillages	Conditions, pollution controls, fuel storage etc.		
3	Ground	Bagenalstown Lower (IE_SE_G_157)	Drainage	Hydrocarbon Spillages	Standard Construction Measures / Conditions, pollution controls, fuel storage etc.	No	Screened out

STAGE 2: ASSESSMENT					
Details of Mitigation Required to Comply with WFD Objectives					
Surface Water					
Development/Activity	**Objective 1:Surface Water** **Prevent deterioration of the status of all bodies of surface water**	**Objective 2:Surface Water** **Protect, enhance and restore all bodies of surface water with aim of achieving good status**	**Objective 3:Surface Water** **Protect and enhance all artificial and heavily modified bodies of water with aim of achieving good ecological potential and good surface water chemical status**	**Objective 4: Surface Water** **Progressively reduce pollution from priority substances and cease or phase out emission, discharges and losses of priority substances**	**Does this component comply with WFD Objectives 1, 2, 3 & 4? (if answer is no, a development cannot proceed without a derogation under art. 4.7)**
	Describe mitigation required to meet objective 1:	**Describe mitigation required to meet objective 2:**	**Describe mitigation required to meet objective 3:**	**Describe mitigation required to meet objective 4:**	
Quarrying Activities – Operational Phase	Site specific mitigation methods described in the EIAR and associated documents e.g. silt fences, site-specific drainage design of settlement ponds. Further evidence is required to confirm the infrastructure is adequate to manage all potential scenarios and is informed by reliable data of water volumes that will require treatment. Contingency measures for the management of extreme weather events which will result in a significant increase in storm water volumes.	Site specific mitigation methods described in the EIAR and associated documents e.g. silt fences, site-specific drainage design of settlement ponds. Further evidence is required to confirm the infrastructure is adequate to manage all potential scenarios and is informed by reliable data of water volumes that will require treatment. Contingency measures for the management of extreme weather events which will result in a significant increase in storm water volumes.	n/a	n/a	No. In the absence of information on the true volume of groundwater ingress and the overall volume of surface water that will be required to managed on the site and the lack of contingency planning for extreme rainfall events, it cannot be confirmed that Objectives 1 & 2 of Article 4 can be met for this component.

Details of Mitigation Required to Comply with WFD Objectives					
Groundwater					
Development/Activity	**Objective 1: Groundwater** **Prevent or limit the input of pollutants into groundwater and to prevent the deterioration of the status of all bodies of groundwater**	**Objective 2 : Groundwater** **Protect, enhance and restore all bodies of groundwater, ensure a balance between abstraction and recharge, with the aim of achieving good status***	**Objective 3:Groundwater** **Reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity**	**Does this component comply with WFD Objectives 1, 2, & 3? (if answer is no, a development cannot proceed without a derogation under art. 4.7)**	
	Describe mitigation required to meet objective 1:	**Describe mitigation required to meet objective 2:**	**Describe mitigation required to meet objective 3:**		
Quarrying Activities – Operational Phase	Site specific mitigation methods described in the EIAR and associated documents e.g. pollution controls, provision of spill kits and absorption pads, appropriate fuel storage an d refuelling procedures and operation under a dedicated Environmental Management System.	Detailed site investigation and analysis to establish the true volume of groundwater resource loss as result of the development and dewatering of the proposed development impact.	n/a	No. In the absence of information on the true volume of groundwater ingress and groundwater resource losses, it cannot be confirmed that Objective 2 of Article 4 can be met for this component.	