An Bord Pleanála

Inspector's Report

ABP-317874-23

Development	Extraction of sand and gravel from quarry. An Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been submitted.
Location	Walterstown, Hollywood, Co. Wicklow.
Planning Authority	Wicklow County Council
Planning Authority Reg. Ref.	22/1306
Applicant(s)	Dempsey Sand and Gravel Limited.
Type of Application	Permission
Planning Authority Decision	Refusal of Permission
Type of Appeal	First Party v. Refusal of Permission
Appellant(s)	Dempsey Sand and Gravel Limited.
Observer(s)	None.
Date of Site Inspection	11th October 2024.
Inspector	Enda Duignan

Contents

1.0 Site Location and Description

1.1. The appeal site has a stated area of c. 8.44ha. and is located within the townland of Walterstown, Hollywood, Co. Wicklow. The lands are situated c. 3.5km to the south-east of Hollywood within a rural area of the county. The site is accessed from an existing agricultural entrance from the northern side of the R756. A c. 500m long unsurfaced lane leads to the main body of the appeal site where the quarrying activities are proposed. Directly to the south of the quarry, the lane crosses over the culverted Little Douglas Stream. This stream bounds the southern boundary of the proposed quarry lands and is referred to as the Toor River within the Applicant's EIAR (refereed herein as the Toor River). The lane serving the site is not within the Applicant's ownership, but it is indicated that they benefit from an existing right of way. The appeal site has an irregular shape and comprises a number of fields which are bound by hedgerows, trees of varying maturities and some stone walls. There is a former farmstead within the southern portion of the site which includes a number of dilapidated structures. There are also a number of mature trees located within the surrounds of the structures. In terms of topography, the site and surrounding area comprises gently undulating farmland with elevations ranging from between 210m above Ordnance Datum (mOD) to 220mOD.

1.2. In terms of the site surrounds, there is a forested area to the west of the site with agricultural lands located to the site's north, south and east. The Toor River flows in a south-easterly direction, where it enters the King's River which is located c. 400m to the south-east of the appeal site. I note that the King's River ultimately discharges into the Poulaphouca Reservoir, c. 1km to the site's north. There are a number of one-off rural houses located along the surrounding road network.

2.0 Proposed Development

2.1. Planning permission is sought for development of a sand and gravel quarry on the subject site. It is proposed to extract a maximum of 50,000 tonnes of material per annum over a ten year period (i.e. maximum of 500,000 tonnes). The proposed extraction area measures a total of c. 5.52ha.

2.2. Construction will involve all site infrastructure required for the proposed development

including site access, haul roads, office and truck wheel wash. The Applicant has proposed a site office, canteen and toilet facilities which are to be housed in an eco-pod or similar and are located adjacent to the existing dilapidated structures on the site which are proposed to be retained. The welfare facilities that will be installed for the construction and operational phase will include a self-contained welfare pod (e.g. Rego Eco welfare pod or similar approved). The welfare pod will be emptied by an approved contractor as part of a maintenance contract in accordance with relevant waste management legislation. It is noted that well water will be used to supply water for the canteen and welfare facilities.

2.3. A precast closed loop wheel wash will be installed on site to ensure that lorries leaving the facility do no create offsite nuisance such as mud on the road during wet conditions and dust in dry conditions. It is proposed to use harvested rainwater for the wheel wash which may be supplemented with groundwater from the well. The wheel wash and a new layby is proposed along the access lane, c. 200m from the site entrance on the R756. The proposals also include the provision of a surface mounted weighbridge which will be installed to weigh loads of material leaving the site and is to be located within the southern end of the quarry.

2.4. Plant and equipment required onsite for the extraction of the virgin aggregate, removal and reinstatement of topsoil and overburden, screening and grading of the extracted aggregates and handling and loading of material on site include:

- Front End Loader (Mobile),
- Dumper Truck (Mobile),
- Screener (Mobile),
- Wheel Wash (Fixed, closed loop system), and,
- Weigh Bridge (Fixed - surface mounted).

2.5. Lorries will be loaded with the final product using a Loading Shovel (Front-End Loader). Once each vehicle is loaded, it will exit the site via the weigh bridge and wheel wash. The proposed operating hours of the quarry are 8am until 6pm Monday to Friday inclusive and 8am until 2pm on Saturdays.

2.6. The Applicant notes that there is no requirement for instream works at the Toor River as an internal haul road with a culverted road crossing of the Toor River is already in place. The Applicant is proposing to install a clear-span prefabricated bridge which will be capable of carrying heavy axle loadings and long wheelbase vehicles. This is to be installed above the existing crossing over the Toor River with no requirement for the removal of the existing crossing. It is stated that the foundations for the new steel bridge will be placed at least 2.5m from the water edge at each bank, in line with IFI guidelines. The main excavation pit is set back in excess of 90m from the Toor River at its closest point. During the construction phase, it is stated that works are required within this buffer to improve site access. This vegetated buffer will remain in place for the duration of the works and is proposed to act as a natural buffer to minimise any runoff with entrained contaminants (e.g., sediment) from the site entering the waterbody.

2.7. In terms of the operational phase, the Applicant notes that there will be no dewatering or wet working of the quarry. A buffer of at least 2m above the groundwater table will be maintained for the duration of the operational phase and any areas where groundwater is within 2m of the quarry floor will be excluded from extraction. Upon the cessation of extraction activities, it is proposed to re-grade the quarry to existing levels and is to be achieved through backfilling using suitable soil and stone to pre-drilling levels, dependant on appropriate subsequent planning permissions and waste licence applications. The re-graded site will then be restored to a mix of agricultural land and native woodland.

2.8. Further plans and particular were received by the Planning Authority on the 8th day of June 2023 which proposed amendments to the proposed development. The proposed revisions to the scheme are discussed in further detail below (Section 3.2.1).

3.0 Planning Authority Decision

3.1. Decision

The Planning Authority refused planning permission for the proposed development for the following 1 no. reason.

1. Having regard to the Environmental Impact Assessment Report, and the unsolicited information received on the 8th June 2023, it is considered that the

details submitted have not provided sufficient information in respect to archaeology, noise assessment, and surface water run-off, such that it cannot be concluded that negative impacts on archaeology, noise impacts and pollution impacts on the Toor River (Little Douglas River) and Kings River can be avoided, and to allow this development would be contrary to the objectives of the Wicklow County Development Plan 2022-2028, would seriously injure the amenities of properties in the vicinity by reason of noise, and would have an adverse impact on the water environment and biodiversity of the area. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

3.2. Planning Authority Reports

3.2.1. Planning Reports

3.2.1.1. The Wicklow County Council Planning Reports form the basis of the decision. The 1st Planner's Report dated 31st January 2023 indicates that the Planning Authority had regard to the Applicant's EIAR and it was submitted that there were a number of fundamental issues with the proposed development. It was considered that the restoration element which is intrinsically linked to the first element i.e. extraction, had not been properly assessed within the EIAR. In particular, where the Applicant indicated that such restoration may be subject to further applications, identifies that there is a vacuum in whether such restoration could take place. The EIAR was therefore considered to be flawed in this regard. Within the 1st Planner's Report, a refusal of permission was initially recommended for 4 no. reasons which were detailed as follows:

- The development sits within the Mountain Uplands Area of Outstanding Natural Beauty, in an area which is considered an important gateway to this Upland area, and located at an important tourist axis between the East and West of County Wicklow. The overriding priority in such areas is to protect the existing landscape quality of this Area of Outstanding Natural Beauty. It is considered notwithstanding the submitted visual / landscape assessment, that the development will impact on the rural character and scenic amenities of the area particularly in views from the R758, would add to the deterioration of this Area of Outstanding Natural Beauty, and would therefore, contravene the policies

and objectives of the County Development Plan, 2022 - 2028, would and be contrary to the proper planning and sustainable development of the area.

- The Environmental Impact Assessment Report and Natura Impact Statement are deficient in their failure to provide sufficient information/ assessment of the Restoration of the extracted area, which is considered integral to the sand/ gravel extraction. In the absence of such information the proposed development may give rise to significant and adverse effects on the amenities of the area, give rise to a serious traffic hazard, and impact negatively on the environment. The proposed development would, therefore, be contrary to the requirements of the Habitats Directive, to Directive 2014/52/ EU (EIA Directive), to the objectives of the County Development Plan 2022-2028, which seeks to ensure that aggregate exploitation does not unduly impinge on the environmental quality, and the visual and residential amenity of an area. The development would therefore be contrary to proper planning and sustainable development of the area.
- Having regard to the location of the proposed quarry, and the lack of sufficient detailed information in respect to the archaeology, baseline noise, road network, dust plumes, site specific bridge installation and silt fences, it is considered that the proposed development, notwithstanding the mitigation measures proposed in the Environmental Impact Assessment Report submitted would seriously injure the amenities of properties in the vicinity by reason of dust, noise, would have an adverse impact on the water environment and biodiversity of the area, would result in a traffic hazard. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.
- The proposed development would endanger public safety by reason of serious traffic hazard because the proposal to provide sightlines by maintaining the height of existing boundary hedgerows is considered wholly inadequate.

3.2.1.2. The 2nd Planner's Report on file dated 25th July 2023 indicated that a time extension was placed on file, and unsolicited further information (FI) was received by the Planning Authority on the 8th June 2023 and the application was subsequently readvertised.

3.2.1.3. As part of the unsolicited FI, the following documents were submitted by the Applicant's agent:

- Updated Restoration Plan prepared by Enviroguide Consulting: Drawing No. Al-03 - Appendix 1,
- Noise Monitoring Baseline Survey prepared by BHP Ltd. - Appendix 2,
- Air Dispersion Modelling prepared by Enviroguide Consulting - Appendix 3,
- Wicklow County Council Planning Report - Appendix 4,
- Wicklow County Council: Consent to extend Appropriate Period - Appendix 5,
- Submitted Letter of Consent from Landowner - Appendix 6,
- Land Registry Map: Right of Way - Appendix 7,
- Haul Road Long Section prepared by Enviroguide Consulting: Drawing No. Al-04 - Appendix 8,
- Updated Bridge Details prepared by Enviroguide Consulting: Drawing No. Al-05 - Appendix 9,
- Drainage and Road Surface Detail prepared by Enviroguide Consulting: Drawing No. Al-02- Appendix 10,
- Updated Sightlines prepared by Enviroguide Consulting: Drawing No. Al-01 - Appendix 11,
- Appropriate Assessment Screening prepared by Enviroguide Consulting - Appendix 12,
- Natura Impact Statement prepared by Enviroguide Consulting - Appendix 13,
- Archaeological Assessment Report prepared by De Faoite Archaeology Appendix 14,
- Traffic Data Traffinomics Limited- Appendix 15, and
- Response Letter to Planning Report Stephen Reid Consulting - Appendix 16.

3.2.1.4. Within their response document (Part 1), the Applicant noted that there had been a change in the project description, and it was now proposed that restoration activities will be phased and happen concurrently with the phasing of extraction activities. A sequencing of the restoration phase compared to the extraction phasing is set out in Table 2-1 of their response document and they referred to the Updated Restoration Plan that accompanied their response. In addition to the supplementary assessments

and modelling, the following amendments to the development were proposed:

- Updated plans to remove the hedgerows/trees on either side of the proposed entrance to facilitate adequate sightlines. (letter of consent from landowner attached)
- The haul road as it approaches the new bridge structure is to be cambered to allow any surface water to drain to each side, hence mitigating any potential run off of silt into the stream. This is in addition to the proposed silt fencing that has been specified.
- The Haul Road Section Drawing No. Al-04 proposes a tarmacked surface from the edge of the R756 to the relocated wheel wash. A new gate is set back 17m from the edge of the R756 with an Aco drain set back 20m.
- In terms of the bridge details, it is proposed to install 4x10m lengths of silt fencing upstream and downstream running parallel to the riverbanks at the top and bottom of the bank, in addition to the already specified silt fencing attached to the bridge as originally proposed.

3.2.1.5. Part 2 of the Applicant's response provides a review of the submitted EIAR on foot of the supplementary information provided and the amendments proposed. Within their assessment of the Applicant's unsolicited FI, it was the Planning Authority's view that the overall submission to address the refusal reasons under the previous planning report have not fully addressed matters in relation to archaeology, silt run-off into stream at the bridge and clarity on noise monitoring locations. The Planning Authority go on to note that as further information cannot be sought on these matters due to time limitations, a refusal of permission was recommended for the reason that I have outlined in Section 3.1.

3.2.2. Other Technical Reports

Waste Management Section: Two (2) no. reports on file which indicate that they have no objection to a grant of permission from a waste, geology or hydrogeological perspective.

EHO: Initial report on file stating no objection to the proposed development subject to compliance with conditions.

Executive Scientist (Pollution Control): Initial report on file which raised concerns with respect to noise, dust, visual impacts and surface water contamination. Risks are also highlighted with respect to the restoration phase and the need to ensure that inert infill sites only accept non-contaminated materials. A refusal of permission was recommended. A second report is on file following the submission of unsolicited FI which recommended a refusal of permission with regard to surface water contamination with silt laden material.

Municipal District Engineer: Report on file recommending FI with respect to the following:

- Revisions to the roadside boundary to achieve sightlines,
- Revised proposals for the surfacing and drainage of haulage roads, and,
- Updated proposals for the wheel wash facilities.

Second report on file which again recommended FI with respect to the requirement to submit a construction management plan (CMP) and update drainage drawings.

Roads: Report on file recommending FI with respect to the following:

- Update sightlines and details how they are to be maintained during the lifetime of the operations.
- Confirmation that the field access to the south-east of the entrance is to be permanently closed.

Second report on file stating no objection subject to compliance with conditions.

3.3. Prescribed Bodies

Department of Housing, Local Government and Heritage (Nature): Report on file dated 3rd February 2023 stating that the proposed application is situated in a location likely to impact on the Poulaphouca Reservoir SPA and it is their view that the application requires further Information in the form of a full Appropriate Assessment.

Department of Housing, Local Government and Heritage (Archaeology): Report on file dated 21st June 2023 which noted that it is not clear if the archaeological impact assessment within the EIAR was prepared by a suitably qualified archaeologist. In

addition, it is stated that no field-based investigative work, such as geophysical survey and/or archaeological testing, had been carried out to inform the archaeological mitigation strategy. Suitable conditions were recommended in the event of a grant of permission.

Irish Water: Report on file stating no objection to the proposed development subject to compliance with conditions.

TII: Report received recommending that the proposed development be undertaken strictly in accordance with the recommendations of the Transport (Traffic Impact) Assessment. Any recommendations arising should be incorporated as Conditions on the Permission, if granted and any additional works required as a result of the Assessment should be funded by the developer.

HSE: No concerns raised with respect to groundwater/surface water, dust and noise if all mitigation measures in the EIAR are implemented. Recommendations provided with respect to a restoration plan and a CEMP.

An Taisce: A report received following the submission of the unsolicited FI which notes that when FI arises on an EIAR-level development, there is an issue of public advertisement for the submission. Clarification on this case is requested as all of the issues raised in the FI request and submission relates to considerations under the EIA Directive. In the case of EIAR development, there is an onus on the planning authority to determine the site suitability of the development proposed and adequacy of mitigation measures under the relevant heading in the EIA Directive.

3.4. Third Party Observations

3.4.1. A total of six (6) no. observations were received by Third Parties. The issues raised in the observations can be summarised as follows:

- Concerns regarding the visual impact of the proposed development within an undisturbed natural landscape.
- The proposed development is contrary to the policies of the current county development plan and the policies that seek to preserve areas of outstanding

natural beauty.

- Concerns regarding the impact of the proposed development on the surrounding road network due to additional traffic flows.
- Concerns regarding the impact of the proposed development on water quality due to the hydrological connectivity of the site.
- Traffic safety concerns associated with the proposed development. It is highlighted that the surrounding road network is utilised by walkers and cyclists and is not suitable to cater to a development of this nature.
- Concerns highlighted with respect to noise and dust emissions associated with the proposed development and its impact on the residential amenity of properties within the site's vicinity.
- Disturbance to habitats and wildlife as a result of the proposed development. It is highlighted that the location of the subject site is in an area that is rich in biodiversity and impacts on biodiversity and habitats will result due to disturbance by the extraction process itself and by the increased noise pollution and potential for water contamination.
- Concerns highlighted with respect to pollution of drinking water wells and local streams and rivers.
- Citing employment as a benefit to the local community on the basis of providing 2 no. jobs is not an adequate justification for the proposed development.
- Concerns raised with respect to the lack of public engagement.

4.0 Relevant Planning History

4.1. Appeal Site

4.1.1. **21/1372:** Planning application deemed to be withdrawn which sought permission for development comprising the extraction of sand and gravel materials from the site. The proposed site area was ca. 20.308ha and the proposed extraction area was c. 17.79ha. The proposed development also included a surface mounted weighbridge, a wastewater treatment system and percolation area, portacabin office, canteen and welfare facilities on site, together with all site ancillary works, drainage, wheel wash and fencing. An Environmental Impact Assessment Report (EIAR) was prepared in respect of the proposed development.

4.1.2. The Planner's Report on this application dated 6th January 2022 recommended a refusal of permission for the following 4 no. reasons.

1. Having regard to:
    i. the location of the development within a landscape defined as an Area of Outstanding Natural Beauty - Mountain and Lakeshore Area of Outstanding Natural Beauty
    ii. Listed Prospect 22 and 23
    iii. the visibility of the site in views from the R756 and R758, and partially from the L8347,

    It is considered that the proposed development would form an obtrusive feature within this sensitive landscape, would erode the intrinsic qualities of this upland area, would have a significant negative impact on views from the R756 and R758 which are important tourist route within County Wicklow, and would seriously interfere with prospects 22 and 23 which are of special interest, which it is necessary to preserve. The development would therefore be contrary to proper planning and sustainable development.
2. The Environmental Impact Assessment Report and Appropriate Assessment Screening Report are deficient in their failure to provide sufficient information to fully assess the impacts of the development, in particular sufficient information/ assessment has not been provided with respect to scale/ life of extraction, groundwater, noise, traffic, roads and restoration. In the absence of such information the proposed development may give rise to significant and adverse effects on the amenities of the area, give rise to a serious traffic hazard, and impact negatively on the environment. In addition, negative impacts on the Poulaphouca Reservoir SPA cannot be screened out. The proposed development would, therefore, be contrary to the requirements of the Habitats Directive, to Directive 2014/52/EU (EIA Directive), to the objectives of the County Development Plan 2016-2022 which seeks to ensure that aggregate exploitation does not unduly impinge on the environmental quality, and the visual and residential amenity of an area. The development would therefore be contrary to proper planning and sustainable development of the area.
3. The proposed development would endanger public safety by reason of serious traffic hazard because the proposal to provide sightlines by maintaining the height

of existing boundary hedgerows is considered wholly inadequate, and insufficient information has been submitted to show that adequate stopping distances on all approaches to the entrance.

4. The site of the effluent disposal system is located within the Liffey catchment area and adjoins an important feeder stream to the Poulaphouca Reservoir, which is a major source of public water supply. The proliferation of on-site effluent disposal systems will increase the likelihood of contaminants reaching this water source, through malfunction, lack of maintenance or otherwise, and would, therefore, be prejudicial to public health and contrary to the proper planning and development of the area.

4.1.3. I note that there is correspondence on the file from the Applicant's agent date stamped 11th January 2022 which formally withdraws the application.

5.0 Policy Context

5.1. Wicklow County Development Plan (CDP), 2022-2028.

5.1.1. The Wicklow County Development Plan (Plan), 2022-2028 is the operative plan for the purposes of this appeal determination. The appeal site is located within a rural area (Level 10: open countryside) of the county. The policy notes that the rural area in Wicklow is an active and vibrant area that plays host to a range of activities including, for example, rural housing, rural recreational activities, agricultural, horticulture, forestry, aquaculture, fishing, rural tourism, rural enterprises, quarrying and extraction, landfill, renewable energy etc.

5.1.2. Section 9.4 (Economic Development Hierarchy) of the current Plan acknowledges that the key areas within Wicklow's rural economy that present these opportunities fall within the agriculture, food and forestry sectors and to a lesser extent within the maritime / fishing and extractive industry. The Strategic Objective contained within Section 9.6 (Objectives for Wicklow's Rural Economy) is 'To preserve the amenity, character and scenic value of rural areas, and to generally require employment-generating development to locate on zoned / designated land within existing settlements. Notwithstanding this, it is the objective of the Council to enhance the competitiveness of rural areas by supporting innovation in rural economic

development and enterprise through the diversification of the rural economy into new sectors and services including those addressing climate change and sustainability and through the development of appropriate rural based enterprises, which are not detrimental to the character, amenity, scenic value, heritage value and environmental quality of a rural area.

5.1.3. The Strategic Objective for the 'Extractive Industry' is 'To support and facilitate the exploitation of County Wicklow's natural aggregate resources in a manner, which does not unduly impinge on the environmental quality, and the visual and residential amenity of an area (see Map 09.05, Crushed Rock Aggregate Potential). The following objectives are noted:

- CPO 9.52 To facilitate and encourage the exploration and exploitation of minerals in the County in a manner, which is consistent with the principle of sustainability and protection of residential, environmental and tourism amenities.
- CPO 9.53 To encourage the use, development and diversification of the County's indigenous natural dimensional rock industry, particularly where it can be shown to benefit processing, craft or other related industries.
- CPO 9.54 To support and facilitate the development of related and spin-off industries of the extractive industry such as craft and monumental stone industries and the development of the mining and industrial tourism heritage. Consideration will be given to the development of such related industries within or in association with existing operations of worked out mines or quarries, at locations such as the disused granite quarries at Ballyknockan, where this does not conflict with other objectives and objectives of the plan.
- CPO 9.55 To have regard to the following guidance documents (as may be amended, replaced or supplemented) in the assessment of planning applications for quarries and ancillary facilities:
    - 'Quarries and Ancillary Activities: Guidelines for Planning Authorities' (2004, DoEHLG); 'Environmental Management Guidelines – Environmental Management in the Extractive Industry (Non Scheduled Minerals)', EPA 2006;
    - 'Archaeological Code of Practice between the DoEHLG and the Irish

Concrete Federation' 2009;

- 'Geological Heritage Guidelines for the Extractive Industry', 2008; and
- 'Wildlife, Habitats and the Extractive Industry – Guidelines for the protection of biodiversity within the extractive industry', NPWS 2009.

5.1.4. In terms of Natural Heritage & Biodiversity, Section 17.4 of the current Plan contains the following relevant objectives:

- CPO 17.1 To protect, sustainably manage and enhance the natural heritage, biodiversity, geological heritage, landscape and environment of County Wicklow in recognition of its importance for nature conservation and biodiversity and as a non-renewable resource.
- CPO 17.2 Ensure the protection of ecosystems and ecosystem services by integrating full consideration of these into all decision making.
- CPO 17.5 Projects giving rise to adverse effects on the integrity of European sites (cumulatively, directly or indirectly) arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall not be permitted on the basis of this plan.

5.1.5. As per Chapter 17 of the CDP (Map No. 17.09A), the site is identified as being located within the 'The Mountain Uplands' Area of Outstanding Natural Beauty. The central mountain upland area extends from the Dublin border in the north of the County at Kippure towards Aughrim in the south and from east of the Glen of Imaal as far as west of Roundwood Village. A key characteristic of this area is mountainous topography with U-shaped valleys, lakes and glacial topography. This area generally relates to lands immediately surrounding and above the 300m+ contour line.

5.1.6. In terms of Landscape, Views & Prospects, the following objectives are noted:

- CPO 17.36 Any application for permission in the AONB which may have the potential to significantly adversely impact the landscape area shall be accompanied by a Landscape / Visual Impact Assessment, which shall include, inter alia, an evaluation of visibility and prominence of the proposed

development in its immediate environs and in the wider landscape, a series of photos or photomontages of the site / development from clearly identified vantage points, an evaluation of impacts on any listed views / prospects and an assessment of vegetation / land cover type in the area (with particular regard to commercial forestry plantations which may be felled thus altering character / visibility). The Assessment shall demonstrate that landscape impacts have been anticipated and avoided to a level consistent with the sensitivity of the landscape and the nature of the designation.

- CPO 17.37 To resist development that would significantly or unnecessarily alter the natural landscape and topography, including land infilling / reclamation projects or projects involving significant landscape remodelling, unless it can be demonstrated that the development would enhance the landscape and / or not give rise to adverse impacts.
- CPO 17.38 To protect listed views and prospects from development that would either obstruct the view / prospect from the identified vantage point or form an obtrusive or incongruous feature in that view / prospect. Due regard will be paid in assessing development applications to the span and scope of the view / prospect and the location of the development within that view / prospect.

5.1.7. As per Map No. 17.11 of the current CDP, there is a prospect (23 i.e. Prospect of area around the Wicklow mountains extending from Laragh to Slievecorragh) which runs along the R756 to the south of the appeal site.

Relevant Appendices

- Appendix 1: Development and Design Standards.

5.1.8. Section 4.3.6 (Extractive Industry) notes that the Planning Authority will facilitate the development of the extractive industry and permit such workings where it has been shown that the following criteria can be met; having taken into account the reduced demand for aggregates that will come about through improved recycling of construction and demolition waste:

- The environment and the landscape will be safeguarded to the greatest possible extent during all life cycle stages of the process;

- Such operations have good access to, or are within reasonable distance of, the national or regional road network and do not adversely affect the residential or tourism amenity of the area;
- Satisfactory provision will be made for a beneficial after use of the land that does not conflict with other planning objectives for the area;
- The working, landscaping, restoration and after care of the site will be carried out to the highest standards in accordance with the approved scheme.

5.1.9. Where proposals for the working out of minerals and aggregates are submitted in the Area of Outstanding Natural Beauty, existing landscape quality shall remain the overriding priority and such proposals must illustrate that the benefits of the development will outweigh any adverse environmental consequences. The Planning Authority shall evaluate the need to conserve the environment, character and natural beauty of AONBs and the extent to which the proposed development would materially damage these qualities. It shall also examine the national need for that specific mineral or aggregate substance to be worked and the availability of the resource in less sensitive locations.

5.1.10. The policy also provides details of the application requirements for extractive developments which include:

- Land and mineral interest,
- Nature of development,
- Nature of deposit,
- Proposed method of extraction,
- Additional information relating to underground operations,
- Processing of materials,
- Ancillary operations and development,
- Access and Transport,
- Environmental effects of the proposal, and,
- Restoration, after care and after use.

5.2. National Policy and Guidance

5.2.1. **Climate Action Plan 2024**

5.2.1.1. The Government of Ireland's Climate Action Pan was published in June 2019 by the Department of Communications, Climate Action and Environment. The Climate Action Plan 2024 (CAP24) is the third 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.

5.2.2. Ireland's 4th National Biodiversity Action Plan 2023–2030

5.2.2.1. Ireland's 4th National Biodiversity Action Plan (NBAP) sets the national biodiversity agenda for the period 2023-2030 and aims to deliver the transformative changes required to the ways in which we value and protect nature. The NBAP will continue to implement actions within the framework of five strategic objectives, while addressing new and emerging issues:

- Objective 1 - Adopt a Whole of Government, Whole of Society Approach to Biodiversity,
- Objective 2 - Meet Urgent Conservation and Restoration Needs,
- Objective 3 - Secure Nature's Contribution to People,
- Objective 4 - Enhance the Evidence Base for Action on Biodiversity
- Objective 5 - Strengthen Ireland's Contribution to International Biodiversity Initiatives.

5.2.3. National Planning Framework (Project Ireland 2040) and National Development Plan 2018-2027

5.2.3.1. These joint documents set out a vision for the future development of the country and in particular, to support the sustainable development of rural areas by encouraging growth. National Policy Objective 23 seeks to facilitate the development of the rural economy through supporting, amongst other sectors, a sustainable and economically efficient extractive industry sector, whilst at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.

5.2.4. Regional Spatial and Economic Strategy for the Eastern and Midlands Region 2019-2031

5.2.4.1. This strategy came into effect on June 28th 2019, and builds on the foundations of Government policy in Project Ireland 2040. It seeks to determine at a regional scale how best to achieve the shared goals set out in the National Strategic Outcomes of the NPF and sets out 16 Regional Strategic Outcomes (RSO's) which set the framework for city and county development plans. The RSO's are underpinned by the Regional Policy Objectives, (RPO's). It supports the circular economy to make better use of resources and become more resource efficient.

- RPO 6.7: Support local authorities to develop sustainable and economically efficient rural economies through initiatives to enhance sectors such as agricultural and food, forestry, fishing and aquaculture, energy and extractive industries, the bioeconomy, tourism, and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage.

5.2.5. **Quarries and Ancillary Activities - Guidelines for Planning Authorities 2004**

5.2.5.1. The Guidelines were issued to offer guidance to planning authorities and An Bord Pleanála for the quarrying industry through the Development Plan and determining planning applications for planning permission for quarrying and ancillary activities and for the implementation of Section 261 of the Planning and Development Act, 2000.

5.2.5.2. 3.6 - Landscape - The development plan will indicate areas of high landscape quality, together with proposed geological Natural Heritage Areas, where quarrying will not normally be permitted. While Quaternary landscape features such as eskers and moraines comprise valuable sediments, they also represent non-renewable records of past climate and environmental change, and should be afforded some protection.

5.2.5.3. 3.7 - Traffic Impact - Best practice/possible mitigation measures: Some related mitigation measures (e.g. in relation to noise and dust) have been outlined above. Specific traffic-related measures may include:

- The improvement of sightlines at the site entrance;
- The strengthening/widening of local roads;
- Limiting HGV traffic to specified routes to and from the site;
- Queuing of vehicles with engines running at quarry sites in the early morning

can impact on residential amenity, and must be avoided;

- Provision of footpaths/pedestrian refuges as well as passing bays for vehicles on rural roads in the vicinity of the site.

5.2.6. **Other National Guidelines**

5.2.6.1. Regard is also given to:

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, (Department of Housing, Local Government and Heritage) (August 2018).
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2009).

5.3. Natural Heritage Designations

5.3.1. The nearest designated site (Poulaphouca Reservoir SPA (Site Code 004063)) is located c. 700m to the north of the appeal site. The site is also located c. 200m to the west of the King's River which forms part of the Poulaphouca Reservoir Natural Heritage Area (pNHA).

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. A First Party appeal has been prepared by Enviroguide on behalf of the Applicant. The appellant's grounds of appeal are addressed under 3 no headings in response to the individual issues contained within the reason for refusal.

Archaeology

6.1.2. The submission refers to the Archaeological Assessment report, carried out by De Faoite Archaeology which was submitted as part of the application (enclosed as Appendix 1) which included a desktop study and a field inspection. It is concluded within the report that ground conditions were not suitable for geophysical survey given numerous furze bushes, small fields with barbed wire fencing, granite boulders and the site's topography. The assessment indicates that there are several possible clearance cairns visible which are overgrown, and it is recommended that these be

further examined and cleared of vegetation during the course of test trenching prior to the commencement of the proposed development to confirm that they are not of archaeological significance. The submission contends that the proposed mitigation measures and proposed planning conditions are considered sufficient to allow a planning determination with the safeguards that if there are any archaeological resources, they will be properly protected to the satisfaction of the Planning Authority. Having regard to the nature of the Proposed Development, the Archaeological Assessment report submitted to the Planning Authority and the recommendation of the Department of Housing, Local Government & Heritage, it is the Applicant's view that that issues raised with respect to archaeology should be addressed by way of condition and do not warrant a reason for refusal.

Noise Assessment

6.1.3. The appellant refers to Section 9.2 of the EIAR which identified that the primary noise impacts associated with this proposed development are likely to be due to:

- Excavation of aggregates using a Front-End Loader,
- Screening plant, and,
- Trucks entering and exiting the site.

6.1.4. It was concluded (Table 9.1) that the site is not considered to be a 'quiet area' following screening being carried out within the EIAR (Section 9.3.1). Section 9.5.1 of the EIAR identifies the Nearest Sensitive Receptors (as defined by the EPA) as one-off residential dwellings which are located approximately 440m - 490m from the site of the proposed development. It is concluded within the EIAR that 'The predicted noise levels from all plant items are expected to fall below the daytime noise limit of 55dB(A) at all sensitive receptors; therefore, noise limit criteria will not be exceeded at or beyond this location, and sensitive receptors will not be affected'. Notwithstanding this, a series of mitigation measures are set out in Section 9.6 of the EIAR.

6.1.5. The appellant highlights that the Planning Authority's Executive Scientist did not recommend a refusal of permission on noise grounds in his subsequent supplementary report dated 21/06/2023. The appellant goes on to refer to the commentary with the 2nd Planner's Report which notes that 'Whilst noise survey point

No. 1 is recognisable as the entry point off the Regional Road, No. 2 is not so readily identified. Point No. 2 is indicated as being to the east side of proposed quarry, it is presumed it is at a point close to the quarry on the east to show that the existing noise levels are clearly during daytime above a 'Quiet Area' definition. However, in the absence of a clear locational detail this cannot be fully interrogated."

6.1.6. The appellant now refers to a map detailing the monitoring points which have been included in Appendix 3 of the appeal. It is contended that the information presented in the EIAR is robust and can be relied upon to determine that the proposed development will not have any significant impact on any sensitive receptor as a result of noise. Once implemented the mitigation measures detailed in the EIAR will further ensure that the appropriate noise levels will be maintained. It is stated that the Applicant does recognise the rural nature of the site and is fully committed to implementing all of the mitigation measures as set out in the EIAR. By doing so, it is contended that this will ensure that there will not be any environmental nuisance from noise as a result of the proposed development.

Surface Water Run-Off

6.1.7. The appellant notes that the proposed development will include a permeable internal haul road with a paved area at the entrance at the R756. Water from the paved road area will be collected in drains and following treatment will discharge to ground with no discharge to surface water (Drawing Nos. Appeal 01, 02 and 03). It is stated that rainwater from the permeable haul road will infiltrate via the permeable road surface to ground and will not be diverted and discharged directly to any water course including the Toor River /Little Douglas Stream. Any surface water from the quarry pit will be retained in the quarry due to the topography of the quarry. The appellant notes that a 10m double row of silt fencing has been proposed on either side of the bridge river crossing on both banks. In addition, silt fencing is to be provided along the bridge as a precautionary measure to prevent any sediment in runoff from the bridge and haul road entering Toor River including in the event of heavy rainfall.

6.1.8. The haul road design is for a permeable surface with filter drains to allow infiltration of any rainfall and prevent surface runoff from the road. The appellant goes on to note

that the road design has been updated to now include a cross-fall towards the filter drain located along the full length of the haul road (Drawing No. Appeal 02). It is stated that theefilter drain is a preventative design measure to provide additional capacity for any rainfall that does not infiltrate the road surface during heavy rainfall events.

6.1.9. Notwithstanding the commentary of the Planning Authority, it is stated that the haul road levels gently fall away from the river and therefore any surface water runoff will be directed away from the river. In addition, the haul road surface will be permeable, and rainwater will infiltrate via the road surface to ground and surface water will not be diverted and drained from the road towards the bridge and river. The appellant notes that the precautionary measures of a cross gradient and filter drains together with the use of silt fences (combined geotextile fabric and straw bale) will prevent any sediment entrained in surface runoff from directly discharging to the river and water passing through the filter drains and silt fences will be treated.

6.1.10. The proposed double rows of silt fencing along the river banks will be extended as a single row fence around the bridge are a precautionary measure to intercept any silt and sediment entrained in runoff during heavy rainfall. The proposed haul road will also include filter drains in the vicinity of the bridge to capture any runoff during heavy rainfall. The proposal to treat any water that may runoff the road includes the use of filter drains, aco drains and gully trap (silt traps) and silt fences. In terms of the filter drains, the appellant notes that they are a proven method to treat any potential contaminants typical of road runoff (e.g. silt/sediment/suspended solids, metals, hydrocarbons) through adsorption to the surrounding soil, biochemical degradation of pollutants and physical filtration of water. The gradient of the filter drains will be similar to the road and will fall away from the bridge and river but they will allow water to percolate to ground rather than divert water. Therefore, in the event of heavy rainfall, runoff from the road will not be diverted to flow downhill towards the river. The following measures are also noted:

- Procedures will be in place for the inspection and maintenance of all water treatment infrastructure.
- All works carried out adjacent to the Toor River will be carried out in accordance with an approved method statement.

- An alarmed continuous logging turbidity monitoring system will be installed downstream of the bridge crossing to verify that there are no impacts to water quality during the construction and operational phase.

Having regard to the proposed mitigation measures and information submitted with the application and additional supporting details provided with the appeal, the appellant contends that it has been adequately demonstrated that there are no risks associated with surface water runoff to surface water quality of the Toor River and the King's River, including the 'good' WFD status of the King's River. Accordingly, it is their view that the proposed development does not warrant a refusal of permission.

6.2. Planning Authority Response

None.

6.3. Observations

None

6.4. Further Responses

None.

7.0 Planning Assessment

Having examined the application details and all other documentation on file, including the reports of the Local Authority, the submissions on file and having inspected the site, and having regard to the 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
- Surface Water Impacts
- Noise
- Archaeology
- Appropriate Assessment

Section 8 of this report includes the environmental impact assessment of the proposed development. There is inevitable overlap between the assessments, for example, with matters raised falling within both the planning assessment and the environmental impact assessment. In the interest of brevity, matters are not repeated but such

overlaps are indicated in subsequent sections of the report.

7.1. Principle of Development.

7.1.1. Under the current proposal, the Applicant is seeking planning consent for the development of a sand and gravel quarry. It is proposed to extract a maximum of 50,000 tonnes of material per annum over a ten year period (i.e. maximum of 500,000 tonnes). The overall extraction area on the site measures a total of c. 5.52ha. Within their assessment of the application, the Planning Authority acknowledge that sustaining growth both within Wicklow and the wider Greater Dublin Area is reliant on the provision of aggregates and mineral extraction and they refer to the policy provisions at local and national level that support aggregate extraction within rural areas. However, they acknowledge that developments of this nature must be reviewed with respect to the other issues of importance including landscape protection, environmental protection, visual and residential amenity and traffic safety.

7.1.2. As noted, the appeal site is located within 'The Mountain Uplands' AONB. As such, regard must be given to the current Plan policy for the extractive industry. Notably, Section 4.3.6 of Appendix 1 of the Plan notes that for quarry applications within an AONB, existing landscape quality shall remain the overriding priority, and such proposals must illustrate that the benefits of the development will outweigh any adverse environmental consequences. The policy requires the Planning Authority to evaluate the need to conserve the environment, character and natural beauty of AONBs and the extent to which the proposed development would materially damage these qualities. There is also requirement for an examination of the national need for that specific mineral or aggregate substance to be worked and the availability of the resource in less sensitive locations. Whilst it is evident that there is policy support for a development of this nature in rural areas, the bar is considerably higher in this instance given the particular sensitivities of the appeal site. The site is not only located within an AONB, but it is hydrologically connected to a designated European Site and a proposed Natural Heritage Area.

7.1.3. Section 2.8 (The Existence of the Project) of the Applicant's EIAR provides some background information on the resource that is proposed to be extracted (i.e. silica

sand) and it notes that the existence of the quarry will ensure a steady supply of high grade Silica sand within the Irish market, negating the need to import Silica sand from abroad. In addition, some analysis is provided within Chapter 3 (Planning and Policy) of the EIAR, and it is highlighted in Section 3.3 that there is no other known area in the Country where there is suitable silica sand to produce glass. Having examined Map No. 09.05 (Crushed Rock Aggregate Potential) of the current Plan, it is evident that the site is located within an area of 'high potential'. Whilst it is evident that there is demand in the country for this particular resource, there is a clear obligation on the Planning Authority to evaluate the need to conserve the environment, character and natural beauty of AONBs and the extent to which the proposed development would materially damage these qualities. Whilst I am satisfied that there is policy support for the proposed development and its principle is generally acceptable, I note that these issues are addressed in further detail in my assessment below and in my assessment of Chapters 5 (Biodiversity) and 10 (Landscape and Visual Assessment) of the Applicant's EIAR.

7.2. Surface Water Impacts

In order to facilitate access to the quarry site, permission is sought to install a clear-span prefabricated bridge over the Toor River which is capable of carrying heavy axle loadings and long wheelbase vehicles. The Applicant notes that there is no requirement for instream works at the Toor River as an internal haul road with a culverted road crossing of the Toor River is already in place. The prefabricated bridge will be installed above the existing crossing over the Toor River with no requirement for the removal of the existing crossing and foundations for the bridge will be placed a minimum of c. 2.5m from the water edge at each bank, in line with IFI guidelines. The Toor River runs proximate to the southern boundary of the site where it flows in a south-easterly direction until it enters the King's River (KING'S (LIFFEY)_020) to the east of the site. I note that the King's River has an abuttal with the eastern and northern boundaries of the Applicant's wider landholding (i.e. Blue Line boundary). This section of the King's River forms part of the Poulaphouca Reservoir Proposed Natural Heritage Area (pNHA) and ultimately discharges into the Poulaphouca Reservoir, a designated SPA (Site Code 004063), c. 700m to the north of the site. The King's River has also 'Good' status under the Water Framework Directive.

7.2.1. Notwithstanding the various mitigation measures provided within Chapter 7 (Hydrology) of the EIAR, a key concern of the Planning Authority within their initial assessment of the application was the potential for sediment laden runoff to enter the watercourse at the location of the proposed bridge crossing. This was due, in part to the steepness of the access route on either site of the Toor River. In addition, concerns were raised that the application was not supported by a site-specific cross section at this location nor had details been provided regarding the location of the proposed silt fences in order to allow for a thorough assessment of the development. In the absence of this information, the Planning Authority was not satisfied that negative impacts on the Toor River would not arise. As part of their unsolicited FI, Drawing No. Al-04 was submitted which provided supplementary information pertaining to the quarry's haul road. The Applicant noted that the haul road will be cambered as it approaches the new bridge structure to allow any surface water to drain to each side, hence mitigating any potential runoff of silt into the stream. This is in addition to the proposed silt fencing that had been specified. Furthermore, it is stated that the haul road upon exiting the proposed bridge will fall at a gradient away from the river to ensure that run off from the haul road will not enter the stream. In their review of the Applicant's FI, the Planning Authority's Executive Scientist indicated that it was not clear how the surface water diverted from the haul road will be treated before it ultimately flows downhill towards the river. They note that proposed silt fencing on its own would not trap the finer silt and the silted surface water flowing off to the sides of the haul route would likely form a channel beside the haul route flowing downgradient towards the river. As such, a refusal of permission was recommended due to the risk of silted surface water generated on the haul route and proposed bridge discharging and negatively impacting on the water quality of the Toor and King's River.

7.2.2. Within their appeal submission, the appellant notes that the Planning Authority have assumed that the haul road will be cambered as it approaches the bridge. However, the appellant confirms that the haul road will not be cambered and its design is for a permeable surface with filter drains to allow infiltration of any rainfall and prevent surface runoff from the road. I note that it was a reasonable assumption by the Planning Authority as the Applicant had clearly indicated in Section 1.7 of the FI

response document that ‘The Haul road as it approaches the new Bridge Structure will be cambered to allow any surface water to drain to each side, hence mitigating any potential run off of silt into the stream’. Irrespective of this, the appellant notes that the road design has now been updated to include a cross-fall towards the filter drain located along the full length of the haul road (Drawing No. Appeal 02). This drawing shows the haul road with an upgraded width of 5m and a crossfall at a 2.5 degree grade. The appellant notes that the filter drain is a preventative design measure to provide additional capacity for any rainfall that does not infiltrate the road surface during heavy rainfall events.

7.2.3. It is stated within the appeal submission that the precautionary measures of a cross gradient and filter drains together with the use of silt fences (combined geotextile fabric and straw bale) will prevent any sediment entrained in surface runoff from directly discharging to the river and any water passing through the filter drains and silt fences will be treated. Whilst the Planning Authority’s Executive Scientist noted within their second report on file that 'silt fencing on its own would not trap the finer silt’, the Applicant is proposing to install a double row of silt fences, each constructed of a geotextile fabric and series of straw bales to ensure both fine silt and coarser sediment is captured whilst allowing water to filter through diffusely. The double rows of silt fencing will now extend by c. 15m along either side of both the riverbank and the bridge and are to be located on the top and bottom of either side of the bank. I note that the length of each silt fence has been increased by 5m (10m length originally proposed). As part of the revised plans (Drawing No. Appeal 03), a single row fence is also proposed to be extended around the bridge as a precautionary measure to intercept any silt and sediment entrained in runoff during heavy rainfall. The construction design includes the installation of the fence fabric and straw bales partially below ground surface to prevent any pathway for water beneath the fence/bales, with full details provided on Drawing No. Appeal 03.

7.2.4. In terms of monitoring, it is noted by the appellant that procedures will be in place for the inspection and maintenance of all water treatment infrastructure including Aco drains, filter drains, interceptor, soakaway as well as the proposed silt fences/straw bales. It is stated that the silt fences and straw bales will be inspected weekly and

following heavy rainfall to ensure that any maintenance including replacement of straw bales or geotextile fabrics will be completed immediately as required. The appellant refers to the mitigation measures set out in the EIAR which confirms that all works carried out adjacent to the Toor River will be carried out in accordance with an approved method statement prepared by an appropriately qualified Ecological Clerk of Works (ECOW) to ensure that works are undertaken in a manner to prevent any impact on the water course, including:

- Works not to take place during rainfall events.
- Additional temporary silt fences or other measures identified by the ECOW to be installed to prevent any accidental release of sediment from silted geotextiles or bales.
- Plant, equipment and personnel required for the works will not be permitted to enter the river.
- Site traffic will not be permitted to cross the bridge while any maintenance work on the silt fencing is taking place.

Further to this, the Applicant is proposing to install an alarmed continuous logging turbidity monitoring system downstream of the bridge crossing to verify that there are no impacts to water quality during the construction and operational phase and it is confirmed that the alarm will be monitored full-time by a nominated person.

7.2.5. Whilst it was evident from my observations on site that the existing access lane slopes down towards the crossing of the Toor River, works are now proposed to ensure the haul road will fall away from the bridge on either side for a distance of c. 10m. This is a key difference from what was submitted as part of the Applicant's FI response and an updated cross section (Drawing No. Appeal 03) has been enclosed with the appeal. Whilst I acknowledge that the lands within this portion of the site are partially underlain by 'Peaty Poorly drained mineral', taking into consideration the revisions to the haul route, the filter and Avo drains, the haul road's permeable surface which will allow infiltration, the increased length of the proposed silt fences and the specific details of same provided within the updated drawings (i.e. Drawing Nos. Appeal 02 & 03), I am satisfied that the measures proposed are robust and would prevent silt laden surface water runoff from entering the existing watercourse during periods of heavy rainfall. Subject to compliance with the various mitigation and monitoring measures contained

within the EIAR, it is my view it has been demonstrated that the proposed development will not have an adverse impact on water quality within the Toor River or the King's River. However, given the 10 year operating period of the quarry and its hydrological connectivity to the King's River and ultimately the Poulaphouca Reservoir, it is my recommendation to the Board should permission be contemplated that a condition be included which requires the Applicant/operator to submit an annual monitoring report throughout the lifetime of the permission. This is to be prepared by the ECOW to demonstrate the ongoing maintenance of the proposed water treatment infrastructure. Further consideration of potential impacts associated with ground and surface water contamination is provided within my assessment of the Chapter 7 (Hydrology) of the EIAR.

7.3. Noise

7.3.1. As per Section 9.3.1 (Quiet Area Screening) of the Applicant's EIAR, the site's location was screened, in order to determine if it is located in or near an area that could be considered a 'Quiet Area' in the open country as per the Environmental Protection Agency's publication Environmental Quality Objectives - Noise in Quiet Areas, 2003. The screening is provided within Table 9-1 of the EIAR and as the site is located c. 9.3km from Blessington, c. 1.1km from an operational sand and gravel quarry and c. 4.2km from the N81, the site is not considered to be a 'quiet area' for the purpose of the assessment. Irrespective of this, given the area's rural characteristics, its separation from Blessington by both topography and road distance, the low level quarry operation in the vicinity (pre 1963) and lack of population, it was the Planning Authority's view that the site is clearly located within a quiet area and there is a need for background noise levels to be monitored in the first instance and criteria to evolve from this assessment to ensure that the amenities of existing residents would not be negatively impacted. The Planning Authority's Executive Scientist refers to the location of existing properties c. 410 to 450m to the site's north-east which are downwind of the prevailing south westerly winds. A refusal of permission was recommended due to the likely risk of tonal and impulsive noise nuisance for the downwind dwellings due to their proximity and clear lines of site to the proposed pit, the long exposed haul-route and the very quiet noise environment of the area.

7.3.2. In response to the concerns of the Planning Authority, the Applicant conducted and submitted a Noise Monitoring Baseline Survey by way of unsolicited FI. They refer to the EPA Guidance, NG4, which states that in order for an area to be deemed an area of low background noise, all three of the following criteria need to be satisfied for any of the measurement locations:

- Average Daytime Background Noise Level ≤40dB LAF90;
- Average Evening Background Noise Level ≤35dB LAF90; and,
- Average Night-time Background Noise Level ≤30dB LAF90.

The results of the Noise Monitoring Baseline Survey demonstrated that the background noise level exceeded 40dB LAF90 and was therefore not considered to be an area of low background noise as per the EPA Guidance. In their assessment of the FI, the Planning Authority noted that one of the locations for the noise monitoring had not been clearly specified. In the absence of clear locational detail, a challenge arose in interrogating and interpreting the measurements. Concerns therefore remained regarding the potential impact of the proposed development on the houses to the north-east of the site along the R758 and it was their view there was a risk of noise nuisance at this location.

7.3.3. Within the appellant's submission, the noise survey locations have been clarified with one taken at the entrance to the site on the R756 (Noise Survey Location No. 1) and the second taken where the haul road will cross the Toor River (Noise Survey Location No. 2), directly to the south of the proposed quarry lands. The appellant refers to the mobile plant associated with the proposed quarrying and processing activities and the corresponding noise values as detailed in the plants manufacturer specifications. The results are summarised in Table 9-3 of the EIAR, and it is predicted that noise levels from all plant items are expected to fall below the daytime noise limit of 55dB(A) at all sensitive receptors. Therefore, noise limit criteria will not be exceeded at or beyond this location, and sensitive receptors will not be affected. I note that noise levels were calculated and projected for a range of distances and the formulas and methodology uses are set out in Section 9.5.3 of the EIAR. Notwithstanding the predicted noise levels falling below the daytime noise limit, various mitigation and monitoring measures are set out in Section 9.6 of the EIAR which include:

- Installation of 3 no. site boundary noise sensors which will sound if the noise level

at the site boundary reaches a set decibel level and will allow the site operator to take immediate remedial action.

- Selection of plant with low inherent potential for generating noise.
- Siting of plant as far away from sensitive receptors as permitted by site constraints.
- Avoid unnecessary revving of engines and switch off plant items when not required.
- Keep plant machinery and vehicles adequately maintained and serviced.
- Proper balancing of plant items with rotating parts.
- Keep internal routes well maintained and avoid steep gradients.
- Minimise drop heights for materials or ensure a resilient material underlies.
- Use of alternative reversing alarm systems on plant machinery.
- Where noise becomes a source of resonating body panels and cover plates, additional stiffening ribs or materials will be safely applied where appropriate.
- Limiting the hours during which site activities likely to create high levels of noise are permitted.
- Appointing a site representative responsible for matters relating to noise.
- Monitoring typical levels of noise during critical periods and at sensitive locations.

7.3.4. Notwithstanding the concerns of the Planning Authority, I am satisfied that the information presented in the Noise Monitoring Survey has established a baseline for the existing noise environment and the predicted noise impacts at the nearest noise sensitive locations (NSL) are below the maximum daytime noise limits. I am also cognisant of the commentary provided within Section 9.5.3 of the EIAR which notes that the sound intensity from a point source will obey the inverse square law if there are no reflections or reverberation. As there are a number of treelines and hedgerows along the boundaries of the site and on the intervening lands between the site and the closest NSLs, the predicted noise levels at the closest NSLs are expected to be lower than what is outlined in Table 9-3 when taking account of local terrain. Subject to compliance with the various mitigation and monitoring measures, I am satisfied that the proposed development will not unreasonably compromise the residential amenity of properties within the vicinity of the site by reason of noise nuisance. Further analysis is provided with my assessment of Chapter 9 of the Applicant's EIAR.

7.4. Archaeology

7.4.1. Within their initial assessment of the application, the Planning Authority noted that no test trenching had been carried out on the subject site and it was their view that the reliance on a desk top study as detailed in the EIAR was an unsatisfactory approach. The Planning Authority highlighted the need for an Archaeological Assessment of the site, and at the very least a geophysical survey and associated archaeological assessment. It is concluded within their report that there is a need to fully set out the archaeological landscape at this point, and the approach identified for mitigation would not ensure against potential negative impacts. As part of the unsolicited FI, the Applicant confirmed that an Archaeological Assessment (De Faoite Archaeology) had been carried out and submitted along with a summary and update to the EIAR conclusions. The Archaeological Assessment indicated that the ground conditions were not suitable for geophysical survey, given that the ground is uneven and there are numerous furze bushes, small fields with barbed wire fencing and a great number of granite boulders. A recommendation was provided within the assessment for test trenching to be undertaken by archaeologists under licence to the National Monuments Service of the Department of Housing, Local Government and Heritage (DoHLGH) should the development be granted planning and in advance of any groundworks commencing. Within the 2nd Planner's Report on file, it is acknowledged that the Archaeological Assessment does facilitate an understanding of the background. However, it is their view that further pre-development assessments are required in order for full resolution of the site in terms of archaeology and a refusal of permission is recommended.

7.4.2. The appellant now contends that the Archaeological Assessment submitted as part of the planning application is proportionate at the application stage and aims to give reassurance to the Planning Authority that any potential impacts on archaeological resources will be adequately mitigated against prior to the commencement of development. They go on to note that the proposed mitigation measures and proposed planning conditions are considered sufficient to allow a planning determination with the safeguards that if there are any archaeological resources, they will be properly protected to the satisfaction of the Planning Authority. Having reviewed the Applicant's

Archaeological Assessment and the National Monument's Viewer, there are 8 no. recorded monuments with 1.2km of the appeal site. The nearest monument is a standing stone (WI016-023----) which is located c. 120m to the east of the quarry site and is within the Applicant's larger landholding. I note that there is a report on file from the DoHLGH dated 21st June 2023 which acknowledges that a desk-based archaeological assessment is included in the EIAR. However, they note that it is not clear if the assessment was prepared by a suitably qualified archaeologist and no field-based investigative work, such as a geophysical survey and/or archaeological testing, had been carried out to inform the archaeological mitigation strategy. From examining the documentation on file, it would appear that the DoHLGH did not review the Applicant's unsolicited FI which included the Archaeological Assessment prepared by a suitably qualified archaeologist and the summary and update to the EIAR conclusions. Nonetheless, the DoHLGH did recommend a number of conditions to be attached in the event of a grant of planning permission including a requirement for a pre-development Archaeological Impact Assessment. Subject to compliance with the various mitigation measures set out in the Applicant's EIAR and the conditions recommended by the DoHLGH, I am satisfied that the proposed development is acceptable from an archaeological perspective, and it is my view that a refusal of permission on these grounds is unreasonable. Further analysis with respect to archaeology and cultural heritage is provided within my assessment of Chapter 11 of the EIAR.

7.5. Appropriate Assessment

Introduction

7.5.1. As per Appendix 2 of this report, the proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually or in-combination with other plans or projects could have a significant effect on the Poulaphouca Reservoir SPA (Site Code 004063) in view of the site's Conservation Objectives, and Appropriate Assessment (and submission of a NIS) is therefore required.

7.5.2. An NIS dated December 2022 has been submitted by the Applicant which has been

prepared by Enviroguide Consulting. The NIS refers to the conclusions of the AA Screening Report which noted that upon examination of the relevant information, in particular the nature of the potential pathways associated with the proposed development, the possibility may not be excluded that the proposed development will have a likely effect on the Poulaphouca Reservoir SPA (004063). A hydrological pathway exists between the subject site and Poulaphouca Reservoir SPA via inadvertent surface water discharges from the site and groundwater flows potentially reaching the Toor River and King's River (i.e. hydrologically connected to Poulaphouca Reservoir SPA). In the absence of mitigation measures, there is the potential to give rise to potentially significant effects on the Poulaphouca Reservoir SPA during the construction and operational phases. This is due to the potential for groundwater and surface water runoff containing pollutants (hydrocarbons and silt) to enter the groundwater body or the adjacent Toor River and King's River and downstream Poulaphouca Reservoir. In addition, the hydrological link that exists has the potential to cause disturbance and/or displacement to the bird and aquatic species associated with the Poulaphouca Reservoir SPA, due to effects on the water quality and resource indicator during both the construction and operational phases. Potential noise impacts and associated disturbance of the Protected Species is addressed in further detail below. A summary of the site is presented below, and full details of this site is available on the website of the National Parks and Wildlife Service.

Table 7.1

European Site	Qualifying Interest/ Conservation Objectives	Distance to Development
Poulaphouca Reservoir SPA (004063)	To restore the favourable conservation condition of the Greylag Goose *Anser anser* (A043) in the Poulaphouca Reservoir SPA. To maintain the favourable conservation condition of the Lesser Black-backed Gull *Larus fuscus* (A183) in the Poulaphouca Reservoir SPA.	0.7km

Submissions

7.5.3. Within a number of observations during the application phase, concerns have been highlighted with respect to disturbance to habitats and wildlife, noting the site's location in an area rich in biodiversity. It was argued that the proposed development would result in disturbance to biodiversity and habitats by the extraction process itself and by

the increased noise pollution. In addition, concerns were highlighted with respect to pollution of drinking water wells and local streams and rivers. It is also noted that a submission has been received on the application from the DoHLGH dated 3rd February 2023, stating that the proposed application is situated in a location likely to impact on the Poulaphouca Reservoir SPA and it is their view that the application requires FI in the form of a full Appropriate Assessment. To clarify, the application was supported by an NIS. A submission is also on file from IFI recommending suitable conditions in the event of a grant of permission.

Potential Impact on Key Habitat Species

7.5.4. The Poulaphouca Reservoir SPA (004063) is an SPA under the E.U. Birds Directive, of special conservation interest for the Greylag Goose and Lesser Black-backed Gull. Poulaphouca Reservoir is of national importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

7.5.5. I note that it is the conservation objective to restore the favourable conservation condition of the Greylag Goose *Anser anser* (A043) in the Poulaphouca Reservoir SPA. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. In terms of *forage spatial distribution, extent and abundance*, it is noted that this species is primarily a grazer and key foraging habitats include marshes, grasslands (particularly wet grasslands) and other wetland habitats, cereal stubble, estuaries, and lakes. Roosting is a critical ecological requirement for the wintering population. When roosting overnight, this species typically utilises lakes, estuaries and other open waterbodies.

7.5.6. For the Lesser Black-backed Gull *Larus fuscus* (A183), the conservation objective is to maintain the favourable conservation condition in the Poulaphouca Reservoir SPA. In winter, this species forages within marine, freshwater and terrestrial (open habitat) environments, and food sources include fish, invertebrates, rodents, birds, and fishing discards, as well as other food scraps/waste. This species can switch foraging habitat depending on prey availability. Roosting is a critical ecological requirement for the wintering population. The species is found in a wide variety of marine, freshwater and terrestrial (including inland) habitats during winter. Daytime roosting is also a common behaviour, where birds minimise activity levels to conserve energy, while benefitting from the vigilance of other flock members. A lack of sufficient and suitable roosting habitats can result in increased mortality risk.

7.5.7. In terms *habitat loss and fragmentation,* the Applicant's AA Screening Report notes that no Greylag Geese or Lesser Black-backed Gulls were recorded nor were goose droppings found during field surveys or site walkover visits. Although the field surveys were carried in September and April (i.e. outside the appropriate survey period for wintering bird surveys), I acknowledge that the overgrown nature of much of the site provides negligible suitability as an ex-situ feeding resource for the above species. I would agree with the Applicant that the bracken habitats and rank grass swards at the site render it largely unsuitable for the SCI species listed for Poulaphouca Reservoir SPA. Therefore, I concur with the Applicant's ecologist that there will be no significant loss of any ex-situ foraging/roosting habitat, to any of the SCI species listed for the relevant SPAs, as a result of the proposed development.

7.5.8. In the context of *Habitat / Species* Fragmentation, as there will be no direct habitat loss within any European sites, I am satisfied that no habitat fragmentation will arise as a result of the proposed development. Having regard the nature of the proposed development (i.e. sand and gravel quarry with no requirement for rock blasting), the information provided with the Applicant's EIAR including Chapter 9 (Noise and Vibration) and the Disamenity Dust Assessment (Appendix C), it is considered that the intervening distance between the subject site and the SPA (i.e. 700m) is sufficient to exclude the possibility of significant effects on the Poulaphouca Reservoir SPA arising

from:

- emissions of noise, dust, pollutants and/or vibrations emitted from the site during the construction and operational phases;
- increased traffic volumes during the construction and operational phase and associated emissions;
- potential increased lighting emitted from the site during construction and operational phase; and
- increased human presence at the site during construction and operational phase.

7.5.9. Section 7 (Impact Prediction) of the Applicant's NIS identifies the following sources of potential effects on the Poulaphouca Reservoir SPA as a result of the proposed development:

- Surface water run-off containing silt, sediments and/or other pollutants into the Toor River or King's [Liffey] River.
- Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater.
- Prefabricated bridge installation over the Toor River.
- Vehicular crossing of the Toor River.
- Use of cementitious materials or other hazardous substances (e.g., accidental release of fuel) during the construction and operational phases of impacting on the underlying groundwater.
- Discharges or leaks from welfare pod due to accidental release.
- Waste generation during the construction and operational phases comprising soils and construction wastes.
- Increased noise, dust and/or vibrations as a result of construction and operational activity.
- Increased dust and air emissions from construction and operational traffic; and
- Increased lighting in the vicinity as a result of construction and operational activity.

Mitigation Measures

7.5.10. A range of mitigation and avoidance measures have been suggested and set out for both the construction and operational phases of the proposed development. These

are detailed in Section 9 of the Applicant's NIS and summarised in Tables 7.2 & 7.3 below.

Table 7.2: Construction Phase Mitigation

Construction Phase	
Construction Best Practice	There will be no discharges to groundwater or surface water during the Construction and Operational Phases. No excavation works are proposed within or immediately adjacent to the Toor River. A clear-span prefabricated bridge will be installed above the existing crossing over the Toor River with no requirement for removal of the existing crossing or instream works. No direct discharges to the Toor River will take place, rainwater on site will percolate to ground. Mitigation will include: - Control and Management of Water and Surface Runoff. - Control of Management of works nears water courses. - Management and control of materials from off-site sources. - Appropriate fuel and Chemical handling, transport and storage; - Management of accidental release of contaminants at the Site; and - Management of all construction works in accordance with all statutory obligations.
Control and Management of Water and Surface Water Runoff	- All works carried out as part of these infrastructure works will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990. - There will be no discharges to groundwater or surface water during the Construction Phase. Good construction management practices will minimise the risk of pollution from construction and the Contractor will ensure that no contaminated water/liquids leave the (as surface water and surface water run-off or otherwise), discharge to the Toor River, King's River or any other water courses. - A minimum 25m buffer will be maintained between the Proposed Development Site boundary and nearby receiving water course, from which no works will be undertaken for the duration of the Construction Phase.
Installation of Bridge	A new clear-span bridge will be installed over the existing crossing of the Toor River and the existing crossing which remain in place will not be altered and there will be no instream works. The bridge has a clear span of 7.5m which will be placed from the existing haul road and new pre-cast foundations will be installed for the bridge which will require some localised groundworks. There will be no works within 2.5m of the water on either side of the river in accordance with IFI guidelines. Sediment management in the form of silt fences will be installed from the bridge crossing the Toor to 10m upstream and 10m downstream of the Toor River. All necessary works carried out adjacent to the Toor River (including the bridge upgrade and the construction of silt fencing) will be carried out in accordance with an approved method statement prepared by an appropriately quailed Environmental / Ecological Clerk of Works employed by the Contractor. A watching brief by an Environmental Clerk of Works will be required during the bridge and sediment installation. Continuous monitoring of turbidity and pH will be undertaken during the installation of the bridge and other critical stages of the Construction Phase. Samples will be collected for chemical analysis of an appropriate suite of water quality parameters. The frequency of sampling and schedule for chemical analysis will be determined by the ECOW based on the appointed contractor's programme of works and will be agreed with WCC in advance. Sediment fencing will be inspected on a weekly basis by site personal.

	Inspections will check if the silt fence is intact and work effectively. When sediment build up has occurred, the removal of excess sediment will take place by an appropriately qualified waste disposal contractor.
Concrete Works	Pre-cast concrete will be used where technically feasible to meet the design requirements for the Proposed Development and it is envisaged that there will be limited requirement for cast- in-place concrete. All work will be carried out to avoid any contamination of the receiving water environment through the use of appropriate design and methods implemented by the appointed Contractor and in accordance with industry standards. Any ready-mixed concrete will be delivered to the site by truck. Concrete mixer trucks will not be permitted to wash out on-site with the exception of cleaning the chute into a container which will then be emptied into a skip for appropriate compliant removal offsite in accordance with all relevant waste management legislation
Welfare Facilities	Welfare facilities installed during construction will be self-contained unit (Rego Pod), all associated waste will be removed from site by a licensed waste contractor.

Table 7.3: Operational Phase Mitigation

Operational Phase	
Groundwater Protection	A buffer of 2.0m above the wettest groundwater level will be maintained (i.e. the quarry floor will be greater than 2.0m above groundwater level). A groundwater level monitoring programme will be in place to ensure that this buffer is maintained, which will include the installation of additional groundwater monitoring locations on the perimeter of the excavation. The location of the ground investigation location will be downgradient of the welfare unit and designated refuelling area and will be utilised for groundwater sampling in the worst case scenario of a fuel spill. All trucks leaving the site will pass through a wheel wash and therefore removing the potential for transport of sediment off-site. The wheel wash will be periodically cleaned out and its contents will be disposed of in the appropriate manner by a suitably licensed waste contractor and never discharged onsite. There will be no direct discharges to groundwater from the Proposed Development Site. Where infiltration is impeded and localised ponding occurs due to accumulations of silt and fines or where subsoil has been compacted, soil will be scraped off the quarry floor to restore natural rates of infiltration to groundwater. The self-contained Rego Pod during the construction phase will be used during the Operational Phase of the Proposed Development.
Groundwater Supplu	Surface water runoff from the site office and a canteen roof will be harvested for operational requirements at the Proposed Development (e.g. wheel wash and dust suppression) with additional top up from the groundwater source as required (PW1). The maximum abstraction volume from the groundwater source is 1m^3/day. Groundwater level monitoring at the site will ensure that any drawdown will not impact on flows to the water course. The groundwater well will be operated in accordance with the requirements of the GSI (GSI, 1998). Groundwater level monitoring will take place to ensure any drawdown will not impact flow to the water course. However, PW1 is screened in the bedrock and not directly in the gravel which feeds the surface water.
Protection of Water Courses	- Silt fences will be installed running parallel to the River Toor to prevent silts and soils from the haulage roads being washed by heavy rains into the water course. - Install of the new steel bridge will supervised and an Environmental Clerks of Works.

	- Surface water and groundwater monitoring programme will be developed for the Site. - There will be no discharges to ground during the operational phase. - A minimum 25m buffer will be maintained between the quarry extraction area (at the breakthrough point) and any receiving water course. After the initial quarry entrance is excavated the distance between the River Toor and the Site Development will be greater than 90m and a minimum of 250m from the King's River. - There will be no water abstractions from surface water courses. Water required for the wheel wash and dust suppression will be sourced from rainfall harvesting with additional supply from PW1 as required.
Internal Haul Routes and Bridge	All trucks leaving the Site are required to pass through the Wheel wash prior to leaving site. This internal road is made up of granular material (equivalent to clause 804). Regular inspection and infilling of potholes will take place to ensure the granular material is not eroded and underlying peat is exposed and tracked from the Site with the truck movement. Furthermore, material from the quarry will be tracked from excavation area to a loading area, the haulage trucks will not be required to enter the excavation. The access bridge on site will be upgraded. The bridge specification is designed to take a safe working load of up to 45 tonnes (refer to drawing P-07 for details). All trucks wilt pass through the weight bridge in the compound prior to crossing the single span bridge. The total vehicle weight load will be checked to be below the working load of 45 tonnes. In an instance where the load is greater than 45 tonnes, the trucks will be required to remove excess sand and be re-weight prior.
Sediment and Debris on Offsite Haul Routes	- All trucks leaving the Site will be pass through the wheel wash prior to exiting the site. - Use of dedicated internal haul routes and set down areas for loading that will be covered with hardcore to minimise the requirement for trucks to enter the unpaved areas of the site. - Use water-assisted dust sweeper(s) on the road outside the site if necessary, in the unlikely event that sediment or debris is tracked out of the Site. - All sludges and other waste from wheel-wash and water treatment infrastructure will be removed from the Site by the approved contractor in accordance with all legislative requirements. - All trucks leaving the Site will be covered to prevent airborne dust from trucks that could settle out in water courses and other water bodies along the haul routes including Poulaphouca Reservoir.
Stockpile Management	Appropriate management of excess stockpiles of sand and gravel to prevent runoff of fines and the potential accumulations of silt and fines. Any stockpiled materials will be stored in low mounds and away from internal haul routes.
Handling of Fuels and Hazardous Materials	There will be no storage of diesel, fuels or hydraulic oils on-site. Fuels will be brought to Site as required. A procedure will be drawn up which will be adhered to during refuelling of on-site vehicles.

Assessment

7.5.11. Within the Planning Authority's initial assessment of the application, it was noted that one aspect of the overall extraction works that had not been fully examined was the restoration and there was no reference to this in the NIS. It was the Planning Authority's view that the restoration was integral to the development, and assessment of such impacts would need to be addressed. Therefore, it was considered that the information was not sufficient to fully conclude that negative impacts on the Natura

2000 site would not arise. As part of the Applicants' unsolicited FI, the Applicant re-evaluated the restoration plan and the approach taken to restoration to better prioritise restoration in line with extraction activities. It was therefore proposed to enhance the biodiversity of the site and provide an additional planning gain by ripping the extracted area and the lower levels of the interior side slopes to a depth of 150mm and allow for natural regeneration. This ripping and natural regeneration was proposed to happen in a phased manner, alongside the extraction, as illustrated in the Updated Restoration Plan (Drawing No. AI-03). As the restoration was proposed to be carried out in progressive basis and will not involve the use of inert materials to bring back the site to its original levels, it was concluded that the development will not give rise to negative impacts on this Natura 2000 site. Given the nature of the restoration works, I would concur with the Planning Authority's conclusion, and I am satisfied that the proposed development will not give rise to negative impacts on this Natura 2000 site. However, it is my recommendation that a condition be attached which requires the restoration of the quarry to be undertaken in a phased basis which accords with the submitted Restoration Plan (Drawing No. AI-03).

7.5.12. As detailed earlier in this assessment, planning permission had been refused in part, due to the potential negative impact of the proposed development on existing watercourses. Concerns were highlighted that the development could result in the contamination of the Toor River due to of the potential for sediment laden surface water runoff to enter the watercourse where the haul road is proposing to cross the river. As I have noted in Section 7.2 of this report, the revised drawings demonstrate that the haul road will fall away from the bridge on either side for a distance of c. 10m. Taking this into consideration, in combination with the filter and Avo drains, the haul road's permeable surface to allow infiltration, the increased length of the proposed silt fences and the specific details of same provided within the updated drawings (i.e. Drawing Nos. Appeal 02 & 03), I am satisfied that the measures proposed are robust and would prevent silt laden surface water run-off from entering the existing watercourse. In addition, the Applicant confirms that procedures will be in place for the inspection and maintenance of all water treatment infrastructure and it is proposed to install an alarmed continuous logging turbidity monitoring system downstream of the bridge crossing to verify that there are no impacts to water quality during the

construction and operational phase and it is confirmed that the alarm will be monitored full-time by a nominated person. I note that the application has not been supported by Construction and Environmental Management Plan (CEMP). In the event that the Board is minded to grant permission, it is my recommendation that a condition be included which requires the Applicant to prepare and submit a CEMP for the written agreement of the Planning Authority which incorporates all the mitigation measures proposed within the NIS and the additional measures which have been proposed as part of the appeal. Subject to compliance with the recommended conditions, I am satisfied that the proposed would not adversely affect the integrity of the Poulaphouca Reservoir SPA (004063) in view of the site's Conservation Objectives.

Cumulative Effects

7.5.13. The proposed residential development is catered for through land use planning, including the Wicklow County Development Plan, 2022-2028 (as amended), covering the location of the application site. This has been subject to AA by the Planning Authority, which concluded that its implementation would not result in significant adverse effects to the integrity of any Natura 2000 areas.

7.5.14. Section 8.3 of the Applicant's NIS considered 'in-combination effects'. This section of the Applicant's report has had regard to the planning policy context and planning history of the surrounding area. It is indicated that there are several existing planning permissions on record in the area, ranging from extensions and alterations to existing residential properties to one-off housing developments. Recent permissions within the site surrounds include:

- 211549: Planning permission was sought for the construction of a new single storey dwelling house, on site sewerage treatment system, alterations to existing entrance, new bored well and all ancillary site works. Decision date, 18/05/2022.
- 21832: Planning permission was sought for a single storey dwelling serviced with a small on-site wastewater treatment system to current EPA guideline, entrance via existing field access and all associated site works. Decision date, 14/12/2021.
- 21104: Planning permission was sought for a single storey dwelling, small on site wastewater treatment system to current EPA guidelines, shared entrance

and all associated site works. Decision date, 26/03/2021.

Having reviewed the Planning Authority's online planning application register, I note that there are other residential and agricultural related permissions within the wider surrounds which are typical of the area's rural location. Overall, I conclude that the proposed development would have no likely significant effect in combination with other plans and projects on the qualifying features of any European site(s).

Conclusion

7.5.15. The proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act, 2000, as amended. Having carried out screening for Appropriate Assessment of the project, it was concluded that it may have a significant effect on the on the Poulaphouca Reservoir SPA (004063) in view of the site's Conservation Objectives. Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

7.5.16. In summary, the NIS, and its supporting documentation including the revised EIAR and the supplementary information provided by way of unsolicited FI and the additional measures which have been proposed as part of the appeal, provides adequate information in respect of baseline conditions, identifies the potential impacts of the proposed development, uses best scientific information and knowledge, and provides details of proposed mitigation measures. In addition, the Planning Authority have confirmed that the supplementary information submitted by way of unsolicited FI has been readvertised. Having regard to the totality of the documentation on file, including the NIS, I am satisfied that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the Poulaphouca Reservoir SPA (004063) in view of the sites' Conservation Objectives and there is no reasonable scientific doubt as to the absence of such effects.

8.0 Environmental Impact Assessment

8.1. Introduction & Statutory Provisions

8.1.1. The proposed quarry development is located on a site measuring c. 8.44ha. and will comprise the extraction of sand and gravel at a maximum rate of 50,000 tonnes per

annum over its proposed 10 year life time.

8.1.2. Part 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended) sets out development for the purposes of Part 10 and defines projects that are assessed on the basis of a set mandatory thresholds for each of the project classes including:

2. Extractive Industry

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

Given the area of extraction exceeds the 5ha. threshold, a mandatory EIA is required in this instance. I have had regard to the EIAR (and associated appendices), submitted with the application, the Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response received on 8th June 2023 and all the supporting documentation.

8.1.3. This section of the report comprises the environmental impact assessment (EIA) 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 171A of the Planning and Development Act, 2000 (as amended) defines EIA as:

a. consisting of the preparation of an Environmental Impact Assessment Report (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. including 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 between these factors, and which includes significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters.

8.1.4. Article 94 of the Planning and Development Regulations, 2001 and associated

Schedule 6 set out requirements on the contents of an EIAR.

8.1.5. 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,
- 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.

8.1.6. It also provides a reasoned conclusion and allows for integration of the reasoned conclusions into the Boards decision, should they agree with the recommendation made.

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

8.2.1. Compliance with the requirements of Article 94 and Schedule 6 of the Regulations is set out below.

Table 8.2.1

Section 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 location and description, the planning history of the site and the overview of the project which includes; - Site infrastructure, - Plant and Equipment, - Construction phase, and - Operational phase. As part of unsolicited FI, the Applicant noted there had been a

	change in the project description and it was then proposed that restoration activities will be phased and happen concurrently with the phasing of extraction activities. Overall, 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)).	An assessment of the likely significant direct, indirect, and cumulative effects of the development is carried out for each of the environmental parameters set out in the Regulations. I am satisfied that the assessment of significant effects is comprehensive and robust and enables decision making.
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. The various mitigation and monitoring measures are also included in Chapter 15 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)).	Section 2.7 of the EIAR considers alternatives in respect of do nothing alternative, alternative locations, alternative designs, alternative layouts, alternative processes and alternative mitigation measures. *Do Nothing Alternative* Site would remain in agricultural use. *Alternative Locations* Two possible alternatives have been considered. - Open a new sand and gravel quarry on another Greenfield site - Purchase an existing sand and gravel quarry with current planning permission. *Alternative Uses* If the development of the gravel quarry is not advanced, the site will remain for agricultural use, forestry, or other potential development. *Alternative Design & Layouts* This section outlines that the design of the development has been subject to an iterative process and is the most efficient layout which represents the least possible environmental impact. *Alternative Process* It is stated that the applicant has considerable expertise and experience in the operation of a sand and gravel quarry, and it is noted that there is no other known area in the Country where there is suitable silica sand to produce glass. *Alternative Mitigation Measures* A summary of the mitigation measures is provided in Chapter 15 of this EIAR. I consider 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 and I am satisfied that it is sufficient to enable the assessment of likely effects and to enable decision making.
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	Forecasting methods and/or evidence to identify and assess significant effects are included in the EIAR, as required for relevant environmental topics. Technical difficulties are identified where necessary, and I am satisfied that there are no significant deficiencies that prevent decision making.
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.	Chapter 13 (Risk Management) of the EIAR sets out the assessment of the vulnerability of the Proposed Development to risks of major accidents and/or disasters. It is concluded that the vulnerability of the proposed development to major accidents and/or disasters is not considered significant. In addition, the potential for the project to cause risks to human health, cultural heritage and the environment is not considered significant.
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	Table 1-3 (EIAR) list the persons who have prepared/contributed to the individual chapters of the EIAR and the expertise of those involved in the preparation of the EIAR. With the exception of Chapter 12 (Stephen Reid Consulting (Traffic)), all chapters have been prepared by employees of Enviroguide Consulting. Further details of the competence and qualifications of each individual contributor is provided in each relevant chapter of the EIAR. As detailed in the Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, input from a qualified archaeologist has informed the assessment and has provided suitable recommendations. Overall, I am satisfied that it has been prepared by competent experts to ensure its completeness and quality.
Consultations	Details of consultations have been set out in Chapter 2 of the EIAR. I am satisfied, that appropriate consultations have been carried out and that third parties have had the opportunity to comment on the proposed development and engage with the application process in advance of decision making.

8.3. Compliance

8.3.1. Having regard to the foregoing, I am satisfied that the information contained in the EIAR, and the additional information provided by the Applicant during the course of the application, including the Supplementary Information and Clarifications Report on

the EIAR as part of the unsolicited FI response is sufficient to comply with Article 94 of the Planning and Development Regulations, 2001 (as amended).

8.4. Assessment of Likely Significant Effects

8.4.1. 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.
- Examination, analysis and evaluation.
- Assessment/Conclusion.

8.4.2. Chapter 2 (Project Description and Description of Alternatives) of the EIAR provides a detailed description of the proposed development together with details of the existing environment. This description sets the basis against which the specialist assessments presented in this EIAR have been undertaken. In addition, the Chapter provides information in relation to the environmental impact of both the proposed development and all other "reasonable" alternatives studied and an indication is provided of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment. Overall, I am satisfied a comprehensive description of the proposed development has been provided which adequately describes the construction and operational phases of the proposed development. In addition, the restoration proposals have now been clarified by way of the FI submitted on the 8th June 2023. As detailed in Table 8.2.1 above, the Applicant has provided an overview of how the proposed development has evolved by way of consideration of alternative designs and how the proposed development considered different layout options, having regard to the key environmental issues pertaining to the lands. Overall, I am satisfied that the description of alternatives is reasonable, in the context of the proposed development, and satisfactory.

8.5. Population & Human Health

8.5.1. Issues Raised

8.5.1.1. Concerns had been raised by the Planning Authority and Third Party observers during the course of the application with respect to the potential impact of the proposed on the residential amenity of properties within the vicinity of the site due to noise impacts associated with the operation of the proposed development.

8.5.2. Examination, analysis and evaluation

Context

8.5.2.1. Chapter 4 of the EIAR considers the potential effects of the proposed development on human beings, living, working and visiting in the vicinity of the site of the proposed development at Walterstown, Co. Wicklow. In terms of methodology, a desk-based study was undertaken in October 2022 to assess information regarding population, age structure, economic activity, employment, and unemployment within the vicinity of the proposed development and the principal sources of information included:

- Census and employment information published by the Central Statistics Office (CSO).
- Wicklow Biodiversity Action Plan 2010-2015 (The actions in the BAP will continue to be implemented beyond its five-year timescale as part of ongoing implementation of the County Wicklow Heritage Plan 2017-2022)
- Wicklow County Development Plan 2022-2028.
- Regional Planning Guidelines of the Greater Dublin Area 2010-2022, and,
- Ordinance Survey Ireland (OSl) mapping and aerial photography

Baseline

8.5.2.2. The site of the proposed development is located in Walterstown, Co. Wicklow. The site is accessed from the northern side of the R756 and consists of several fields used for grazing and which bounded by hedgerows. Approximately 1km north-east of the site is Poulaphouca, where the Liffey cascades in three stages. The Poulaphouca Reservoir (also known as Blessington Lakes) was formed in the mid-20th century by the building of the Poulaphouca Dam and hydroelectric power station, and today serves the purpose of providing the power and water services that supply County Dublin. The King's River forms the eastern boundary of the land in the ownership of

the Applicant and ultimately discharges to the Blessington Lakes to the east of Johnstown. The setting is predominantly rural with surrounding land uses of agriculture, forestry and a number of one-off residential dwellings. Hollywood village is located c. 3km to the north-west of the site with the town of Blessington being located c. 9.5km to the site's north.

8.5.2.3. In terms of 'population and demographic analysis', a desktop study from the Census of Population for the Blessington area was carried out. Table 4-5 of the EIAR illustrates that the population of Blessington is comparable to the demographic age profile of Wicklow and Ireland with the largest portion of the population range between 5 to 24 years in the town of Blessington (29.9% in total). For 'economic activity and employment', Table 4-6 shows the percentage of the total population aged 15+ who were in the labour force during the 2016 Census. This figure is further broken down into the percentages that were at work or unemployed. When assessing the percentage of people in the labour force, it is noted that 68.3% of the population in the Blessington area are in the labour force. It is highlighted that this reflects a high number of people of a working profile living within the area which is higher than the national percentage of 61.4%. In terms of statistics on unemployment, the most recent information available from the CSO from September 2022 records 497 people on the Live Register in Baltinglass. The EIAR notes that the nearest Social Welfare Office is the Baltinglass Intreo Office located approximately 25km away from the site.

8.5.2.4. With respect to 'tourism and amenities', the EIAR acknowledges that the scenic and natural landscape coupled with the rich cultural heritage places County Wicklow as a key location for recreation and tourism. Walterstown and the local area have important historical attractions that provide amenities and tourism interest in the area which includes Stepping-stones and the King's River Valley, Walterstown Enclosure and Standing stone, Avoca walking tours, and the Wicklow Mountains. In terms of 'landscape' the EIAR notes that the setting of the proposed development is predominantly rural with surrounding land uses of agriculture, forestry and residential dwellings. The landscape is predominantly rolling pastureland, and areas of forestry. A number of agricultural fields surround the proposed development, with these fields varying in size and in use. The general surrounds of the site are covered with existing

hedgerows, scrubs of gorse on dry areas and rushes on the wetter, and a scatter of trees. It is stated that a full assessment of the potential impact of the proposed development on the existing landscape, visual environment and heritage sites is carried out under Chapter 10 (Landscape and Visual) and Chapter 11 (Archaeology and Cultural Heritage) of the EIAR.

8.5.2.5. In terms of human health, Table 4-13 of the EIAR shows that the majority of people in Blessington (90.9%) and County Wicklow (88.7%) have self-identified themselves Census as having 'very good health' or 'good health'.

Potential Effects

8.5.2.6. Likely significant effects of the development, as identified in the EIAR, are summarised in Table 8.5.1 below.

Table 8.5.1: Summary of Potential Effects

Do Nothing	If the sand and gravel quarry is not advanced, the site will remain in agricultural use. Surface water runoff will be at greenfield rates and volumes. The risks to the environment would be from those associated with agriculture. Loss of opportunity for employment growth and there would be an under-utilisation of quarry lands.
Construction Phase	The construction phase of the proposed development will be short in duration and will include site preparation works and some construction works to install the necessary infrastructure. There will be no measurable impact on the traffic flows on the R756 or the N81 during the construction phase (see assessment of Chapter 12 for further detail). Therefore, due to the nature and duration of the proposed construction works, all impacts are likely to be localised, short-term and of temporary nature.
Operational Phase	*Human Health* - All workers will comply with the relevant HSE guidelines and any Government protocols that will be in place at that point in time in relation to Covid-19. - No expected increased level of vermin or rodent activity on-site. - The impact as a result of radon on human health will be neutral and imperceptible *Socio-Economic* - 2 no. jobs will be created during the operational phase having a positive impact, both directly and indirectly to the local economy and employment and there is the potential to increase the level of direct and indirect employment associated with spin-off economic activity. This would have a slight, positive and medium term socio-

	economic effect. *Water* - Drinking water for employees will be provided from bottled water. - No direct discharges to groundwater or surface water from the proposed development. *Dust* - There is potential for dust generation during operation but given the distance to the nearest residential receptors it is indicated that there is an adequate buffer zone. It is stated that the implementation of planned proper on-site management controls as outlined in Chapter 8 (Air Quality), should ensure that no significant adverse impacts to residential amenity occur. *Dust Containing Silica* - The dust mitigation measures detailed in Section 8.6 of the EIAR will also be applied to prevent negative impacts occurring as a result of dust containing silica. Therefore, the impact in relation to silica dust will be imperceptible, neutral, and medium term. *Traffic and Transport* - It is estimated that there will be 10 truck movements each way per working day based on the volume of material to be excavated and it noted that it will not result in any significant change to current traffic movements. Therefore, the development will not result in a negative impact on human health. Full analysis is provided in the assessment of Chapter 12 of the EIAR. *Noise and Vibrations* - The predicted noise levels from all plant items are expected to fall below the daytime noise limit of 55dB(A) at all sensitive receptors. Therefore, noise limit criteria will not be exceeded at or beyond this location, and sensitive receptors will not be affected. As such there will be no significant impact on population and human health as a result of operational noise activities. *Landscape and Visual Amenity* - Chapter 10 of the EIAR concludes that the proposed development will have a minor to moderate, neutral to negative and short-term impact on the landscape character of the site during the construction phase due to the removal of existing vegetation. However, landscaping planned for the peripheral zones of the site will mitigate the visual impacts caused. As such there will be no significant impact on human health as result of landscape and visual amenity.
Cumulative Effect	Cumulative impacts have been considered within Section 4.5.3 of the EIAR. It is highlighted that there is an operational sand and gravel quarry located c. 1.1km to the south-east of the site. However, due to the established nature of this offsite sand and gravel quarry with existing utility infrastructure in place, there is limited risk of any negative cumulative

	impacts on local built services due to the proposed development.

8.5.2.7. As detailed in the submitted Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, there has been no change in the potential impacts of the proposed development during the construction and operational phase, after consideration of the reports and information submitted by way of FI.

Mitigation

8.5.2.8. Mitigation measures are summarised in Table 8.5.2 below.

Table 8.5.2: Summary of Mitigation

Construction Phase	- Working hours will be limited to 08:00 - 18:00, Monday to Friday and 08:00 - 14:00 on Saturday. - No construction activity will be carried out on Monday to Friday evenings after 18:00, on Sundays or on Bank Holidays. - There will be no unnecessary revving of vehicles during arrival or departures to and from the site to ensure that construction related traffic does not give rise to unnecessary noise nuisances. - All vehicles will be switched off when not in use on-site. There will be no unnecessary idling of vehicles or machinery on-site during the construction phase. this will reduce or eliminate any potential noise impacts. - A speed limit of 15km per will be put in place on-site for the construction phase of the proposed development. This will ensure that traffic will not give rise to dust in periods of prolonged dry weather. - In periods of prolonged dry weather, the entrance roadway will be dampened down with water to prevent dust if considered necessary during the construction phase.
Operational Phase	- Dust control measures will be in place at the quarry to ensure that dust does not cause any health impacts which are detailed within Chapter 8 of this EIAR. General dust mitigation measures specified in Chapter 8 will also serve to protect human health in relation to dust containing silica. - Mitigation measures will be strictly implemented to mitigate any potential impact on the receiving hydrological and hydrogeological environment as detailed in Chapter 7 of the EIAR. - Where required, mitigation measures in relation to air emissions, noise, traffic, water etc. are identified in their respective chapters in the EIAR.

8.5.2.9. As detailed in the submitted Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, there has been no change in the construction and operational phase mitigation measures associated with population

and human health, after consideration of the reports and information submitted by way of FI.

Residual Effects

8.5.2.10. It is stated that no negative residual impacts in the context of population and human health are anticipated regarding this proposed development. Once extraction activities have ceased, the restoration of the site will be to a mixture woodland and agricultural use, therefore resulting in a positive residual impact. It is also contended that the proposed development will have a positive residual effect on population and socioeconomic aspects securing future employment and contributing positively to economic activity for residents living in the area.

Assessment / Conclusion

8.5.2.11. I have examined, analysed and evaluated Chapter 4 of the EIAR and all of the associated documentation and submissions on file in respect of population and human health. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028). It is outlined within this Chapter that monitoring will be conducted during the lifetime of the operations to assess the effects on the environment so that operational changes and improvements can be made where appropriate. The proposed monitoring programme will include dust, noise, groundwater and surface water. It is noted that there are also numerous inter-related environmental topics described in detail throughout the EIAR document which are of relevance to human health. During the operational phase noise, air, water, traffic and landscape and visual will be the key environmental factors that will have an impact on population and human health and each topic will be addressed in further detail in my assessment of the individual chapters of the EIAR.

8.5.2.12. Having regard to the examination of environmental information in respect of Population and Human Health within the EIAR, the supplementary information provided by the Applicant, the reports of the Planning Authority and prescribed bodies in the course of the application, I consider that the proposed development would have a neutral impact on the local socio-economic environment. I am also satisfied that the potential for significant adverse impacts on human health during the construction and operational

phases can be avoided, managed, and mitigated by measures that form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on population and human health.

8.6. Biodiversity

8.6.1. Issues Raised

8.6.1.1. Within a number of observations by Third Parties to the application, concerns had been highlighted with respect to the potential for disturbance to habitats and wildlife. It was highlighted that the location of the subject site is in an area that is rich in biodiversity and impacts on biodiversity and habitats will result due to disturbance by the extraction process itself and by the increased noise pollution and potential for water contamination. Concerns had also been raised by the Planning Authority with respect to the potential for contamination of watercourses due to sediment laden surface water runoff.

8.6.2. Examination, analysis and evaluation

Context

8.6.2.1. Chapter 5 of the EIAR provides an assessment of the impacts of the Proposed Development on habitats and species, particularly those protected by national and international legislation, or considered to be of conservation importance; and proposes measures for the mitigation of these impacts, where appropriate.

8.6.2.2. A 15km Zone of influence (ZOI) is used in this report as an initial starting point for collating designated sites for the Biodiversity Chapter. The methodology used to identify relevant designated sites comprised of the following:

- Use of current GIS spatial datasets for designated sites and water catchments downloaded from the NPWS website and the EPA website to identify designated sites which could potentially be affected by the proposed development;
- The catchment data was used to establish or discount potential hydrological connectivity between the project boundary and any designated sites;
- All designated sites within the ZOI (within 15km of the proposed development)

were identified and are illustrated in Figure 5-3 and Figure 5-4 of the EIAR);

- The potential for connectivity with designated sites at distances greater than 15km from the proposed development was also considered in this initial assessment. In this case, there is no potential connectivity between the site and designated sites located at a distance greater than 15km based on the Source-Pathway- Receptor (S-P-R) model;
- Table 5-6 provides details of all relevant designated sites as identified in the preceding steps. The potential for pathways between designated sites and the subject site was assessed on a case-by-case basis using the S-P-R model as per the OPR Practice Note PN01 (March 2021). Pathways considered include:
    - Direct pathways e.g., proximity (i.e., location within the designated sites), water bodies, air (for both air emissions and noise impacts).
    - lndirect pathways e.g., disruption to migratory paths, 'sightlines' where noisy or intrusive activities may result in disturbance to shy species.

8.6.2.3. A separate standalone AA Screening Report and NIS (Scott Cawley Ltd., 2022) was submitted as part of the original planning application documentation. To avoid any repetition, the potential impact on the designated sites has been addressed in Section 7.4 above and in Appendix 2 of this report.

Baseline

8.6.2.4. A desktop study was carried out and completed in November 2022 to collate and review available information, datasets and documentation sources pertaining to the site's natural environment. The following field surveys were undertaken in order to inform the Chapter:

- Invasive Species Surveys: 17th September 2021 and 19th September 2022,
- Mammal Surveys: 17th September 2021 and 19th September 2022,
- Bat Surveys: 17th September 2021 and 19th September 2022,
- Bird Surveys: April 2021 and 19th September 2022,

8.6.2.5. A summary of the habitats, flora and fauna recorded on site and within its surrounds can be summarised in Table 8.6.1 below:

Table 8.6.1: Habitats, Flora and Fauna Records

Habitats & Flora	No protected and/or rare flora were recorded within the site during the surveys. Improved Agricultural Grassland (Gal) dominates the south-western half of the Site. Derived from agricultural grassland subjected to reduced management intensity, this habitat is currently being used as pasture for sheep. Dry Meadows and Grassy Verges (GS2) is a habitat type that occurs where herbaceous species have encroached on less intensively managed grassland habitats and along road margins (Figure 5-5). A small section of improved agricultural grassland in the centre of the site is transitioning to Wet Grassland habitat (GS4/GA). A Dense Bracken (HD1) habitat dominates much of the north-east of the site. Small sections of scrub (WS1) habitat are present throughout the site and along field margins. (identified as a Key Ecological Receptor (KER)) Field margins on Site are lined with linear strips of hawthorn, gorse, bramble, willows (WL1 – Hedgerow). (identified as a KER) Mature treelines (WL2 – Treeline) are present along the access road leading up to the current buildings on site and surrounding the courtyard of the buildings. (identified as a KER) Old stone walls and old stone buildings (BL1- Stone Walls and Other Stonework) are present in the south of the main site area. Low stone walls are also present along field margins throughout the site. An intact building consisting (BL3 – Buildings and Artificial Structures) of a derelict bungalow lies at the south of the main site. (identified as KERs) An area of exposed sand lies (EDl - Exposed Sand Gravel or Till) at the south of the main body of the site, directly adjacent to the entrance gate. Areas of recolonising bare ground habitat (ED3 - Recolonising Bare Ground) are present along the access road and within the courtyard adjacent to the old buildings and structures on site. The Toor River (FWl - Eroding / Upland River) lies adjacent to the southern boundary of the main body of the site and is culverted under the site access road. (identified as a KER) No invasive plant species were recorded at the site during surveys carried out in September 2021 and September 2022.
Fauna	*Mammals (excluding bats)* No rare or protected mammal species were directly recorded during site surveys. The habitats within the site are of variable value to mammals. Evidence of mammal activity was noted during the field surveys in September 2021 and September 2022. Several mammal tracks were observed within the grassland and scrub habitats. No evidence of badger activity such as setts, latrines or feeding signs (snuffle-holes) were recorded at the site. No signs of otter were recorded at the site; however, otter likely utilise areas along the Toor River and downstream King's [Liffey] River. The Eurasian badger, West European hedgehog, Eurasian pygmy shrew, European otter and the Irish stoat have been identified in Table 5-9 as KERs. *Bats*

	During the ecological surveys of the site, the habitats were assessed for their bat roost potential and commuting/foraging suitability. The boundary vegetation was considered to have 'low' bat roost potential given the nature of potential bat roost features present. Given the degree of connectivity to the surrounding landscape, the boundary vegetation features are likely of 'Moderate' foraging and commuting suitability for bats. The existing structures on site, comprising of old stone buildings, structures and a vacant bungalow were noted as having 'High' roost potential based on the presence of and multiple ingress and egress points. A mature treeline running along this courtyard and access road near the buildings, was identified as holding 'Negligible - Low' roost potential given the good condition of the trees and absence of potential bat roost features present. One 'Moderate' roost potential tree was observed in the courtyard area. Some sections of the old stone walls at the site also held 'Low - Moderate' bat roost potential. It is proposed to remove a small section of treeline and low stone wall to the north of the old courtyard on site to facilitate the proposed extraction works. No works are proposed within or directly adjacent to the old buildings or mature treelines along this access road and courtyard. Bats have been identified as a KER in in Table 5-9. *Birds* Two species observed on site are on the Amber List of the Birds of Conservation Concern in lreland; Goldcrests were abundant in the treeline along the entrance road and in the adjacent conifer plantation west of the site, swallow was observed breeding within the old buildings on site. *Fish* There are no NBDC records of Atlantic Salmon in the 2km and 1km national grid squares associated with this site. lnland Fisheries lreland (lFI) surveyed 60 sites on the River Liffey catchment between August and September 2019 to assess the fish stocks status. Five survey sites are located upstream of the subject site along the Kings [Liffey] River, with brown trout representing 100% of the catch within these waterbodies. *Amphibians* There are records of common frog (Rana temporaria) and smooth newt (Lissotriton vulgaris) within the 2km grid squares of the site. The Toor River and adjacent grassland habitats provide potential habitat for common frog. Smooth newts require freshwater ponds, ditches or other similar waterbodies for breeding, moving water such as the river adjacent to site is highly unlikely to provide suitable habitat. The grassland, hedgerows and scrub habitats throughout the site provide potential habitat for smooth newt outside of the breeding season. *Ivertebrates* There are no records for freshwater white-clawed crayfish within c. 2km of the site in the NBDC database. There is no suitable habitat for White-clawed Crayfish within the site boundary or lFI records of White-clawed Crayfish within the King's [Liffey] River. Crayfish naturally colonised Poulaphouca Reservoir and were first noted within the waterbody from fish traps in 1958. *Common Lizard* There are no records for common lizard for the 2km NBDC grid squares associated with the site. However, records exist for this species in the surrounding mountains. The stone walls, grasslands and scrub habitats on site provide potential habitat for this species.

8.6.2.9. Potential significant effects of the development, as identified in the EIAR, are

summarised in Table 8.6.2 below.

Table 8.6.2: Summary of Potential Effects

Do Nothing	The EIAR notes that no impact is predicted from the Do-nothing scenario as it will remain in its natural condition. Habitats at the site would continue to evolve. The dense bracken and scrub would continue to encroach on the grassland habitats at the site. The treelines, hedgerows and old stone walls would continue to provide roosting, nesting, foraging and commuting habitat for local fauna. The site would continue to be used for grazing by local farmers.
Construction Phase	*European Sites* Poulaphouca Reservoir SPA and pNHA are hydrologically linked to the site via surface water and groundwater flows from the site. There is a potential risk associated with the use of cementitious materials or other hazardous substances. There is also potential for sediments/pollutants from the Site to reach the Toor River or King's [Liffey] River via surface water and groundwater flows, which could result in negative impacts to water quality within the Toor River or downstream King's [Liffey] River and Poulaphouca Reservoir. The potential impact is considered to be *negative, short-term* and *moderate* in the absence of suitable mitigation. *Vegetation Clearance and Habitat loss* Phased removal of vegetation as per the proposed phasing plan. There is potential, in the absence of mitigation, for works accidentally being carried out within the root protection areas of the trees being retained and subsequent impacts on the trees via accidental damage, storage of materials in this habitat or 'spilling out' of materials onto the root protection area, for example. As such, there is potential for negative, long-term, moderate impacts on the trees designated for retention. A small section of treeline and low stone walls to the north of the existing buildings and structures on site is scheduled for removal to facilitate the first excavation phase. The loss of these habitats is considered to have a negative, long-term, moderate impact at a local scale. The scrub and hedgerows within the proposed excavation area will be removed to facilitate works, these habitats provide potential nesting, foraging and resting habitat for local bird and bat populations as well as small mammals such as Hedgehog, Pygmy shrew and Stoat. The loss of these habitats is considered to have a negative, long-term, moderate impact, in the absence of suitable mitigation. A prefabricated bridge will be installed above the existing crossing over the Toor River with no requirement for removal of the existing crossing. In the absence of appropriate mitigation measures, there is potential for sediments/pollutants to reach the Toor River or King's [Liffey] River, which could result in impacts to water quality. The potential impacts are considered to be negative, short-term, moderate. *Impacts on Mammals (excluding bats)*

	The site contains habitats suitable for small mammals such as hedgehog, pygmy shrew, and stoat (grassland, scrub, hedgerow, stone walls). Clearance of vegetation may put these species at risk of injury or death if present when clearance is taking place and constitutes a potential, negative, short-term, significant impact on the local populations of these species. Due to the absence of badger setts at the site and the abundance of suitable badger habitat within the surrounding environment, any foraging habitat loss associated with the proposed development will have a neutral impact on badger should they be present. Small mammal species such as hedgehog have the potential to become entangled in construction materials. This constitutes a negative, short-term, significant impact at a local scale. Noise and dust generated during the construction phase has the potential to cause a disturbance impact on small mammals. In the absence of appropriate mitigation, this represents a negative, short-term, slight impact. The reduction of water quality and consequent impact on fish species has the potential to affect otter by reducing prey availability within the waterbodies. This constitutes a negative, short-term, moderate impact in the absence of suitable mitigation. *Impacts on Bats* There is potential for a loss of foraging and commuting habitat for bats that reside within the vicinity of the site through the loss of some sections of hedgerows, linear vegetation, old stone walls and open grassland habitat. This loss and fragmentation of habitat, along with an increased noise and light levels associated with human activity, could have a local negative, long-term, moderate impact on bat species. It is proposed to remove a small section of treeline and low stone wall to the north of the courtyard on the site. In a worst case scenario, where several bats are present within these structures, this could constitute a negative, short-term, significant impact on bats at a local scale, in the absence of suitable mitigation. No works are proposed within or directly adjacent to the old buildings, stone walls and mature treelines along the access road and courtyard. There is a potential local negative, short-term, moderate impact on bats from construction phase lighting at the site in the absence of mitigation measures. *Impacts on Birds* Several bird species were recorded utilising the hedgerow, treeline, scrub and grassland habitats within the site. Should vegetation be cleared or cut back during the breeding bird season (March 1st to August 31st); there is the potential for nesting birds to be harmed and nests to be destroyed. In the absence of mitigation or preventative measures, this risk constitutes a

	negative, short-term, significant impact on local bird populations. In addition, the increased noise and dust levels associated with the construction phase may have the potential to cause negative, short-term, slight impact to local bird populations in the absence of mitigation. *Impacts on Fish and White-clawed Crayfish* In the absence of suitable surface water protection measures, the potential for negative impacts to fish and White-clawed Crayfish as a result of water quality could not be ruled out. This constitutes a negative, short-term, moderate impact in the absence of suitable mitigation. *Impacts on Amphibians and Reptiles* The construction phase will involve the phased removal of vegetation on Site. The impact of the loss of the remaining vegetation on site for amphibians is therefore deemed to be negative, long-term, imperceptible. The stone walls, scrub and grassland habitats provide potential habitat for common lizard, the loss of potential habitat for common lizard and the initial site set up prior to commencement of quarrying, represents a negative, long-term, slight impact in the absence of suitable mitigation. The clearance of scrub/stone wall could cause injury or death to lizards should they be present during the clearance and could constitute a negative, short-term, significant impact at the site level in the absence of mitigation
Operational Phase	*European Sites* In the absence of appropriate mitigation measures, there is potential for sediments/pollutants from the site to reach the Toor River or King's [Liffey] River via surface water and groundwater flows, which could result in negative impacts to water quality within the Toor River or downstream King's [Liffey] River and Poulaphouca Reservoir. This is considered to be negative, long-term, moderate in the absence of suitable mitigation. *Impacts on Habitats and Flora* In the absence of mitigation, there is potential for works accidentally being carried out within the root protection areas of the trees being retained and subsequent impacts on the trees via accidental damage, storage of materials in this habitat or 'spilling out' of materials onto the root protection area, for example. As such, there is potential for negative, long-term, moderate impacts on the trees designated for retention. In the absence of appropriate mitigation measures, there is potential for sediments/pollutants from the site to reach the Toor River or King's [Liffey] River via surface water and groundwater flows, which could result in impacts to water quality within the Toor River or downstream King's [Liffey] River. The potential impacts to the waterbodies are considered to be negative, long-term, significant. *Impacts on Mammals (excluding bats)* Small mammal species such as hedgehog have the potential to become entangled in construction materials causing entrapment and injury or

	death. This constitutes a negative, long-term, significant impact at a local scale. Due to the absence of badger setts at the site and the abundance of suitable badger habitat within the surrounding environment, any foraging habitat loss associated with the proposed development will have a neutral impact on badger should they be present. As badger are mobile species and can establish a sett relatively quickly, should they establish within the proposed extraction boundary in the interim, the destruction of their sett would constitute a negative, long-term, significant impact at a local level. Small mammal species such as hedgehog have the potential to become entangled in construction materials. This constitutes a negative, short-term, significant impact at a local scale. Noise and dust generated during the operational phase has the potential to cause a disturbance impact on small mammals. In the absence of appropriate mitigation, this represents a negative, long-term, moderate impact. The reduction of water quality and consequent impact on fish species has the potential to affect otter by reducing prey availability within the waterbodies. This constitutes a negative, long-term, moderate impact in the absence of suitable mitigation. *Impacts on Bats* There is potential for a loss of foraging and commuting habitat for bats that reside within the vicinity of the site through operational phase lighting and constitutes a negative, long-term, moderate impact on bats at a local scale. A 10 meter buffer radiating out from this area has been included in the project design to protect the Treeline and old structures during the quarry activities. There is a potential negative, short-term, moderate impact on bats from operational phase lighting at the site in the absence of mitigation measures. *Impacts on Birds* The increased noise and dust levels associated with the operational phase may have the potential to cause negative, long-term, moderate impact to local bird populations in the absence of mitigation. The mature treeline along the courtyard and access has been included in the proposed project design, the retention and inclusion of this treeline into the project design represents a positive, permanent, neutral, impact on local bird populations. *Impacts on Fish and White-clawed Crayfish* Due to the nature of the proposed extraction works and the groundwater vulnerability rating assigned to the groundwater in the bedrock aquifer beneath the site as 'High (H)', negative impacts to fish and White-clawed Crayfish as a result of water quality could not be ruled out. This could

	constitute a negative, long-term, significant impact at the scale of the Toor River and King's [Liffey] River downstream of the site, in the absence of suitable mitigation. *Impacts on Amphibians and Reptiles* None listed.
Cumulative Effect	Cumulative impacts have been considered with current and future developments in the vicinity of the subject site as outlined within Sections 5.5.3. Regard is also given the following policies and plans which were reviewed and considered for possible in-combination effects with the proposed development. - Wicklow County Development Plan 2022 -2028 - Wicklow Biodiversity Action Plan 2010 - 2015 Once the recommended mitigation measures detailed in this chapter are adhered to, it is noted that the proposed development is not likely to result in any significant impacts when assessed in isolation in relation to identified KERs, as the habitats present at the site are relatively common in the locality. In addition, the granted developments located in the vicinity of the site are all small in scale, consisting of minor alterations, extensions and one-off housing developments. As such, significant cumulative impacts can be ruled out.

8.6.2.10. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there was no change in the construction phase conclusion in relation to the impacts associated with biodiversity, after consideration of the reports and information submitted by way of FI. In terms of the operational phase, the proposed development will result in the phased restoration of the site. The extracted area and the lower levels of the interior side slopes of the site will be ripped to a depth of 150mm to allow for natural regeneration as per the Updated Phased Restoration Plan (Drawing No. AI-03). The phased restoration using natural regeneration will have a positive, permanent, significant impact on biodiversity. I note that there was no other change in the operational phase conclusion in relation to the impacts associated with the biodiversity.

Mitigation

8.6.2.11. Mitigation measures are summarised in Table 8.6.3 below.

Table 8.6.3: Summary of Mitigation

Mitigation 1 - Control and Management of Water and Surface	There will be no discharges to groundwater or surface water during the construction and operational phases. No works are proposed within or immediately adjacent to the Toor River. A clear-span prefabricated bridge

Water Runoff	will be installed above the existing crossing over the Toor River with no requirement for removal of the existing crossing or instream works. A buffer of 25m will be in place between the remaining Site preparation works and the Toor River, a buffer of at least 90m will be in place between the main extraction works and the Toor River. This buffer will remain in place for the duration of the proposed development. No direct discharges to the Toor River will take place, rainwater on Site will percolate to ground. *Vehicular Crossing of Toor River and Bridge Placement* The vehicular crossing of the Toor River and bridge placement will be one of the main focus points for the prevention of sediment/run-off associated with the proposed works, this will include: - 25m buffer zone for site preparation works and 90m buffer zone between the main extraction works and the Toor River. - existing vegetation will be retained to act as an additional layer of filtration between the quarrying works and the Toor River. - No instream works for the bridge installation. - Silt fencing will be installed from the bridge crossing the Toor River to 10m upstream and 10m downstream of the Toor River. - All necessary works carried out adjacent to the Toor River will be carried out in accordance with an approved method statement prepared by an appropriately qualified Environmental Clerk of Works (ECoW). *General Water Quality Protection* - Pre-cast concrete will be used where technically feasible to meet the design requirements. - Any ready-mixed concrete will be delivered to the site by truck. Concrete mixer trucks will not be permitted to wash out on-site with the exception of cleaning the chute into a container which will then be emptied into a skip for appropriate compliant removal offsite in accordance with all relevant waste management legislation. - A regular review of weather forecasts of heavy rainfall will be conducted, and a contingency plan will be prepared for before and after such events to minimise any potential nuisances. - All containment and treatment facilities will be regularly inspected and maintained. - Refuelling of plant will only be carried out at designated refuelling station locations on Site. - Only emergency breakdown maintenance will be carried out on Site. - All personnel working on site will be trained in pollution incident control response. - Emergency silt control & spillage response procedures contained within the Construction Management Plan will ensure that appropriate information will be available on site. - Spill kits including oil absorbent material will be provided so that any spillage of lubricants or hydraulic oils will be immediately contained. - The wheel wash will be periodically cleaned out and its contents will be disposed of in the appropriate manner by a suitably licenced

	waste contractor and never discharged onsite. - Excess stockpiles of sand and gravel will be appropriately managed to prevent runoff of fines and the potential accumulations of silt and fines. - A buffer of 2.0m above the identified groundwater level will be maintained for the duration of the extraction works. A groundwater level monitoring programme will be in place to ensure this buffer is maintained. - The welfare pod will be emptied by a licenced waste contractor.
Mitigation 2: Tree protection	A 10m buffer surrounding the mature treeline and old structures on site has been incorporated into the project design. This works exclusion zone will be clearly marked up and fenced prior to works being carried out. Trees that are proposed to be retained will be protected by protective fencing, signage and/or ground protection prior to any materials or machinery being brough on site and prior to any soil stripping.
Mitigation 3: Timing of Vegetation Clearance	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. The optimal period for vegetation/habitat clearance is within the months of September and October. Where this seasonal restriction cannot be observed, a check for active roosts and nests will be carried out immediately prior to any site clearance by an appropriately qualified ecologist/ornithologist and repeated as required to ensure compliance with legislative requirements.
Mitigation 4: Protection of Fauna	*Waste Management* As best practice all construction-related rubbish on site will be kept in a designated area and kept off ground level so as to prevent small mammals such as hedgehogs from entrapment and death. *Phased Removal of Vegetation and Structures* A phased approach to the removal of the vegetation and stone walls is recommended, with extraction works taking place in the southern section of the quarry initially and working their way to the next section of the quarry once each section is complete as per the phasing plan.This focusing of the area of works in one section of the site at a time will allow for the adjacent habitats to provide sufficient nesting and foraging habitat for small mammals in the locality. In terms of lizards and scrub/stone wall clearance, Section 5.6.4.2.1 sets the detailed approach for the removal of the scrub/stone wall habitats that make up the various field boundaries within the site. *Log piles for invertebrates and Fauna* Piles of logs and other woody vegetation arising from proposed vegetation removal will be left in suitable secluded corners/margins of the site, to

	provide habitat for common frog, lizards and small mammals such as hedgehog and pygmy shrew. *Badger Survey* A pre-clearance badger survey is recommended to ensure badgers have not taken up residence within or close to the footprint of the extraction works. This should be undertaken 8-12 weeks prior to commencement of vegetation removal. *Protection of Potential Bat Roosts* Should works be required for any reason to the tree identified to hold 'Moderate' bat roost potential, this tree will be subject to a pre-felling survey by a qualified bat ecologist, the evening/ dawn before felling; to confirm the presence or absence of bats. Should bats be found, felling will be postponed until advice is obtained from the NPWS. *Bat Friendly Lighting Measures* Where construction and operational lighting is required, lighting will be directed away from all mature treelines, hedgerows and old buildings and stone structures. This can be achieved by the use of directional lighting.
Mitigation 5: Protection of Aquatic Species and nearby watercourses	Measures for the protection of the Toor River are detailed in 'Mitigation 1' and will ensure that the proposed site preparation, extraction, and infill activities have no significant adverse effects on aquatic sensitivities downstream of the site.
Mitigation 6: Operational Noise Disturbance	Measures to control likely noise impacts caused by the proposed external operations during the construction and operational phase are set out in Section 5.6.6 of the EIAR. It is stated that these measures will ensure that any noise disturbance to nesting birds or any other fauna species in the vicinity of the site will be reduced to a minimum.
Mitigation 7: Operational Dust Disturbance	- Rotary atomisers and water bowsers will be employed during dry weather and during any site preparation activities including overburden removal, excavation of works area, internal roads. - Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind and shorten the length of time for which material will be stockpiled. - Regular spraying of material stockpiles and haul roads during dry and/or windy weather. - Covering of loose loads of fine sized materials during transit. - Regular use of a road sweeper unit on the site entrance road and at the site exit. - A wheel wash will be employed for dust suppression to ensure dust is not transferred off the working site area. - Daily visual observations will be made on fugitive dust levels; in the event of high dust levels, operations giving rise to such emissions will be ceased or curtailed.

8.6.2.12. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there has been no change in the construction and operational phase mitigation measures associated with biodiversity,

after consideration of the reports and information submitted by way of FI.

Residual Effects

8.6.2.13. Table 5-11 of the EIAR provides a summary of the significant residual ecological effects of the proposed development on the KERs during construction and operational phases. The residual impact is summarised in Table 8.6.4 below.

Table 8.6.4: Residual Impacts

Key Ecological Resource	**Residual Impact**
Hedgerows (WLl) and Treelines (WL2), Scrub (WSl)	Imperceptible.
The Toor River (FW1)	Imperceptible.
Stone Walls and other Stonework (BL1)	Negative, long-term, slight.
Buildings and Artificial Surfaces (BL3)	Imperceptible.
Small Mammals	Negative, short-term, slight.
Badger	Negative, long-term, slight through loss of habitat if present in surrounding lands.
Bird Assemblage	Negative, long-term, moderate through loss of habitat. Negative, long-term, slight through noise disturbance.
Bat Assemblage	Negative, long-term, moderate through loss of habitat.
Aquatic and semi-aquatic fauna of the Toor River, King's [Liffey] River and Poulaphouca Reservoir (Otter, Fish assemblage White- Crayfish (WCC)).	Imperceptible.
Amphibians and Reptiles	Imperceptible.

8.6.2.17. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there has been no change to residual impacts in relation to biodiversity, after consideration of the reports and information submitted by way of FI.

Assessment / Conclusion

8.6.2.18. I have examined, analysed and evaluated Chapter 5 of the EIAR and all of the associated documentation and submissions on file in respect of biodiversity. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028).

8.6.2.19. The proposed development will result in the permanent loss of habitats within the site to facilitate the proposed extraction activities. However, I am satisfied that the loss of

these habitats is not considered to be significant given the overall scale of the site and the scope of the proposed mitigation measures. In addition, the restoration plan provides for the site's phased restoration and will allow the site to return to its original use upon the cessation of the quarrying activities, i.e. agriculture. Whilst quarrying activities may result in negative impacts to mammals on site (Small Mammals, Badger, Birds and Bats), the impacts are associated with the loss of habitat and range from slight to moderate. As per the above, the proposal includes significant landscaping that will contribute to the biodiversity of the area in the future and conditions will be included with respect to the site's phased restoration.

8.6.2.20. As discussed earlier, concerns had been highlighted by the Planning Authority and observers regarding the potential for negative impacts on water quality as result of the contamination of watercourses due to sediment laden surface water runoff. The EIAR indicates that in the absence of mitigation, potential negative impacts to fish and White-clawed Crayfish as a result of water quality could not be ruled out due to the nature of the proposed extraction works and the groundwater vulnerability rating assigned to the groundwater in the bedrock aquifer beneath the site as 'High (H)'. It is noted that the vulnerability rating across the quarry will in fact be increased to "extreme" for the operational phase of the proposed development and upon the cessation of the quarrying activities as the unsaturated zone within the quarry lands will be reduced to 2m above the water table during the wettest recorded groundwater levels (see assessment of Chapter 7 for further detail). Notwithstanding this, I have addressed issues concerning surface water and groundwater contamination in detail in Sections 7.2 and 7.4 (Appropriate Assessment) of this report and I am satisfied that significant effects will not arise subject to compliance with the various mitigation measures, proposed monitoring (Section 5.8) and suitable conditions which should be attached in the event of a grant of permission.

8.6.2.21. Although it has not been detailed in the Applicant's EIAR or supplementary information submitted by way unsolicited FI, the revisions to the site entrance off the R756 require extensive hedgerow removal on either side of the entrance for distances of c. 160m. I note that the removal is more pronounced to the west of the entrance, given there are stands of mature trees located towards the western end of the sightline. The Applicant

is proposing to provide a new stock proof fence behind the sightline which is back planted by a native hedgerow. However, from an examination of the plans and particulars, the actual extent of tree removal required to provide the required sightlines remains unclear. From my observations on site, it is evident that a number of trees to the west of the site can be retained given the extent by which they encroach into the adjacent field. Therefore, it is my recommendation that a condition be included which requires an arboricultural impact assessment to be prepared for the trees within the existing hedgerows. The arboricultural impact assessment shall inform a landscape plan for this portion of the site which provides specific details of the proposed native hedgerow planting and fence details (height, material etc.). I note that it may not be necessary/appropriate for the proposed native hedgerow to extend through the stand of existing trees. The arboricultural impact assessment shall provide details of tree protection measures, and the landscape plan shall clearly identify the trees that are proposed to be retained. In addition, a pre-felling survey shall be carried out by a qualified bat specialist to confirm the presence or absence of bats. Should bats be found, felling will be postponed until advice is obtained from the NPWS.

8.6.2.22. In terms of the hydrologically connected European Site (i.e. the Poulaphouca Reservoir SPA (004063)). It is confirmed within the Applicant's AA Screening Report that no Greylag Geese or Lesser Black-backed Gulls were recorded nor were goose droppings found during field surveys or site walkover visits. In addition, it is highlighted that the overgrown nature of much of the site provides negligible suitability as an ex-situ feeding resource for the above species. The bracken habitats and rank grass swards at the site render it largely unsuitable for the SCI species listed for Poulaphouca Reservoir SPA. This has been addressed in further detail in Section 7.4 of this report.

8.6.2.23. I note that 'Mitigation 1' has outlined that the Construction Management Plan (CMP) will ensure that appropriate information will be available on site in terms of emergency silt control & spillage response procedures. It is noted that a CMP has not been submitted with the application. As I have outlined earlier in this report, it is my recommendation that a condition be included which requires the Applicant to prepare and submit a CEMP for the written agreement of the Planning Authority which

incorporates all the mitigation measures proposed within the EIAR, the NIS and the additional measures which have been proposed as part of the appeal. This CEMP shall be prepared in consultation with, a signed off by the project ecologist. Given the details provided in 'Mitigation 6', it also my recommendation that a lighting design for the construction and operational phases of the proposed development, which is prepared in conjunction with a bat specialist, be submitted to the Planning Authority for written agreement prior to the commencement of development.

8.6.2.24. With regard to cumulative effects, I am satisfied that there will be no potential for significant cumulative effects on biodiversity, given the absence of significant effects likely to arise from the proposed development and the protective policies and objectives on the land-use plans that will direct future development locally.

8.6.2.25. Having regard to the examination of environmental information in respect of biodiversity, in particular the EIAR and supplementary information provided by the Applicant and the report of the Planning Authority and prescribed bodies and the submissions of Third Parties in the course of the application, it is considered that the negative impacts on habitats and fauna will be mitigated by the application of best practice construction methodologies, as set out in the project documentation, the application of proposed site and species specific mitigation measures, such that no significant adverse effects arise.

8.7. Land, Soil, Water, Air & Climate

Land & Soil

8.7.1. Issues Raised

8.7.1.1. No issues are raised by parties to the application in respect of land and soil.

8.7.2. Examination, analysis and evaluation

Context

8.7.2.1. Chapter 6 of the EIAR assesses and evaluates the potential impacts of the development on the land, soils and geological aspects of the site and surrounding area. The principal objectives of the chapter are to identify:

- Land, soils, and geological characteristics at the proposed development site,
- Potential impacts that the proposed development may have on land, soils and geology including "worst case" scenario assessment,
- Potential constraints that the environmental attributes may place on the proposed development,
- Required mitigation measures which may be necessary to minimise any adverse impacts related to the proposed development, and,
- Evaluate the significance of any residual impacts.

Included as an appendix which is of relevance to this chapter is a Hydrogeological Risk Assessment Report (Appendix D).

8.7.2.2. It is highlighted that a phased approach was adopted for this chapter in accordance with Environmental Protection Agency (EPA) and lnstitute of Geologists of lreland (lGl) guidelines. The first stage (Element 1) included a desk top study that comprised a review of published environmental information for the site, a site survey and information provided by the Applicant and a site walkover survey undertaken on the 25th March 2021, to establish baseline conditions for the site relevant to the land, soil and geological environment. The second stage (Element 2) comprised the Direct and lndirect Site lnvestigation and Studies stage which was carried out to refine the conceptual site model and undertake a detailed assessment and impact determination. This included:

- A site walkover survey on the 26th March 2021;
- A geophysical survey carried out between the 13th to the 16th 2021 of April to establish the general geological conditions at the site. The survey report is provided in the Hydrogeological Risk Assessment Report (Appendix D).
- An intrusive site investigation was undertaken on a phased basis between 26th March 2021 and September 2022 to log the geological and hydrogeological conditions at the site. The scope of the site investigation included the following:
    - Trial pit excavation at 15 no. locations across the entire site (TP01 to TP15) to identify and assess the shallow geological and hydrogeological subsurface conditions at the site.
    - Borehole drilling and construction of groundwater monitoring wells at eight (8) no. locations and the installation of a groundwater supply trial

well (PW1).
    - Trial pit and borehole/monitoring well logs are included in Appendix D.
- Soil samples from three locations collected and submitted for Particle Size Distribution (PSD) analysis and aggregate classification. The laboratory reports are provided in Appendix D.
- A topographical survey of the site was undertaken and included surveying of all site investigation and sampling locations (Drawing P-01 in Appendix A).

8.7.2.3. Mitigation Measures, Residual Impacts and Final Impact Assessment (Element 3) are based on the outcome of the information gathered in Element 1 and Element 2 of the assessment. These mitigation measures were then considered in the impact assessment to identify any residual impacts. It goes on to state that Element 4 comprises completion of this Land, Soils, Geology assessment.

Baseline

8.7.2.4. The proposed development is located on a greenfield site in agricultural use, predominantly grazing of livestock. I note that the access road from the R756 to the main excavation area is granular hardcore. A disused derelict dwelling and outbuildings, including animal feed trough is located within in the southern part of the main site. The surrounding lands comprises agricultural and forestry land uses with occasional one-off residential dwellings. The topography of the site and surrounding area comprises gently undulating farmland with elevations ranging between 210m above Ordnance Datum (mOD) to 220mOD (GSl,2021). A topographical survey is included in Drawing P-01 (Appendix A).

8.7.2.5. In terms of soil, the site is mapped as being underlain by soils of 'Shallow well drained mineral (mainly acidic)' (AminSW) with 'Shallow, rocky, peaty/non peaty mineral complexes (mainly acidic) (AminSRPT) beneath the south of the main site and north of the access road. South of the access road is underlain by 'Peaty Poorly drained mineral (mainly acidic) (AminPDPT) to (GSl, 2022). 'Mineral poorly drained (mainly acidic soils)' till underlying the River Toor and Kings River. The subsoils or quaternary sediments beneath the majority of the site are mapped by the GSI (GSl 2021) as gravels derived from granite (GGr). The subsoils encountered on site during the

ground investigations comprised of slightly gravelly SAND with varying inclusions of cobbles/ boulders. A layer comprising gravelly to clayey SILT to silty CLAY is present in MW1 and MW3 to MWB ranging in thickness from 0.3 to 3.5m, generally following the topography. The SAND deposits were present to a maximum depth of 29.8mBGL at bn PW1. The results of the geophysical survey (Minerex Geophysics Ltd., 8th June 2021) (refer to Appendix D). The results identified that 'clean' sand deposits of between 6m and 14m thick with only limited cover of up to 0.3m of topsoil above the sand.

8.7.2.6. In terms of bedrock geology, the mapped bedrock beneath the site is identified as Type 2e equigranular formation (Stratigraphic Code: IDNLGRE) which are described as "Pale grey fine to coarse grained granite". The depth to bedrock encountered during the ground investigation ranged from 7.8m to 29.8mbGL and from 191 to 216.4m above Ordnance Datum (maOD). Bedrock is generally dipping to the north-west with the except for PWO1, suggesting there is a fault present on site.

8.7.2.7. In terms of geological heritage, there are no recorded sites on the development site. However, a review of the GSI Geological Heritage Database (G51,2022) indicates that there are 2 no. recorded geological heritage sites located within a 2km radius of the site and are summarised in Table 6-5 of the EIAR.

8.7.2.8. In terms of economic geology, it is noted that the sand deposits at the site are a silica sand and can be described as 'clean' sand (Minerex, 2021) with a grading typical of the requirements of 0/6mm, 0/4(CP) and 012(F) aggregates (laboratory reports provided in Appendix D of the EIAR). It is stated that the Applicant has identified there is a market requirement for lrish-based supply of the type of sand at the site to supply the glass manufacturing sector.

8.7.2.9. The GSI records verify that that there are no karst features (e.g. cave, enclosed depression, swallow hole, turlough) within 2km of the site. It is noted that karst features in lreland are generally associated with Carboniferous limestones and as the site is underlain by granite bedrock, karst features and associated landforms are not expected.

8.7.2.10. In terms of the importation of the receiving environment, the Chapter refers to the Transport Infrastructure Ireland (TII) criteria for rating the importance of geological features at the site. Based on the analysis undertaken, the site would be rated as an attribute of 'high' importance due to the presence of sand resources identified to be approximately 1,700,000m^3 as well as the mapped 'high' crushed rock aggregate potential.

Potential Effects

8.7.2.11. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.1 below.

Table 8.7.1: Summary of Potential Effects

Do Nothing	It is stated that there would be no change or resulting impact on the nature of the site which would remain agricultural land and there would be no impact or change to the land, soil and geology at the site.
Construction Phase	- Land take and stripping of topsoil will be undertaken across the 5.52Ha of the quarry extraction area of the 8.2Ha Site. The topsoil will be re-used onsite for the construction of berms around the western, northern and eastern boundaries of the quarry. There will be an overall land take and change of use from agricultural lands to a quarry that will result in a 'negative', 'significant', 'medium-term' impact due to the loss of topsoil and agricultural lands for the duration of the quarrying activity. It is noted that the quarry will be restored to agricultural on completion of the quarry activities. - There is a limited use of cementitious materials during the construction phase as all infrastructure will be pre-fabricated or pre-cast and therefore only small quantities of concrete will be used onsite. - There will be no bulk storage of fuel of hazardous compound and refuelling will be from a road tanker brought to site as required. A welfare unit will be in place for the construction phase and operational phase. - The welfare unit will be a self-contained unit (Rego pod) with no discharges to ground. The unit will be emptied as required by an authorised contractor in compliance with waste management legislation. The welfare until will remain during the operational phase of the site. - There is a worst case scenario for and accidental release during re-fuelling or emptying of the welfare unit, there may be a 'negative', 'moderate' and 'long-term' impact to soils at the Site.
Operational Phase	*Land Take* There will be a land take of 8.44Ha for the entire site with an extraction area of 5.52Ha for within the site. The land-use change from with a from agricultural lands to a quarry will result in a "negative", "significant",

	"medium-term" impact due to the loss of grazing lands for the duration of the quarrying activity. *Loss of Soil and Subsoil* Unavoidable a loss of native soil through the extraction of sand over an area of 5.52ha. The proposed quarrying will result in a "negative", "significant", "permanent" loss of this material from the site. There will be no impact on bedrock geology associated with the proposed development. *Stability of Land* Collapse of working faces may occur and potentially result in subsidence of adjoining lands and would potentially have an overall "negative", "significant" and "short-term" impact on lands. The lands surrounding the excavation area are under the ownership of the Applicant and a buffer zone will be established (Drawing No. P-05 in Appendix A) which will minimise potential for any offsite subsidence outside the redline boundary. There is no risk of subsidence outside the Applicant's land ownership. *Degradation of Soils* The entire quarry footprint will be stripped of the clay topsoil (ranging in thickness from 0.3 to 0.6m) to create the berms on site and the soils will be stockpiled into berms as they are stripped. There is a potential for "negative" "slight" and "long term" impact to the structure of the soils on site. *Contamination of Soil and Subsoil* The potential accidental release of hazardous material including fuels and materials being used on-site, through the failure of secondary containment or a materials handling accident on the site is considered to potentially result in a 'negative', 'moderate to significant', 'long-term' impact on the receiving geological environment depending on the nature of the incident. The potential accidental release of untreated water (raw sewage) from the on-site welfare facility, through equipment failure or handing accident is considered to result in a "negative" "moderate" and "long term" impact on the receiving lands and soils in the absence of mitigation measures and in a worse case scenario. *Dust* There will be dust generation during the normal quarrying operations at the site. However, it is considered that there will be no significant impact associated with dust arising from the extraction and processing beyond 400m from the site. *Economic* The sand present on site is unique and nontypical of lrish Sands. While the aggregate potential map indicates "low potential", a significant volume of sand has been identified. The availability of such sand within lreland, will reduce the requirement for import of similar grade sands. Overall there will be a "positive", "moderate" and "medium-term" on the local economy.
Cumulative Effect	There is a potential cumulative impact relating to land, soil and geology due

	to dust generation during the operational phase. If a worst-case scenario, generation of dust and sediment on the road from the proposed development and other development in the area.

8.7.2.12. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there was no change in the construction phase conclusion in relation to the impacts associated with the land, soils and geological environment, after consideration of the reports and information submitted by way of FI. In terms of the operational phase, the proposed development will result in the phased restoration of the site. It is highlighted that the restoration plan does not require importation of material and the site will be allowed to naturally regenerate with the following modified impact regarding land: The land take will result a 'negative', 'significant', 'permanent' impact on land and soil. I note that there was no other change in the operational phase conclusion in relation to the impacts associated with the land, soils and geological environment.

Mitigation

8.7.2.13. Mitigation measures are summarised in Table 8.7.2 below.

Table 8.7.2: Summary of Mitigation

Construction Phase	- All works will be undertaken taking cognisance of relevant industry standards (e.g. Guidance for Consultants and Contractors, CIRIA - C532', CIRIA, 2001). - Emergency procedures will be developed, and spillage kits will be available on-site including in vehicles operating on-site. Construction staff will be familiar with emergency procedures for in the event of accidental fuel spillages. Remedial action will be immediately implemented to address any potential impacts in accordance with industry standards and legislative requirements. - The stripping of the topsoil to construct the berms around the perimeter of the site will take place in a continuous movement i.e. berms will be constructed as the overburden is stripped. - The material will be carefully managed and maintained in order to minimise potential impact on soil quality. The handling of the stripped soils will be minimised in stockpiles to not disturb the stockpiles once formed. Stockpiles will be formed to minimise infiltration or accumulations of rainwater in the stockpiles. - Any cementitious materials used during construction will avoid any contamination of soil and geology through the use of appropriate design and methods implemented by the Contractor and in accordance with industry standards. - The emptying of the on-site welfare facility will undertaken in

	accordance with waste legislation by an authorised waste disposal company. - Any small quantities of ready-mixed concrete required will be delivered to the site by truck. - Concrete mixer trucks will not be permitted to wash out on-site with the exception of cleaning the chute into a container which will then be removed offsite. - A suitable risk assessment for wet concreting will be completed prior to works being carried out.
Operational Phase	*Land Take* Potential impacts of the restoration works will be evaluated, and appropriate design and mitigation measures identified as part of the detailed restoration design. In the case that restoration is carried out, the impact to land will be mitigated with progressive restoration to ensure that the lands are suitable for a mixture of woodland and agricultural use. The quarry will be infilled to mOD with residual native soil that remains on-site (i.e. does not meet the required aggregate specifications for commercial sale). The remainder of the void will be made up with imported soil (subject to the necessary consents) that has been verified to be geochemically suitable soil as per EPA guidelines (EPA, 2020) to Domain 6 which will not present any unacceptable risk to the receiving environment at that time. *Loss of Soil and Subsoil* The proposed quarrying will result in a "negative", "significant", "permanent" loss of this Material from the Site. The restoration plan will utilise residual soils not removed from the site (e.g., overburden material not suitable for sale) and will require that only soils that are identified geochemically suitable for Domain 6 as defined in the EPA guidelines (EPA, 2020) will be used for the restoration of the site. *Stability of Land* The proposed final quarry faces are at 1:3 slope. All operations at the site will be carried out in accordance with relevant current health and safety legislation including the Safety, Health and Welfare at Work (Quarries) Regulations 2008 and 2013 and as amended. Excavation works will be carried out by benching in accordance with current best practices (i.e. less than 7.5m) and internal haul routes from the working faces will also be constructed and maintained in accordance with guidelines and regulations to minimise any potential risk of collapse particularly haul routes from benches. All working faces will be inspected and assessed daily by suitably experienced and competent site staff and the geometries of the working faces amended where required appropriate to the characteristics of sand and gravels. *Contamination of Soil and Subsoil* There will be no storage of diesel, fuels or hydraulic oils on-site. Fuels will be brought to site as required. A procedure will be drawn up which will be

	adhered to during refuelling of on-site vehicles. Full measures are identified in Section 6.6.2.4 of the EIAR. Welfare facilities installed during construction will be self-contained unit that will be operated as part of service contract (e.g. Rego Pod). All associated waste will be removed from Site by a licensed waste contractor. There will be no discharges to ground. *Control of Dust* The potential for quarry workers to be exposed to silica dust can arise from the quarrying activities. The normal measures required to prevent airborne dust emissions and associated nuisance arising from extraction activities will be in place including measures to prevent excessing wind pick up of dust and debris being tracked onto the local road network and adjoining properties. Design avoidance and mitigation measures will avoid and prevent associated impacts and include: - Boundary berms and planting to screen and prevent dust dispersion from the Site, - Use of wheel-wash for all trucks to prevent debris being tracked offsite, - Additional wetting at the point of dust release and dampening down during dry weather; and, - Covering of trucks prior leaving the site. *Concrete Works* Pre-cast concrete will be used where technically feasible to meet the design requirements. All work will be carried out to avoid any contamination of receiving soil environment through the use of appropriate design and methods implemented by the appointed Contractor and in accordance with industry standards. Any ready-mixed concrete will be delivered to the site by truck. Concrete mixer trucks will not be permitted to wash out on-site with the exception of cleaning the chute into a container which will then be emptied into a skip for appropriate compliant removal offsite in accordance with all relevant waste management legislation

8.7.2.14. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there has been no change in the construction phase mitigation measures associated with land, soils and geology, after consideration of the reports and information submitted by way of FI. In terms of the operational phase, the mitigation measures have been modified as follows:

- *Land Take*

  The restoration plan does not require the importation of material / geochemically suitable soil and therefore there is no requirement for any

consents.

- *Loss of Soil and Subsoil*.

  The restoration plan does not require the importation of material / geochemically suitable soil.

Residual Effects

8.7.2.15. There are no likely significant impacts on the geological or hydrogeological environment associated with the proposed development of the site. It is not anticipated that any impacts will arise following the implementation of the mitigation measures discussed above.

8.7.2.16. Table 6-7 of the EIAR provides a summary of the significant residual effects of the proposed development during the construction and operational phases. The residual impact is summarised in Table 8.7.3 below.

Table 8.7.3: Residual Impacts

Construction Phase		
Activity	***Attribute***	***Residual Impact***
Accidental release of deleterious materials including fuel and other materials being used on-site	Land, soil and geology	Imperceptible.
Operational Phase		
Activity	***Attribute***	***Residual Impact***
Land Take and Extraction	Land and land use	Moderate
Extraction	Loss of soil and subsoil	Significant Permanent
Extraction	Land stability on site and off site	Imperceptible.
Stockpiling	Soil structure	Slight
Accidental release of hazardous materials including fuels/waste from welfare unit.	Land, soil and geology	Imperceptible.
Extraction	Dust Generation	Imperceptible.

8.7.2.17. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, the residual impact on ‘Land Take’ has been identified as ‘Negative, Moderate, Permanent, Direct’ after consideration of the reports and information submitted by way of FI, i.e. following the modifications to the project description and updated restoration plan.

Assessment / Conclusion

8.7.2.18. I have examined, analysed and evaluated Chapter 6 of the EIAR and the associated appendices. The main activities associated with the construction phase of the proposed development that can give rise to potential impacts include run-off percolating to ground, contaminants in surface water, earthworks, excavations and subsoil stripping. The relevant mitigation measures have beenn outlined in the EIAR and as I have mentioned previously, a condition should be attached in the event of a grant of permission which requires the Applicant to prepare and submit a CEMP for the written agreement of the Planning Authority.

8.7.2.19. In terms of the operational phase, it is acknowledged that a significant impact will arise in terms of loss of soil and subsoil. In addition, the proposed development will result in the permanent loss of land (i.e. land take (moderate impact)) as the restoration is now proposed to be carried out in progressive basis and will not involve the use of inert materials to bring back the site back to its original levels. However, I acknowledge the policy support for developments of this nature that support aggregate extraction within rural areas. In addition, I have had regard to the submitted restoration plan and it is evident that the site can be restored to its current use (i.e. agriculture) following the cessation of the quarrying activities. Overall, I am satisfied that the applicant provided sufficient survey data to enable assessment of likely effects on the environment. Having regard to the detailed assessment carried out and subject to the detailed and full implementation of proposed mitigation measures, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on land, soils, or geology of the site.

Water

8.7.3. **Issues Raised**

8.7.3.1. Within a number of observations by Third Parties during the application phase, concerns had been raised regarding the potential for water contamination during the construction and operational phase. In addition, this is an issue that has been raised within the Planning Authority's reason for refusal due to the potential for impacts on water quality as a result of sediment laden surface water runoff entering existing watercourses.

8.7.4. **Examination, analysis and evaluation**

Context

8.7.4.1. Chapter 7 (Hydrology) of the EIAR provides a description of the hydrology and hydrogeology (water) environment within and immediately surrounding the site and an assessment of the potential impacts of the proposed development on hydrology and hydrogeology and sets out any required mitigation measures where appropriate. The principal objectives of this chapter are to identify:

- Hydrological and hydrogeological characteristics of the receiving environment at the site;
- Potential impacts that the proposed development may have on the receiving water environment;
- Potential constraints that the environmental attributes may place on the proposed development; and,
- Required mitigation measures which may be necessary to minimise any adverse impacts related to the proposed development.

8.7.4.2. As was the case with Chapter 6, the methodology included a phased approach which included an 'Initial Assessment and Impact Determination', site inspections, geophysical survey, intrusive site investigation, groundwater and surface water monitoring and sampling and the preparation of a topographical survey.

Baseline

8.7.4.3. The subject site is bound by greenfield lands within the Applicant's landholding to the east, west and north with third-party lands to the south. A woodland is located c. 100m west of the site. The topography of the site slopes gently to the north and east toward the King's River. Topography also gently slopes from the south of the site to the south and south-east to the Toor River. It is stated that the ground elevations at the site range from 224mOD in the central to 221mOD in the south/southeast and 22mOD in the north.

8.7.4.4. In terms of hydrology, the closest surface water feature adjoins the southern boundary of the site and is recorded on the EPA Database (EPA, 2022) as the Toor River. The Toor River flows to the east-southeast and discharges to the King's (Liffey) River

(which is located along the eastern and northern boundary of the Applicant's landholding). The King's (Liffey) River flows north towards the Poulaphouca Reservoir which is located c. 700m to the north of the site. The King's River and Toor River are part of the 'King's (Liffey) _020'(EU code: lE_EA_09K010100) WFD river sub basin (EPA, 2022). It is stated within the EIAR that there was no open water courses identified within the site during the site walkover survey noting that the site access route crosses the Toor River. Local surface water features within a 2km radius of the site are presented in Figure 7-1 and summarised in Table 7-5 of the EIAR.

8.7.4.5. In terms of surface water quality, the closest operational EPA monitoring station on the King's (Liffey) River to the site is the "Bridge NW of Lockstown Upper" (Station lD: RS09K010100) located c. 0.42km upstream of the site and immediately upstream of the confluence of the King's River and the River Toor. It is highlighted that there is no operational EPA monitoring stations located on the River Toor (EPA, 2022). As detailed in Table 7-6 of the EIAR, the watercourse is attributed a 'good' WFD status**.** Surface water monitoring at the site was undertaken by Enviroguide on the 11th May 2021 and on the 8th of September 2022 and it highlighted that the reported concentrations parameters in surface water samples are considered representative of baseline to the proposed development.

8.7.4.6. In terms of groundwater quality, groundwater monitoring and sampling was undertaken by Enviroguide Consulting on the 19th of June 2021 (locations MW1, MW2 and MW3) and on the 8th of September 2022 (location MW4 and MWO). The reported results for all groundwater samples were below the applicable GW GTV, DW PV and SW EQS with the exception of ammoniacal nitrogen as N (0.08m9/l) marginally in excess of the GTV (0.065m9/l-0.175m9/l)and SW EQS (0.065m9/l- good status and 0.04m9/l high status). It is stated that the exceedances are likely due to the presence of sheep grazing on the lands.

8.7.4.7. The main source of water supply for the Dublin Region is Poulaphouca Reservoir located c. 700m north and hydraulically downstream of the site. A hydraulic connection has been identified between the site and the King's (Liffey) River. There are a number of surface water courses within a 2km radius of the site that discharge into the

Poulaphouca Reservoir and are designated drinking water rivers (EU_PA_Type: Article 7 Abstraction for Drinking Water). It is noted that the King's (Liffey) River and the Toor River are not designated drinking water rivers.

8.7.4.8. In terms of flood risk, fluvial and coastal flood mapping published by the OPW including the National CFRAM Programme (in 201612017) and the National Indicative Fluvial Maps (NIFM) were consulted (OPW, 2022). Both maps identify that the site is within Flood Zone C, where the probability of flooding from rivers and the sea is low (less than 0.1AEP or 1 in 100) for both river and coastal flooding.

8.7.4.9. For the site's aquifer classification, the GSI (GSI, 2022) has classified the bedrock of the Type 2e Equigranular Formation beneath the site and surrounding area as Poor Aquifer (Pl) which is generally unproductive except for local zones. The GSI (GSI, 2022) have also identified a gravel aquifer beneath the site which is classified as "Locally important Gravel Aquifer". The gravel body name is the "King's River", the GSI notes there is "significant rejected recharge" associated with it. In terms of the aquifer vulnerability, the GSI has assigned a groundwater vulnerability rating of 'High' (H) for the groundwater beneath the site (GSI, 2022)

8.7.4.10. In terms of the groundwater body and groundwater flow regimes, it is stated within the EIAR that based on the measured groundwater and surface water levels (Figure 7-11), it is considered that the groundwater beneath site is hydraulically connected with the King's (Liffey) River. The majority of groundwater flow will occur in the upper 3m of the rocks with lateral flow towards rivers and streams (GSl, 2022). Regional groundwater flow paths are not considered to develop, as the rocks do not have sufficient transmissivity to transport water over long distances. Typical groundwater flow paths will be localised rather than over longer distances. Based on the geological and hydrogeological conditions encountered at the site during borehole drilling including at PW1, the majority of groundwater inflows were observed in the upper weathered bedrock interface with the overlying sand, with the exception of a deeper water strike at 34.75mbgl. The groundwater levels at their highest levels are illustrated in Table 7-9 of the EIAR. Based on the recorded groundwater levels and invert surface water levels (and elevations relative to Ordnance Datum (mOD)), there is a local

groundwater divide on site (in the vicinity of MW8 and TP14). Groundwater to the south flows in south-easterly direction towards Toor River. Groundwater north of MW8 flows in north-easterly direction towards the King's (Liffey) River. The groundwater flow map is shown in Figure 7-9.

8.7.4.11. A Conceptual Site Model (CSM) has been developed for the site and is included within Appendix D of the EIAR which provides an overview of the flow regime for the site. Rainfall to the site will infiltrate to the ground or discharge as overland flow to the Toor and King's River. The site access road crosses the Toor River. The site is underlain by a clay soil (ranging in thickness from 0.3 to 0.6m) overlying the King's River Sand and Gravel Aquifer (Locally Important). The depth to bedrock on site ranges from 7.8 to 30mbGL with bedrock noticeably deeper in PW1 suggesting the presence of fault or discontinuously in the rock. The bedrock underlying the site comprises Granite, the bedrock is classified by the GSI as a 'Poor Aquifer'. The gravel aquifer is considered to be in hydraulic continuity with the King's River and River Toor. Groundwater flow to the north of MW8 flows in a north-easterly direction towards the King's river. Groundwater south of the MW8 flows to a south-easterly direction towards the Toor River and the Toor / King's River Confluence.

8.7.4.12. In terms of the ‘Importance of Hydrogeological Features’, Section 7.3.17 of the EIAR notes that the site is considered to have a "high" importance due to the presence of the Poulaphouca Reservoir downgradient of the site. The Poulaphouca Reservoir is a main source of water supply for Dublin City and is a designated SPA, while the King's river is not mapped by the EPA as a drinking water river, it discharges into the Poulaphouca Reservoir. The Poulaphouca Reservoir is mapped as WFD lake waterbody and has been assigned a "good" status, the waterbody is "not at risk" of achieving the WFD status.

Potential Effects

8.7.4.13. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.4 below.

Table 8.7.4: Summary of Potential Effects

Do Nothing	If the proposed development did not proceed, the site would remain in agriculture use (i.e., grazing of livestock) and there would be no impact or change to the site's hydrological and hydrogeological regime.
Construction Phase	*Groundwater and Surface Water Flow Regimes* There will be no abstractions from or direct discharges to ground or surface water during the construction phase. In addition, there will be no dewatering or work below groundwater during the construction phase. *Water Quality* Potential sources associated with the proposed development that could impact on water quality receptors include: - Runoff with entrained sediment or other contaminants from the haul road during construction of the extension to the new quarry pit, site compound and installation of the new bridge. - Runoff with entrained sediment or other contaminants during stripping of topsoil and berm construction. Berm construction will commence in the construction phase and continue into phase 1 (i.e., year 0 to year 2) of the operational phase. - Discharges or leaks from welfare pod as a result of accidental release during emptying of the welfare pad could introduce contaminants to the water environment via groundwater. - Accidental release of fuel of other hazardous contaminants during refuelling in advance of construction of the compound area and impact to the water environment via groundwater. - Use of cementitious materials will be negligible as the bridge and foundations as well as site infrastructure will be prefabricated, and foundations will be pre-cast offsite. *Potential Impacts to Surface Water Receptors* There is a potential risk of minor displacement of surface sediment during the construction of the internal haul route near the Toor River that may impact on water quality. This will result in a 'negative', 'moderate' and short-term, impact on water quality within the Toor River. Due to attenuation and settlement within the Toor River, there will likely be limited impact on the King's River within the area around the confluence with the Toor River which will not extend to the Poulaphouca Reservoir. It is considered that any impact on water quality associated with the construction of the berms 'negligible', 'imperceptible, and 'short-term'. *Potential Impacts to Groundwater Receptors* In the event of a spill of fuel or accidental release of wastewater from the welfare facilities, could result in a negative impact on groundwater quality beneath the site and downgradient surface water receptors. This is considered to be an unlikely worst-case scenario. The results of the Detailed Quantitative Risk Assessment (DQRA) confirmed (Appendix D) that there would be a localised impact to groundwater quality beneath the site. However, the contaminant plume would not extend to the water courses (Toor River or King's River). Accordingly, there could potentially be a 'negative', 'significant', 'long-term'

	within a localised area of the aquifer beneath the site. There was no identified potential impact on the receiving water courses (Toor River or King's River) with a 'neutral', 'imperceptible' and 'long- term' impact on water quality in the Toor River, King's River and downstream Poulaphouca Reservoir associated with the pathway of groundwater migration from the site.
Operational Phase	*Surface Water Flow Regime* There will be no direct discharge to or abstraction from any surface water course as part of the proposed development. There are no identified flood risks for the proposed development and all excavations will take place above the groundwater table. There will be no change to the local hydrological regime associated with the proposed development and it is considered that therefore that will be no impact the surface water flow regime during the operational phase. *Groundwater Flow Regime and Resource* No requirement for wet working or dewatering for the proposed development and all extraction of sand will be above the groundwater table. A minimum 2m buffer will be maintained above the highest groundwater table recorded. Recharge to ground will not be impacted by the quarry. Where infiltration is impeded and localised ponding occurs due to accumulations of silt and fines or where subsoil has been compacted, soil will be scraped off the quarry floor to restore natural rates of infiltration to groundwater. In addition, there will be no increased permeable areas constructed as part of the proposed development. It is stated that the restoration stage will involve backfilling with geochemically suitable, inert soil taking account of the infiltration requirements and vulnerability of groundwater. Therefore, no overall impact on the groundwater recharge beneath the site is anticipated. Groundwater abstraction from PW1 will cause a localised groundwater lowering in the vicinity of the well, with potential impacts on localised groundwater flow and resource potential. Given that the recharge to the aquifer will not be altered, the proposed abstraction volumes are minimal and the absence of any nearby groundwater users, there will be a potential "negative", "slight" and "medium-term" impact on the groundwater resource in the gravel aquifer and flow regime within localised portion of the gravel aquifer at the site. *Groundwater Vulnerability* The vulnerability rating will be increased to ‘extreme’ (from currently High) for the operational phase of the proposed development as the unsaturated zone will be reduced to 2m above the water table during the wettest recorded groundwater levels. Quarrying at the site will result in an overall ‘negative’, ‘significant’ and ‘medium-term’ impact on the site, however it is stated that the impact is "reversible" with remediation and restoration.

	Water Quality - Quarrying and earth moving activities during quarrying and restoration works have the potential to release sediment. - The transport of material from the site if not appropriately managed could result in sediment and debris being tracked offsite on trucks and other site vehicles. - There is potential risk to off-site locations due to dust and sediment from haulage trucks during transit. - Importation of materials during the restoration phase. - The results of the Detailed Quantitative Risk Assessment (DORA) confirmed there would be a localised impact on groundwater quality beneath the site due to a hypothetical worst-case scenario of an accidental fuel spill on site beneath the site.
Cumulative Effect	There is potential for cumulative impact due to sediment and run-off from haulage roads, the impact of which has been assessed in Section 7.5.2.1 of the EIAR. It is stated that there are no other cumulative impacts associated with the proposed development.

8.7.4.14. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there was no change in the construction phase conclusion in relation to the potential impacts associated with hydrology, after consideration of the reports and information submitted by way of FI. In terms of the operational phase, the proposed development will result in the phased restoration of the site. It is highlighted that the restoration plan does not require importation of material and the site will be allowed to naturally regenerate. In terms of 'groundwater flow regime and resource', it is stated that there will be a slight increase in recharge within a localised area of the sand and gravel aquifer and there will be no overall impact on recharge to the bedrock aquifer. Given that the recharge to the aquifer will not be significantly altered within the gravel aquifer only and recharge to the bedrock aquifer will not be altered, the proposed abstraction volumes are minimal and the absence of any nearby groundwater users, there will be a potential 'negative', 'slight' and 'medium-term' impact on the groundwater resource in the gravel aquifer and flow regime within localised portion of the gravel aquifer at the site.

8.7.4.15. In terms of 'groundwater vulnerability', the vulnerability classification indicates the susceptibility of the groundwater to contamination (i.e. extreme due to the reduction in unsaturated soil to 2m above water table). However, it is stated that mitigation measures to prevent contamination will be integrated throughout the operational phase of the development. In addition, the site will be restored in a manner to allow

natural regeneration of the lands and there will be no anthropogenic contaminant sources at the site. I note that there was no other change in the operational phase conclusion in relation to the impacts associated with the land, soils and geological environment.

Mitigation

8.7.4.16. Mitigation measures are summarised in Table 8.7.5 below.

Table 8.7.5: Summary of Mitigation

Construction Phase	*Control and Management of Water and Surface Water Runoff* As part of the overall construction methodology, sediment and water pollution control risks arising from construction-related surface water discharges will be considered. There will be no discharges to groundwater or surface water during the Construction Phase. Good construction management practices will minimise the risk of pollution from construction activities at the site in line with the CIRIA C532. The operator will ensure that no contaminated water/liquids leave the site (as surface water and surface water run-off or otherwise), discharge the Toor River or other water courses. A minimum 25m buffer will be maintained between the site boundary and nearby receiving water course, from which no works will be undertaken for the duration of the construction phase. *Installation of Bridge* The existing crossing of the Toor River will remain in place will not be altered. In addition, there will be no instream works. Sediment management in the form of silt fences will be installed from the bridge crossing the Toor to 10m upstream and 10m downstream of the Toor River. All necessary works carried out adjacent to the Toor River will follow best practice as listed in above. All necessary works carried out adjacent to the Toor River (including the bridge upgrade and the construction of silt fencing) will be carried out in accordance with an approved method statement prepared by an appropriately quailed Environmental / ECOW employed by the Contractor. Continuous monitoring of turbidity and pH will be undertaken during the installation of the bridge and other critical stages of the construction phase. Samples will be collected for chemical analysis of an appropriate suite of water quality parameters. Sediment fencing will be inspected on a weekly basis by Site personal. When sediment build up has occurred, the removal of excess sediment will

	take place by an appropriately qualified waste disposal contractor. *Concrete Works* Pre-cast concrete will be used where technically feasible to meet the design requirements for the proposed development. All work will be carried out to avoid any contamination of the receiving water environment through the use of appropriate design and methods implemented. Any ready-mixed concrete will be delivered to the site by truck. Concrete mixer trucks will not be permitted to wash out on-site with the exception of cleaning the chute into a container which will then be emptied into a skip for appropriate compliant removal offsite in accordance with all relevant waste management legislation *Welfare Facilities* Welfare facilities installed during construction will be self-contained unit (Rego Pod), all associated waste will be removed from site by a licensed waste contractor.
Operational Phase	*Groundwater Protection* A buffer of 2.0m above the wettest groundwater level will be maintained (i.e. the quarry floor will be greater than 2.0m above groundwater level). A groundwater level monitoring programme will be in place to ensure that this buffer is maintained, which will include the installation of additional groundwater monitoring locations on the perimeter of the excavation. All trucks leaving the site will pass through a wheel wash and therefore removing the potential for transport of sediment off-site. The wheel wash will be periodically cleaned out and its contents will be disposed of in the appropriate manner by a suitably licensed waste contractor and never discharged onsite. There will be no direct discharges to groundwater from the site. Where infiltration is impeded and localised ponding occurs due to accumulations of silt and fines or where subsoil has been compacted, soil will be scraped off the quarry floor to restore natural rates of infiltration to groundwater. The self-contained Rego Pod during the construction phase will be used during the operational phase of the proposed development. *Groundwater Supply* Surface water runoff from the site office and a canteen roof will be harvested for operational requirements at the proposed development (e.g., wheel wash and dust suppression) with additional top up from the groundwater source as required (PW1). The maximum abstraction volume from the groundwater source is $1m^3$/day. Groundwater level monitoring at the site will ensure that any drawdown will not impact on flows to the water course. Groundwater level monitoring will take place to ensure any drawdown will not impact flow to the water course. *Protection of Water Courses - On Site* Protection of Toor River, King's River and downgradient Poulaphouca Reservoir will be undertaken by the following techniques:

	- Silt fences will be installed running parallel to the River Toor to prevent silts and soils from the haulage roads being washed by heavy rains into the water course. - Installation of the new steel bridge will supervised and an ECOW. - Surface water and groundwater monitoring programmes will be developed for the site. - There will be no direct discharges to ground during the operation of the proposed development. - A minimum 25m buffer will be maintained between the quarry extraction area (refer to drawing P05 Appendix A) and any receiving water course. After the initial quarry entrance is excavated the distance between the River Toor and the site development will be greater than 90m (main excavation area). - There will be no water abstractions from surface water courses. Water required for the wheel wash and dust suppression will be sourced from rainfall harvesting with additional supply from PW1 as required. *Internal Haul Routes and Bridge* All trucks leaving the site are required to pass through the Wheel wash prior to leaving site. The Trucks will then travel the remained of the internal haulage route from the main excavation to the R756 Road. This internal road is made up of granular material (equivalent to clause 804). Regular inspection and infilling of potholes will take place to ensure the granular material is not eroded and underlying peat is exposed and tracked from the site with the truck movement. Furthermore, material from the quarry will be tracked from excavation area to a loading area, the haulage trucks will not be required to enter the excavation. The bridge specification is designed to take a safe working load of up to 45 tonnes (drawing P-07 Appendix A for details). *Sediment and Debris on Offsite Haul Routes* Measures are proposed to prevent tracking of dust and debris on haul routes offsite and ensure no risk of sediment being tracked offsite that could potentially become entrained in road runoff and enter offsite water courses and associated receptors. *Stockpile Management* Appropriate management of excess stockpiles of sand and gravel to prevent runoff of fines and the potential accumulations of silt and fines. Any stockpiled materials will be stored in low mounds and away from internal haul routes. *Handling of Fuels and Hazardous Materials:* There will be no storage of diesel, fuels or hydraulic oils on-site. Fuels will be brought to site as required. A procedure will be drawn up which will be adhered to during refuelling of on-site vehicles with full details provided in Section 7.6.2 of the EIAR.

8.7.4.17. As detailed in the submitted Supplementary Information and Clarifications Report on

EIAR as part of the unsolicited FI response, there has been no change in the construction and operational phase mitigation measures associated with hydrology. However, supplementary details for the design of the specified silt fencing and containment measures around the Toor River and crossing accompanied both the unsolicited FI and the appeal submission.

Residual Effects

8.7.4.18. Table 7-14 of the EIAR provides a summary of the significant residual effects of the proposed development during the construction and operational phases. The residual impact is summarised in Table 8.7.6 below.

Table 8.7.6: Residual Impacts

Construction Phase		
Activity	***Attribute***	***Residual Impact***
Accidental release of deleterious materials including fuel and other materials being used on-site	Revieving groundwater	Imperceptible.
Haul road construction	Toor River and downstream watercourses	Imperceptible.
Construction of berms	Toor River, King's River and downstream watercourses	Imperceptible.
Operational Phase		
Activity	***Attribute***	***Residual Impact***
Groundwater abstraction	Groundwater flow regime and resource	Imperceptible.
Extraction	Groundwater vulnerability	Imperceptible.
Accidental release of untreated wastewater to gravel aquifer	Groundwater quality	Imperceptible.

8.7.4.19. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, it is stated that there has been no change in the residual impacts in relation to hydrology and hydrogeology, after consideration of the reports and information submitted by way of FI.

Assessment / Conclusion

8.7.4.20. I have examined, analysed and evaluated Chapter 7 of the EIAR and the associated appendices including the reports of the Planning Authority. As part of the phased approached, a Conceptual Site Model (CSM) has been developed for the site

(Appendix D) which provides an overview of the flow regime. This demonstrates that rainfall to the site will infiltrate to the ground or discharge as overland flow to the Toor and King's River. I note that there is no requirement for wet working or dewatering for the proposed development and all extraction of sand will be above the groundwater table. The chapter demonstrates that a minimum 2m buffer will be maintained above the highest groundwater table recorded. The aquifer vulnerability rating will be increased within the site to 'extreme' (from currently High) for the operational phase. This is due to the unsaturated zone being reduced to 2m above the water table during the wettest recorded groundwater levels. However, a suite of mitigation measures to prevent contamination will be integrated throughout the operational phase of the development. In addition, the site is now proposed to be restored in a manner to allow natural regeneration of the lands and there will be no anthropogenic contaminant sources at the site.

8.7.4.21. Further to the above, I have addressed issues concerning surface water and groundwater contamination in detail in Sections 7.2 and 7.4 (Appropriate Assessment) of this report and I am satisfied that significant effects will not arise subject to compliance with the various mitigation measures, proposed monitoring (Section 7.9) and suitable conditions which should be attached in the event of a grant of permission. As I have outlined earlier in this report, it is my recommendation that a condition be included which requires the Applicant to prepare and submit a CEMP for the written agreement of the Planning Authority which incorporates all the mitigation measures proposed within the EIAR, the NIS and the additional measures which have been proposed as part of the appeal.

8.7.4.22. Overall, I am satisfied that the Applicant has provided sufficient baseline data to enable assessment of likely effects on the water environment. Having regard to the detailed assessment carried out, the proposed mitigation measures, which are typically standard good practice measures and which are proven to be effective at preventing adverse effects on water flows and water quality, I am satisfied that no significant, adverse direct, indirect, or cumulative effects on the water environment, water quality or WFD objectives will arise as a consequence of the proposed development.

Air Quality and Climate

8.7.5. **Issues Raised**

8.7.5.1. During the course of the application, concerns have been highlighted with respect to dust emissions associated with the proposed development and its adverse impact on the residential amenity of properties within the site's vicinity.

8.7.6. **Examination, analysis and evaluation**

Context

8.7.6.1. Within Chapter 10 (Air Quality & Climate) of the EIAR, the baseline air quality of the proposed facility is examined along with the potential impacts of the proposed development on the existing environment. The Chapter also describes and assesses the potential impacts on micro and macro-climate as a result of the proposed development and attention is focused on lreland's obligations under the Kyoto Protocol in the context of the overall climatic impact of the presence and absence of the proposed development.

8.7.6.2. In terms of the methodology, a desktop study involving various national and international documents on climate change and analysis of synoptic meteorological data was carried out in order to compile this Chapter. Furthermore, a semi-quantitative assessment of fugitive dust emissions from operations of the proposed development was undertaken and sets out to:

- Assess the existing PM10 concentrations and dust deposition rates,
- Identify the potential sources of impacts on air quality and climate,
- Identify the local sensitive receptors,
- Identify the pathway and distance of sensitive receptors relative to the site, and,
- Analysis of weather data to assess impacts caused by weather events.

Baseline

8.7.6.3. As per the Air Pollution Act (Marketing, Sale, Distribution and Burning of Specified Fuels) 2012 Regulations (S.I. No. 326 of 2012) (the 2012 Regulations), the proposed site falls into 'Zone D' of Ireland which is described by the EPA as 'Rural Ireland'. It is expected that existing ambient air quality in the vicinity of the site is characteristic of a rural location with the primary source air emissions (such as particulate matter (dust),

NO2, and hydrocarbons) likely to be of local domestic and agricultural origin. Local agricultural activities may exert a higher or lower influence on dust generation in the vicinity of the site on a seasonal basis. Quarrying is currently taking place c. 1km south-east of the site. It is stated that these activities may exert a higher influence on levels of particulate matter in the surrounding environment on an operational basis. For the purpose of this Chapter, a summary of the most recent compiled Air Quality data obtained from Zones C (large towns) and D has been provided in Table 8-3 of the EIAR. On the basis of this information existing baseline air quality for the area in which the site is located (Zone D), and neighbouring large towns (Zone C), may be characterised as being of good quality with no exceedances of the Air Quality Regulations limit values of specific pollutants.

8.7.6.4. In terms of microclimate, the weather in the area of the site is influenced predominantly by the lrish Sea which results in damp, mild weather that is dominated by cool oceanic air masses. The prevailing wind direction is from a quadrant centred on the south-west. These are moderately warm winds from the Atlantic and they habitually bring rain. Easterly winds are less frequent, weaker, and tend to bring cooler weather from the north-east in spring and warmer weather from the southeast in summer. The expected annual rainfall for the eastern half of the country ranges between 750 and 1000 mm.

Potential Effects

8.7.6.5. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.7 below.

Table 8.7.6: Summary of Potential Effects

Do Nothing	A 'Do Nothing' scenario would result in the site remaining undeveloped. The existing ambient air quality would remain unchanged onsite and at nearby sensitive receptors.
Air Quality	
Construction Phase	As with all construction sites, there is potential for construction related air emissions to impact on local air quality, with the main air quality impact arising from nuisance dust. However, due to the nature and duration of the proposed construction works, any such impacts are likely to be localised (within the site boundary), short-term and of a temporary nature. Furthermore, appropriate mitigation measures will prevent such nuisances occurring.

Operational Phase	*Dust* The primary air quality impacts associated with quarrying activities is dust accumulation resulting from deposition of dispersed particles. Quarrying activities and ancillary facilities, by their nature, generate dust. The dust arises mainly from inert soil and rock materials. Furthermore, the movement of vehicles and use of machinery during this phase will potentially generate exhaust fumes and consequently potential emissions of volatile organic compounds, nitrogen oxides, sulphur oxides, and particulate matter (PM_{25} and PM_{10}). The primary sources of dust identified include site preparation, extraction of materials, stockpiling, handling, and loading of materials, traffic movements on internal and external haul routes, stripping, and overburden storage. They are generally dispersed sources rather than specific point sources, which dictates the measures required to mitigate potential dust-related impacts. Dust typically becomes airborne due to the action of wind or activities such as excavating, drilling, or screening. Dust emissions associated with vehicular movements are largely due to the resuspension of particulate materials that are present on road surfaces. The movement of vehicles within the site and to and from the site to the external road network also has potential to cause dust due to deposition from the vehicles themselves if appropriate mitigation measures are not considered. The potential for dust generation depends on site activity, particle size, the moisture content of materials, and meteorological conditions. The type of material being extracted and processed can also have a significant influence on potential emissions. Sand and gravel deposits may possess an inherently high moisture content, which can cause particles to adhere and thereby affords a high degree of natural mitigation. However, this does not negate the potential for fugitive emissions from this material if it dries out, especially during high wind conditions. The prevailing meteorological conditions have the largest impact on the rate of dust dispersion. During periods of prolonged dry weather, there is the potential for dust dispersion rates to be higher than average. Where rainfall has or is occurring, dust emissions can be dramatically reduced. Dust arising from the quarry can reduce amenity in the local community if visible dust plumes and dust soiling are present. The coarser dust associated with these effects may be referred to as 'nuisance dust'. Smaller dust particles remain airborne for longer and have the potential to increase local ambient air concentrations of suspended particulate matter (PM_{25} and PM_{10}) which can be associated with a range of health concerns (IAQM, 2016). It is further noted that ambient air quality limit values for these pollutants are rarely exceeded in the vicinity of most quarrying sites as they are commonly located in rural areas where traffic pollution is significantly less than in urban areas. The Potential Impacts associated within dust emissions are summarised

below:

Element	Description	Potential Risk
Source	Stockpiling of materials	Particulate matter on surface of stockpiles
	Extraction and loading of materials	Particulate matter being handled and suspended
	Traffic movements	Resuspension of particulate matter and deposition due to facility vehicles
Pathway	Dry date with wind speeds > 5m/s	Potential for particular suspension and deposition
	Distance between sensitive receptor and dust source < 400m	Potential for particular deposition
Receptors	Human Sensitive Receptors	Health Impacts Visual Impacts

Dust Containing Silica

Exposure to fine respirable dust which contains silica is considered to be a major health risk encountered by quarry industry employees. Workers are at risk from fine airborne particles, which are often not visible to the naked eye, and therefore pose no obvious hazard to workers, entering the respiratory tract. Silica dust exposure can be managed in line with the appropriate mitigation measures set out for all dust impacts.

Traffic-Related Air Emissions

Development-related traffic will use local roads to access the site with potential increases of traffic flow on some roads and subsequent associated emissions of VOCs, nitrogen oxides, sulphur dioxides and increased particulate matter concentrations.

Climate

Construction Phase	There is the potential for combustion emissions from onsite machinery and traffic derived pollutants of CO_2 and N_2O to be emitted during the construction phase of the development. However, due to the size and duration of the construction phase, and the mitigation measures proposed, the effect on national GHG emissions will be insignificant in terms of Ireland's obligations under the Kyoto Protocol and therefore will have no considerable impact on climate.
Operational Phase	Combustion emissions from onsite machinery and traffic derived pollutants of CO_2 and N_2O will be emitted during facility operations. However, it is stated that the development will not result in any significant change to current traffic movements (see Chapter 12). Therefore, no significant increases in associated greenhouse gas emissions are expected. It is also noted that the quantity and scale of machinery to be used in the proposed development is limited, and associated GHG contributions are likely to be marginal in terms of overall national GHG emission estimates, and therefore unlikely to have an adverse effect on climate. It is therefore concluded that macro and micro-climatic impacts as a result of the proposed development are negligible.

Cumulative Effect	The cumulative effects on the air quality and climate of the proposed development and other existing developments have been considered, in particular through the generation of air pollutants and greenhouse gas emissions. It is highlighted that there is an operational sand and gravel quarry located ca. 1.1km to the south-east of the site. The most significant potential for adverse cumulative impacts in combination with this offsite facility, in the context of Air Quality and Climate, is the potential for nuisance dust. Regard is given to the conclusions within the Disamenity Dust Assessment (Section 8.5.1.2.1.1.) which finds that there will be an overall Negligible impact on sensitive receptors as a result of the proposed development. However, the adherence and full implementation of the appropriate control and mitigation measures will ensure there is no potential for cumulative impacts to arise.

8.7.6.6. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there was no change in the construction and operational phases conclusions in relation to the impacts associated with air quality and climate, after consideration of the reports and information submitted by way of FI.

Mitigation

8.7.6.7. Mitigation measures are summarised in Table 8.7.8 below.

Table 8.7.8: Summary of Mitigation

Air Quality	
Construction Phase	Due to the nature and duration of the proposed construction works, it is not expected that adverse air quality impacts are likely to occur. However, appropriate mitigation measures will be employed to further prevent such impacts occurring. - Rotary atomisers and water bowsers will be employed during dry weather, - A wheel wash will be employed for dust suppression to ensure dust is not transferred to external roads, - Daily visual observations will be made on fugitive dust levels; in the event of high dust levels, operations giving rise to such emissions will be ceased or curtailed, - Exhaust emissions from vehicles and machinery will be minimised by avoidance of engines running unnecessarily as idle engines will not be permitted for excessive periods.
Operational Phase	- Rotary atomisers and water bowsers will be employed during dry weather and during any site preparation activities including overburden removal, excavation of works area, internal roads; - Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind and shorten the length of time for which material will be stockpiled;

	- Regular spraying of material stockpiles and haul roads during dry and/or windy weather; - Covering of loose loads of fine sized materials during transit; - Regular use of a road sweeper unit on the site entrance road and at the site exit onto the local road network; - A wheel wash will be employed for dust suppression to ensure dust is not transferred to external roads; - Daily visual observations will be made on fugitive dust levels; in the event of high dust levels, operations giving rise to such emissions will be ceased or curtailed; - Exhaust emissions from vehicles and machinery will be minimised by avoidance of engines running unnecessarily as idle engines will not be permitted for excessive periods.
Climate	
As negative climatic impacts associated with the construction and operational phases of the development are negligible, no mitigation measures are proposed. Best practice measures will be implemented to minimise exhaust emissions from construction and operational vehicles and machinery by avoidance of engines running unnecessarily, as idle engines will not be permitted for excessive periods.	

8.7.6.8. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, A complaints log will be maintained by the site manager and in the event of a complaint relating to dust nuisance, an investigation will be initiated. I note that there has been no other change in the construction and operational phase mitigation measures associated with air quality and climate, after consideration of the reports and information submitted by way of FI.

Residual Effects

8.7.6.9. Section 8.7 of the EIAR notes that no negative residual impacts in the context of air quality and climate are anticipated regarding the proposed development.

Assessment / Conclusion

8.7.6.10. I have examined, analysed and evaluated Chapter 8 of the EIAR and the associated appendices. In addition, I have had regard to the reports of the Planning Authority, including the reports of the Executive Scientist and the commentary of Third Parties during the course of the application. Overall, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts and provides suitably comprehensive range of mitigation measures to reduce any potential impacts. As part of the Chapter, a Disamenity Dust Assessment was carried out. Whilst the area around the site is predominantly rural with surrounding

land uses of agriculture and forestry, there are a number of one-off residential dwellings. A total of fourteen (14) no. discrete sensitive receptors were identified in the surrounding area (residential dwellings) as part of the Disamenity Dust Assessment. The assessment concludes that there will be an overall negligible impact on sensitive receptors as a result of the proposed development and all identified sensitive receptors are positioned more than 400m away from the proposed extraction and processing areas. This suggests that fugitive dust will have adequate time to deposit on the preceding landscape before reaching the sensitive receptors. In addition, the assessment notes that it is likely that the local terrain and natural features between the source and the receptors will variously act as barriers, reduce airborne concentrations due to impaction, lengthen pathways, affect air flow, and increase or inhibit dispersion and dilution. Nevertheless, mitigation measures have been incorporated to reduce any likelihood of fugitive emissions causing an impact on sensitive receptors within the site's vicinity.

8.7.6.11. Further to the above, an Air Dispersion Model (Appendix C of the EIAR) was prepared for the proposed development. The assessment determined that in ambient conditions, dust emissions from the site will result in offsite dust deposition levels which are compliant with the criterion of less than 350mg/m2/day at and beyond the site boundary (as per the German TA Luft Air Quality Standards (TA Luft, 1986). It is concluded within the analysis that all predicted dust deposition levels at the nearest sensitive receptors are negligible, with the highest 24-hour dust deposition level of 8.295mg/m2 experienced at SR11 which is located to the south-west of the site on the R756. Therefore, the predicted dust deposition levels are significantly below the criterion of less than 350 mg/m2/day. It is also highlighted within the Chapter that the proposed berm and planting will act as an initial natural buffer for dust generated within the quarry extraction activities.

8.7.6.12. It is acknowledged that there is the potential for combustion emissions from onsite machinery and traffic derived pollutants of CO_2 and N_2O to be emitted during both the construction and operational phase of the proposed development. However, noting the size and duration of the construction phase, the predicted traffic movements during the operational phase, the quantity and scale of machinery and the mitigation

measures proposed, I would agree with the Applicant that the effect on national GHG emissions will be insignificant in terms of Ireland's obligations under the Kyoto Protocol. Therefore, the proposed development will have no considerable impact on climate.

8.7.6.13. Having regard to the foregoing, I am satisfied that subject development will not give rise to significant direct, indirect, or cumulative effects on air quality and climate subject to compliance with the proposed mitigation measures and suitable conditions.

Noise and Vibration

8.7.7. **Issues Raised**

8.7.7.1. The Planning Authority recommended a refusal of permission as a result of the likely risk of tonal and impulsive noise nuisance for the downwind dwellings, due to their proximity and clear lines of site to the proposed pit, the long exposed haul-route and the very quiet noise environment of the area. Similar concerns had also been raised by Third Parties during the course of the application.

8.7.8. **Examination, analysis and evaluation**

Context

8.7.8.1. Chapter 9 of the EIAR provides a description and assessment of the likely impact of the proposed development in respect of noise. The Chapter discusses the existing ambient noise levels at nearby sensitive receptors, the potential impacts of the proposed development on the existing ambient noise environment and the mitigation measures that may be employed to reduce or eliminate any potential impact.

8.7.8.2. In terms of the methodology, the noise assessment provides a review of all existing information relating to the site and its environs, which involves a desk-based study of the following:

- An evaluation of the site and the surrounding area to assess certain changes that are likely to impact the surrounding environs was carried out. Sensitive receptors were identified and are discussed in this chapter.
- Typical noise limits associated with quarry operations as outlined in the EPA Guideline Document for Extractive industries (Non-Scheduled Minerals, 2006)

and the then Department of Environment, Heritage, and Local Government (DoEHLG)Quarries and Ancillary Activities: Guidelines for Planning Authorities (2004)

Baseline

8.7.8.3. The location of the proposed development was screened to determine whether it is located in or near an area that could be considered a 'Quiet Area' in open country according to the Environmental Protection Agency's publication Environmental Quality Objectives - Noise in Quiet Areas, 2003.

8.7.8.4. The following criteria were assessed for this determination:

- At least 3 km from urban areas with a population >1,000 people;
- At least 10 km from any urban areas with a population >5,000 people;
- At least 15 km from any urban areas with a population >10,000 people;
- At least 3 km from any local industry;
- At least 10 km from any major industry centre;
- At least 5 km from any National Primary Route, and;
- At least 7.5 km from any Motorway or Dual Carriageway.

8.7.8.5. If the site does not meet these criteria, it is not considered to be a quiet area as per the definition of the Environmental Protection Agency. 'Quiet Areas', according to NG4 (2016), have a much more stringent noise criterion set out in the guidelines. Before relevant noise criterion can be applied, 'Quiet Area Screening' must be performed to identify or rule out the site as a Quiet Area. It is stated within the EIAR that the subject site is located c. 9.3km from Blessington, c. 1.1km from an operational sand and gravel quarry, and 4.2km from the N81. It is therefore concluded that a low background noise would not be predicted. The quiet area screening for the subject site is provided within Table 9-1 of the EIAR. Notwithstanding this, it is stated within the EIAR that 3 no. fixed boundary noise monitoring alarms are proposed to be installed for the first 12 months the development’s operations as a result of the site’s location within a rural area. It is stated that these alarms will alert the operator if the noise at the site boundary exceeds a fixed threshold (55dB) and will allow the operator to remedy the situation immediately.

8.7.9. As detailed in Section 7.3 of this report, the Applicant conducted and submitted a Noise Monitoring Baseline Survey by way of unsolicited FI following concerns raised by the Planning Authority. The results of the Noise Monitoring Baseline Survey demonstrated that the background noise level exceeded 40dB LAF90 and was therefore not considered to be an area of low background noise as per the EPA Guidance. In their assessment of the FI, the Planning Authority noted that one of the locations for the noise monitoring had not been clearly specified and in the absence of clear locational detail, a challenge arose in interrogating and interpreting the measurements. Within the appellant's submission, the noise survey locations have been clarified with one taken at the entrance to the site on the R756 (Noise Survey Location No. 1) and the second taken where the haul road will cross the Toor River (Noise Survey Location No. 2), directly to the south of the proposed quarry lands.

8.7.10. The nearest noise sensitive receptors have been identified as one-off residential dwellings which are located approximately 440m - 490m from the subject site.

8.7.10.1. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.7.9 below.

Table 8.7.9: Summary of Potential Effects

Do Nothing	A 'Do Nothing' scenario would result in the site remaining as agricultural land. Noise and vibration levels would remain unchanged onsite and at nearby sensitive receptors
Construction Phase & Operational Phase	*Noise from Operational Traffic* Reference is made to Chapter 12 of the EIAR which outlines that the 50,000 tonnes per annum rate equates to +1.77% of the flow during the 12-hour daytime period on the R756 between the site and Hollywood. No traffic routes are predicted to experience increases of more than 25% in total traffic flows during the Operational Phase and therefore no detailed assessment is required as per the DMRB Guidelines. It is stated that the impact of noise from operational traffic will be unnoticeable and will not have a negative impact. *Noise from Onsite Plant & Equipment* Noise and vibration can arise from the operation of fixed or mobile machinery onsite. Onsite activity involves the removal of underlying sand and gravel. The Front end loader will extract material which is transported around the site via dumper truck and wheeled loaders. Sand products will be exported offsite by lorry. Plant and machinery which operate onsite

	include Wheeled Loaders, Screening Plant and Dumper Trucks. Ancillary equipment such as wheel wash are utilised as required for dust suppression. As detailed in Table 8.7.10, the predicted noise levels from all plant items are expected to fall below the daytime noise limit of 55dB(A) at all sensitive receptors; therefore, noise limit criteria will not be exceeded at or beyond this location, and sensitive receptors will not be affected. **Table 8.7.10**

Plant Item	dB(A) @10m	dB(A) @440m	dB(A) @470m	dB(A) @490m
Front end loader	80	47.1	46.6	46.2
Screener	81	48.1	47.6	47.2
Dumper truck	70	37.1	36.6	36.2

Cumulative Effect	Section 9.5.4 notes that the cumulative effects of noise and vibrations from the proposed development and other existing developments have been considered, in particular through the generation of nuisance noise. It is highlighted that there is an operational sand and gravel quarry located c. 1.1km to the south-east of the site. It is concluded within the Chapter that noise from facility operations will not exceed the relevant noise limit criteria at nearby sensitive receptors. Notwithstanding this, the adherence and full implementation of the appropriate control and mitigation measures will ensure there is no potential for cumulative impacts to arise

8.7.10.2. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there was no change in the construction and operational phases conclusions in relation to the impacts associated with noise and vibration, after consideration of the reports and information submitted by way of FI.

Mitigation

8.7.10.3. Mitigation measures are summarised in Table 8.7.11 below.

Table 8.7.11: Summary of Mitigation

Construction Phase & Operational Phase	Mitigation measures to be implemented and applied during the construction and operational phase include: - Installation of 3 no. site boundary noise sensors which will sound if the noise level at the site boundary reaches a set decibel level and will allow the site operator to take immediate remedial action. - Selection of plant with low inherent potential for generating noise. - Siting of plant as far away from sensitive receptors as permitted by site constraints.

	- Avoid unnecessary revving of engines and switch off plant items when not required. - Keep plant machinery and vehicles adequately maintained and serviced. - Proper balancing of plant items with rotating parts. - Keep internal routes well maintained and avoid steep gradients. - Minimise drop heights for materials or ensure a resilient material underlies. - Use of alternative reversing alarm systems on plant machinery. - Where noise becomes a source of resonating body panels and cover plates, additional stiffening ribs or materials will be safely applied where appropriate. - Limiting the hours during which site activities likely to create high levels of noise are permitted. - Appointing a site representative responsible for matters relating to noise. - Monitoring typical levels of noise during critical periods and at sensitive locations.

8.7.10.4. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there has been no further changes to the mitigation measures associated with the Noise and Vibration, after consideration of the reports and information submitted by way of FI.

Residual Effects

8.7.10.5. No residual impacts are anticipated.

Assessment / Conclusion

8.7.10.6. I have examined, analysed and evaluated Chapter 9 of the EIAR and all of the associated documentation and submissions on file in respect of noise and vibration. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028). Having regard to the totality of the documentation on file and my assessment of potential noise impacts provided in Section 7.3 of this report, I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on noise and vibration. Subject to compliance with the proposed mitigation measures and monitoring discussed above, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

8.8. Material Assets, Cultural Heritage and the Landscape

Material Assets (Traffic)

8.8.1. Issues Raised

8.8.1.1. Concerns had been raised by the Third Parties regarding the impact of the proposed development on the surrounding road network due to additional traffic flows.

8.8.2. Examination, analysis and evaluation

Context

8.8.2.1. Chapter 12 of the EIAR considers the levels of traffic currently using the site access and the adjacent public road network and determines the potential impacts of the proposed operations at the site, in an 'opening year' and in future years. Where impacts are identified, suitable mitigation measures are proposed, if applicable. Traffic counts were collected in September 2021 for a previous assessment to provide baseline data which has been used for this EIAR, with a review of nearby Tll Permanent Traffic Counter data on the N81 to the south of Hollywood to compare with 2022 traffic volumes.

Baseline

8.8.2.2. The site is located on the northern side of the R756 Hollywood to Laragh Road, c. 4.7km by road to the south-east of the N81 Baltinglass road. The junction is subject to a speed limit of 100km/h on the N81 approaches, and a speed limit of 80km/h on the R756 side road arms. The R756 has a varying width, being typically c. 5.5m wide, with minor widening on some of the bends to 6.5-7.0m wide. The EIAR notes that the site access is formed by a field gate set back 3m from northern most surfaced edge of the R756. There are hedgerows and gorse boundary features to either side of the access, which limits visibility on the south-east bound approach and for exiting movements. It is stated that there is a reasonable forward visibility approaching from the south-east from a point where there is a slight crest in the R756 (approximately 160m from the access). Looking to the north-west, it is stated that the R756 bends slightly after the L8349 side road junction as it passes the farmhouse before straightening out. The section to the north-west of the farmhouse has a broken centreline which permits overtaking there.

8.8.2.3. As part of an assessment carried out for the same access location in 2021 (21/1372), the Applicant's consulting engineer commissioned an Automatic Traffic Counter (ATC) to be installed on the R756 for a continuous 7-day period from Friday 3rd September 2021. This provided data on traffic flows, and vehicle speeds. The ATC location was between the site access gate and the L8349 side road junction. ln summary, the following salient points are noted:

- Eastbound average weekday flow from 07.00-19.00 = 572 vehicles,
- Westbound average weekday flow from 07.00-19.00 = 560 vehicles, and,
- Two-way average weekday volume from 07.00-19.00 = 1,132 vehicles.

It is noted that the HGV percentage on the road was generally low on weekdays (typically 2-4%, from OGV1 and OGV2 classifications aggregated). The 85th percentile (design speed) on the R756 near to the access was as follows:

- Eastbound = 75.15 kph.
- Westbound = 80.73 kph.

8.8.2.4. It is noted within the Chapter that that this is an existing, established field gate access serving the lands and is not a new access. Therefore, it is contended that the principle of the access is established, and the key issue is ensuring that the increased use by haulage vehicles does not impact on passing traffic on the R756. It is noted that unladen trucks entering the site will approach from the N81 Hollywood to the west and therefore a right turn storage lane on the R756 will not be required or warranted. While there is unlikely to be any right turning traffic (including on-site staff) waiting on the R756, an assessment of exit visibility, Stopping Sight Distance (SSD) and forward visibility is undertaken in accordance with the TII standards.

8.8.2.5. An assessment of exit sightlines has been undertaken by the Applicant's Consulting Engineer (Drawing No. P-02 (Planning) 'Proposed Site Layout - Sightlines'). Based on the 85th percentile speed data recorded, sightlines of 160m sightlines from a 3.0m setback are required for the exit, from a minimum driver eye height of 1.05m to a minimum object height of 1.05m, per Tll standard DN-GEO-O3060 'Geometric Design of Junctions'. The existing hedgerow and vegetation/banking to left and right of the access is to be reduced to below 1.0m in the magenta zone between the road edge and the exit sightline as illustrated in the submitted drawing to facilitate full 160m

sightlines from a 3.0m setback position to the left and right for exiting traffic.

Potential Effects

8.8.2.6. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.8.1 below.

Table 8.8.1: Summary of Potential Effects

Do Nothing	No impact on the local environment if the extraction and haulage did not occur.
Construction Phase	The Construction Phase would relate to a short period where materials are brought to site to widen the access and properly surface the section between the new setback access gate and the R756 carriageway, and for any plant or accommodations to be developed within the site. It is stated that this would be a minimal number of vehicles and there would be no measurable impact on the traffic flows on the R756 or the N81 during this phase.
Operational Phase / Cumulative Effect	It is proposed to extract sand from the site at an annual rate not exceeding 50,000T per annum over a 10 year period), operating from 08.00 to 18.00 (Monday-Friday) and 08.00-14.00 (Saturday), no operations on Sundays or public holidays. The following assumptions have been made to determine the expected traffic volumes generated by the export and haulage: - a 276 day working year (calculated as follows: 5.5/7 days/week x 365 = 286 days, minus 10 days for public holidays, etc); - 18 tonne payloads per truck exiting the site;. Based on the total volume per annum this works out as follows: 50,000/276 = 181 tonnes per working day / 18 Tonne payload = 10 truck movements each way per working day. The proposed development would result in the following two-way total volumes of haulage truck movements per year. - 556 total truck movements, being the aggregate total of vehicles arriving empty and departing laden (export/transfer off-site). The truck drivers will arrive at the site in their trucks from the haulage company storage yard in the morning and return to the storage yard in the evening. The EIAR indicates that the likely haul route will be to the N81 via the R756. It is indicated that it is unlikely truck movements will go eastwards towards Laragh. The 2 or 3 on-site operatives would generate 2 or 3 car/van arrivals in the morning (before 08.00) and 2 or 3 car/van departures in the evening (after 18.00), with earlier finishing times on Saturdays. It is contended that these daily 'commuting' journeys to/from Walterstown are not significant and would have no detrimental impact on the operational capacity of the R756. It is noted that the background growth on the R756 and the N81 in year 1 (assume 2023) and year 10 (assume 2033) would be based on the TII document PA-PAG-02017 Project Appraisal Guidelines for National Roads

	Unit 5.3 - Travel Demand Projections (published May 2019). An extract is provided (Table 6.2) which indicates the growth factors for Co Wicklow outside of the Dublin Metropolitan Area. It is stated that the percentage impact will decrease in future years as the background traffic increases (albeit the growth factors are modest and the background traffic flows are not significant).

8.8.2.7. Having reviewed the Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, it is evident that there was no change in the construction and operational phase conclusions in relation to the potential impacts associated with traffic, after consideration of the reports and information submitted by way of FI.

Mitigation

8.8.2.8. Mitigation measures are summarised in Table 8.8.2 below.

Table 8.8.2: Summary of Mitigation

Construction Phase	Road signage and temporary traffic management would be required for any works on or adjacent to the R756 at the access
Operational Phase	Routine maintenance of the boundary hedgerows to ensure sightlines are maintained, in accordance with the agreement and letter of consent provided to the Applicant by the landowner. Road markings should be reviewed and a broken line marking RRM003C should be provided in place of the solid centreline directly in front of the access to denote that a vehicle could be turning in/out.

8.8.2.9. Having reviewed the Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, it is evident that there was no change in the construction and operational phase mitigation measures associated with traffic, after consideration of the reports and information submitted by way of FI.

Residual Effects

8.8.2.10. The operation of the proposed development would result in the increased volume of HGV traffic using the R756 to the N81 which would equate to a 1.4% increase in the Weekday Average Traffic Flow (WADT) on the R756 between the site access and Hollywood village. It is contended that this will have a marginal impact on the road pavement and standard development contributions for road infrastructure will offset

this impact as the Local Authority will carry out maintenance and resurfacing of key regional routes in the road network as and when appropriate.

Assessment / Conclusion

8.8.2.11. I have examined, analysed and evaluated Chapter 12 of the EIAR and all of the associated documentation and submissions on file in respect of traffic. I have inspected the application site and the surrounding area. In addition, I have had regard to the policy outlined in the current Plan (2022-2028).

8.8.2.12. During their assessment of the application, the Planning Authority's Senior Executive Engineer noted that the proposed development will result in an intensification of traffic movements at an existing field entrance on the R756 given the significant changes in the volume and nature of traffic using this entrance that will be generated during construction and operation phases. Based on the submitted drawings (Drawing No. P-02 (Planning) 'Proposed Site Layout - Sightlines'), adequate sightlines could be achieved from either side of the entrance. However, the Applicant was proposing to achieve the sightlines through the maintenance of the existing hedgerows. It was the Planning Authority's view that the roadside boundaries needed to be set back behind the sightline envelope to ensure sightlines are achieved on a permanent basis and the Applicant was requested to submit evidence that they have sufficient control of the necessary lands to execute the proposal. A similar concern had been raised by the Planning Authority's Transportation Department (Engineer). As part of the Applicant's unsolicited FI, Drawing No. AI-01 was submitted which illustrates the works pertaining to sightlines. It was then proposed to align a new native hedgerow and stockproof timber post and wire rail fence in accordance with TII DN-GEO-03060 Geometric design of junctions. It was stated that the new hedgerow will be maintained on a regular routine basis, or as appropriate in order to maintain sightlines clear of vegetative growth. The response was noted by the Planning Authority and they were satisfied that this would overcome this particular issue.

8.8.2.13. Notwithstanding the commentary in this Chapter, I observed from my site inspection that the existing access gate serving the site is only set back c. 1m from northern end of the carriageway (R756) (stated to be 3m). When exiting the access, I note that there

was extremely limited visibility in a westerly direction given the presence of the existing mature hedgerow and its proximity to the edge of the access gate. Within this Chapter, it is stated that the eastbound 85th percentile (design speed) on the R756 was 75.15kph in comparison to the westbound 85th percentile which was recorded to be 80.73kph. From my own observations on site, one could reasonably assume that the eastbound design speed would be greater due to the alignment of this section of the R756. When travelling in an easterly direction towards the site, there are overtaking opportunities along a relatively straight section of the R756 which is demarcated by a broken centre line and which culminates c. 220m to the west of the site's access. From this point, there is a slight downward gradient along the R756, where it passes the site's access. This can be contrasted to the section of R756 to the east of the access, where one would likely drive at a reduced speed in a westerly direction due to the presence of an existing junction (L8350) and the alignment and gradient of the carriageway.

8.8.2.14. Although the Planning Authority's engineers were satisfied that the modified plans submitted by way of unsolicited FI overcame their concerns regarding the adequacy of the proposed sightlines, I note that the modified plans would now appear to require extensive hedgerow removal on either side of the site's entrance. As I have detailed previously, the impact of the hedgerow removal would be more pronounced to the west of the entrance given the significant number of trees located along the northern side of the R756. I accept that this would be required in order to facilitate the proposed development given the current access arrangement represents a significant traffic hazard in my view. Nonetheless, I am conscious of the Objectives (CPO 17.23) of the current Plan that seek 'To require the retention, wherever possible, of hedgerows and other distinctive boundary treatment in the County'. One would reasonably assume that this policy is of particular importance in an Area of Outstanding Natural Beauty such as this. I will discuss this issue in further detail in my assessment of Chapter 10 (Landscape and Visual Assessment) of the Applicant's EIAR.

8.8.2.15. Notwithstanding the above, I am generally satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project on traffic and transportation. The proposed development will not

generate traffic levels during the construction and operational phases that will give rise to a significant impact. However, I am conscious of the recommendations of the Planning Authority's engineer and their suggested conditions which are detailed as follows:

- The applicant shall be responsible for maintaining the adjoining public road in a clean state free from mud and debris cause by the extraction of materials from this facility.
- Undertake a detailed condition survey of the route for haulage traffic of the Regional road with the Council. Any improvement works required on the public road to facilitate this development shall be agreed with the Council and completed prior to the commencement of the extraction activities.
- Conduct regular conditions surveys with the Council on the public roads during the lifetime of the extraction and any issues identified that can be attributed to the extraction are be dealt with in a timely manner by the applicant in agreement with the Council.
- That the maximum annual extraction of materials from this facility should be set at 50,000 tonnes as per the EIAR and records of the quantum of material extracted shall be kept on file for review by Wicklow County Council on request.
- The applicant shall submit details of new advance warning signs to be installed on the public road and at the development access point. These shall be agreed with Wicklow County Council and shall be installed prior to commencement of importation of materials into the facility.
- Site entrance should have a bound surface to reduce the risk of the public road getting dirty.

Subject to compliance with the proposed mitigation measures discussed above and a number of conditions as recommended by the Planning Authority's engineer, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects. In my view, the requirement to undertake a detailed condition survey of the haulage route and the requirement for improvement works on the public road is overly onerous and will be covered through the application of a development contribution.

Material Assets (Waste and Utilities)

8.8.3. **Issues Raised**

8.8.3.1. No issues raised with respect to waste or utilities.

8.8.4. **Examination, analysis and evaluation**

Context

8.8.4.1. Chapter 12 of the EIAR also provides an assessment of the potential impacts of the proposed development on Material Assets or 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,
- Water Supply and Demand,
- Wastewater Management, and
- Waste Management

8.8.4.2. It is stated that the scope of work undertaken for the assessment included a desk-based study of material assets, namely built services, utilities and waste management infrastructure associated with the existing site. The desk study involved collecting all the relevant data for the site and surrounding area, including published information and details pertaining to the proposed development and all phases of the development were considered in the assessment of potential impacts on material assets.

Baseline

8.8.4.3. In terms of power supply, it is stated that existing domestic electricity supply is in place at the site and there is one overhead power line supplying power to the derelict dwelling at the southern end of the site. However, there are no overhead lines crossing the site and there are no underground powerlines. It is also noted that there is currently no gas line supplying the site.

8.8.4.4. For mobile telecommunication for transmission and reception, the closest mobile/ICT communications mast (Three and Meteor/Eir) is located in Ballinteskin, c. 3km to the north of the site. The EIAR notes that the site is not currently operational, hence IT

infrastructure for operations and administration is not established or in place.

8.8.4.5. The site is not connected to a municipal water supply. Bottled water will be provided to site users. A groundwater supply well (PW01) and 8 No. groundwater monitoring wells have recently been installed at the site. The supply will be commissioned for use during the operational phase for the wheelwash and dust suppression only. The closest groundwater wells to the site on the GSI database are three wells located to the south-east and north-east of the site. The nearest well is located 0.6km to the south-east in the townland of Coonmore and another borehole is located 1.1km north-east in Johnstown townland. A third drilled well is located 1.8km northeast of the site, on the outskirts of Johnstown.

8.8.4.6. In terms of 'Local Hydrology and Hydrogeology', it is noted that specific details relating to Hydrology associated with the proposed development are set out in Chapter 7 of the EIAR.

8.8.4.7. As the subject site is currently a greenfield site, there is therefore no foul loading nor waste management requirements.

Potential Effects

8.8.4.8. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.8.3 below.

Table 8.8.3: Summary of Potential Effects

Do Nothing	No impact is predicted from the Do-nothing scenario as it will remain in its natural condition.
Construction Phase	
Settlement	*Dust Generation* There will be dust generation during earthworks associated with the construction phase. However, it is considered that there will be no significant impact on the local population given the separation distance of 0.5km between the R756, distances to nearby residential properties and the screening provided by the existing forestry and trees to the west and south of the site.
Water Environment	There will be no direct discharges to ground or surface water during the construction phase. There is no requirement for instream works at the Toor River as the internal haul road with a culverted crossing of the Toor River is already in place. There will be no construction works within at least 10m

	of the Toor River and this 10m buffer area is vegetated which will prevent any entrained sediment in surface runoff from entering the Toor River.
Foul Water	The welfare facilities that will be installed for the construction phase and will be emptied by an approved contractor as part of a maintenance contract in accordance with relevant waste management legislation.
Water Supply	There is no mains water connection required for the proposed development during the construction phase. Therefore, no impact is anticipated.
Electricity Supply	There is a requirement for an electrical supply to power the portacabins for the canteen and welfare facilities and the well pump. All plant machinery will be powered by their own engines. The electricity requirement is therefore small in scale, and it is not considered that there will be any impact on electrical infrastructure or supply in the area.
Gas Supply	The project does not rely on gas supply for processing activities onsite no impacts are anticipated to the existing gas supply in the area.
Information and Communications Technology (ICT)	The proposed development will not create any additional ICT demand or infrastructure development in the construction phase. Impacts on ICT infrastructure are not therefore anticipated.
Waste Management	All wastes generated during the construction phase on-site will be sent for recycling, recovery, or disposal to a suitably licensed or permitted waste facility.
Operational Phase	
Settlement	*Dust Generation* There will be dust generation during the normal quarrying operations. The potential for the local population to be exposed to silica dust can arise from the quarrying activities. The normal measures required to prevent airborne dust emissions and associated nuisance arising from extraction activities will be in place including measures to prevent wind pick up of dust and mud being spread onto the local road network and adjoining properties. This will require additional wetting at the point of dust release, dampening down during dry weather and wheel cleaning for any vehicles leaving the site. *Visual Impact* The proposed changes to the site will alter the character of its immediate setting. It is contended that there are no protected views within this area that could be affected by the operation of the proposed development. *Noise and Vibration Impact* The impact assessment of noise and vibration has been assessed in Chapter 9 of this EIAR. Additional noise associated with the operation of on-site machinery will be intermittent and will not create any major negative impacts beyond the site boundary. *Property Prices* The site is located in a rural area and it is stated that it is unlikely that the proposed development will further impact on property prices given the proximity of this type of development in the local area.
Water Environment	A minimum 25m buffer will be maintained between the quarry extraction area and any receiving water course. After the initial quarry entrance is excavated the distance between the River Toor and the site will be greater than 90m (main excavation area).

	There will be no dewatering or wet working of the quarry for the operational phase. A buffer of at least 2m above the groundwater table will be maintained for the duration of the operational phase and any areas where groundwater is within 2m of the quarry floor will be excluded from extraction. Spill kits will be provided on-site to deal with any spills or leaks that may occur during refuelling of plant or generators.
Foul Water	A site office, canteen and toilet facilities will be housed in an eco-pod or similar onsite. A wheel wash, which will be a closed loop system, will be installed at the site. All trucks exiting the site will be required to pass through the wheel wash and the wheel wash will be periodically cleaned out and its contents will be disposed of in the appropriate manner by a suitably licensed waste contractor and never discharged or disposed of at the site.
Water Supply	There is no mains water connection required for the proposed development during the operational phase. Therefore, no impact is anticipated.
Electricity Supply	There is a requirement for an electrical supply to power the portacabins for the canteen and welfare facilities and the well pump. All plant machinery will be powered by their own engines. The electricity requirement is therefore small in scale, and it is not considered that there will be any impact on electrical infrastructure or supply in the area.
Gas Supply	The project does not rely on gas supply for processing activities onsite no impacts are anticipated to the existing gas supply in the area.
Information and Communications Technology (ICT)	The proposed development will not create any additional ICT demand or infrastructure development in the operational phase. Impacts on ICT infrastructure are not therefore anticipated.
Waste Management	A small quantity (<1 tonnes per annum) of non-hazardous office and canteen waste will be generated by the proposed site operations. Office and canteen waste, including food waste, will be stored in wheelie bins on site and it will be collected by an appropriately authorised waste collector. All wastes generated on site will be sent for recycling, recovery, or disposal to a suitably licensed or permitted waste facility. As the quantity of waste that will be generated is small in scale, it is not considered that there will be any impact on waste management in the area.
Cumulative Effect	In terms of cumulative impacts, Section 12.2.5.9 of the EIAR notes that it is predicted that the cumulative effects the proposed development on surface water, foul water disposal, potable water supply, natural gas supply, electrical supply, telecoms, and municipal waste will be negligible.

8.8.4.9. As detailed in the submitted Supplementary Information and Clarifications Report on EIAR as part of the unsolicited FI response, there was no noticeable change in the construction and operational phases conclusions in relation to the potential impacts associated with material assets, after consideration of the reports and information submitted by way of FI.

Mitigation

8.8.4.10. 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 in this instance. 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.

8.8.4.11. Having reviewed the Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, it is evident that there was no change in the construction and operational phase mitigation measures associated with utilities, after consideration of the reports and information submitted by way of FI.

Residual Effects

8.8.4.12. 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 a Quarry Management Plan in conjunction with best environmental practice will ensure that there will be no significant adverse residual impacts on Material Assets associated with the proposed development.

Assessment / Conclusion

8.8.4.13. I have examined, analysed and evaluated Chapter 12 of the EIAR and all of the associated documentation 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 (2022-2028). 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.

Cultural Heritage

8.8.5. **Issues Raised**

8.8.5.1. No issues are raised by parties to the application in respect of cultural heritage. However, concerns have been raised by the Planning Authority and the application was refused, in part, due to the potential impact of the proposed development on archaeological heritage.

8.8.6. **Examination, analysis and evaluation**

Context

8.8.6.1. Chapter 11 (Archaeology and Cultural Heritage) of the EIAR provides an assessment of the baseline Archaeological, Architectural and Cultural Heritage conditions of the surrounding environment for the proposed development, in order to determine any significant impacts that may arise as a result of the proposed development and highlight any potential effects this may have on these resources. ln addition, mitigation measures are recommended, if deemed appropriate. The assessment comprised a paper survey and cartographic research. The sources used were the Record of Monument and Places (RMP), Department of Culture, Heritage and the Gaeltacht (DoCHG), the National Museum of lreland topographical files, the County Development plans and various literature resources.

Baseline

8.8.6.2. It is highlighted within Section 11.4 of the EIAR that ringforts and enclosures are undoubtedly the most common field monuments within the lrish landscape and there are no. 3 ringforts and no.4 enclosure located within a 2km radius of the subject site, the location of which are identified in Figure 11-1 of the EIAR. It is noted that the information is gathered from the online Historic Environment Viewer provided by the Department of Culture, Heritage, and the Gaeltacht and discussion is provided regarding these monuments within the context of the historical and archaeological background of the surrounding area. It is stated that no Recorded Monuments will be affected by the proposed development.

8.8.6.3. In terms of Protected Structure, reference is made to Appendix 4 of the Wicklow County Council Development Plan 2022-2028, which indicates that there is no record

of Protected Structures within the site of the proposed development. In addition, it is stated that there are no buildings of architectural significance (i.e. included on the National Inventory of Architectural Heritage (NIAH)) located within 2km of the subject site.

Potential Effects

8.8.6.4. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.8.4 below.

Table 8.8.4: Summary of Potential Effects

Do Nothing	The 'do-nothing' scenario will have no impact on archaeological and cultural heritage.
Construction Phase	The development will involve ground disturbance works across the site as the quarry will require the removal of natural vegetation, topsoil and subsoil to reach the aggregate underneath. The greatest impact to buried archaeological deposits occurs during large-scale removal of topsoil during the initial construction phase groundworks. However, as the closest recorded RMP site is located 0.1km from the site, it is predicted that the construction phase of the development will not cause any significant impact on the Archaeology and Cultural Heritage of the area as a result of construction and excavation works.
Operational Phase	The operational phase will consist of the importation of soil and subsoil from greenfield development sites. No objects or sites of archaeological or cultural importance were identified during the desktop study and as such there is likely to be no significant effects on the archaeological, architectural or cultural heritage of the area through the operations.
Cumulative Effect	No cumulative impacts on archaeological and cultural heritage are expected as a result of the operational phase of the proposed development.

8.8.6.5. As part of the Applicant's unsolicited FI, an Archaeological Assessment Report prepared by De Faoite Archaeology was submitted for the Planning Authority's consideration. As detailed in the submitted Supplementary Information and Clarifications Report on the EIAR, it was concluded that, no structures/buildings will be directly impacted upon by the works and the farmhouse will be retained based on the desk-based survey and field inspection which have been carried out as part of the Archaeological Assessment. However, given the scale of the development, it is acknowledged that previously unrecorded archaeological features may be uncovered during groundworks associated with the development.

Mitigation

8.8.6.6. Mitigation measures are summarised in Table 8.8.5 below.

Table 8.8.5: Summary of Mitigation

Construction Phase	It is possible that excavation works associated with the proposed development may have an adverse impact on small or isolated previously unrecorded archaeological feature or deposits that have the potential to survive beneath the current ground level. Therefore, it is proposed to employ the services of an expert Archaeologist for the initial stages of the groundworks and based on their findings an archaeology management plan will be put in place for the remainder of the construction and operational phases. This plan may involve regular site visits by the archaeologist and setting aside areas of the site if archaeological remains are found or suspected.
Operational Phase	The Archaeologist employed during the construction phase will advise for the duration of the operation phase and the contractor will abide by the Archaeology Management Plan.

8.8.6.7. Having reviewed the Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, the following mitigation measures were recommended in the Archaeological Assessment:

- Test trenching will be undertaken by archaeologists under licence to the National Monuments Service of the Department of Housing, Local Government and Heritage (DoHLGH) should the development be granted planning permission and in advance of any groundworks commencing;
- Depending on the results of the test trenching, further mitigation may be required, such as the preservation in-situ or by record (archaeological excavation) of any features that may be identified and/or archaeological monitoring. Any further mitigation will require agreement from DoHLGH; and,
- There are several possible clearance cairns visible which are overgrown, and it is recommended that these be further examined and cleared of vegetation during the course of test trenching to confirm that they are not of archaeological significance.

Residual Effects

8.8.6.8. No negative residual impacts in the context of archaeology and cultural heritage are anticipated regarding the proposed development.

8.8.6.9. However, as detailed in the Supplementary Information and Clarifications Report on the EIAR, further mitigation may be required, such as the preservation in-situ or by record (archaeological excavation) of any features that may be identified and/or archaeological monitoring dependant on the results of the test trenching. Any further mitigation will require agreement from the DoHLGH.

Assessment / Conclusion

8.8.6.10. As detailed in Section 7.4 of this report, concerns were raised by the Planning Authority that no test trenching had been carried out on the subject site and it was their view that the reliance on desk top study as detailed in the EIAR was an unsatisfactory approach. In addition, I note that the person who prepared this Chapter does not appear to have a relevant qualification in the area of archaeology or built heritage. However, as part of the unsolicited FI, the Applicant engaged the services of a suitably qualified archaeologist to prepare an Archaeological Assessment for the proposed development. Although it was stated within the Archaeological Assessment that the ground conditions were not suitable for a geophysical survey, a recommendation is included which requires test trenching to be undertaken by an archaeologist under licence to the National Monuments Service of the DoHLGH should the development be granted planning and in advance of any groundworks commencing.

8.8.6.11. As I have indicated previously, the DoHLGH have recommended a number of conditions to be attached in the event of a grant of planning permission including a requirement for a pre-development Archaeological Impact Assessment. Having examined, analysed and evaluated Chapter 11 of the EIAR and all the information provided in respect of archaeological, architectural and cultural heritage, including the documentation submitted by the Applicant by way of unsolicited FI, I am satisfied that the applicant's understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on cultural heritage have been identified. Subject to compliance with appropriate conditions and the proposed mitigation measures discussed above, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects.

Landscape

8.8.7. **Issues Raised**

8.8.7.1. Within their initial assessment of the application, a refusal of permission was recommended as it was the Planning Authority's view that the proposed development would impact on the rural character and scenic amenities of the area, particularly in views from the R758, would add to the deterioration of this Area of Outstanding Natural Beauty, would contravene the policies and objectives of the County Development Plan, 2022 – 2028 and would therefore be contrary to the proper planning and sustainable development of the area. I note that similar concerns were raised by Third Parties during the course of the application.

8.8.8. **Examination, analysis and evaluation**

Context

8.8.8.1. Chapter 10 (Landscape and Visual Assessment) of the EIAR seeks to assess the effects of the proposed development on the landscape and visual amenities of the area and details the potential direct and indirect effects of the proposed development on landscape fabric, character and quality, and the resulting impact on visual amenity. It is stated that the aim of a Landscape and Visual lmpact Assessment is to identify the elements of the landscape which make it unique and the extent to which it is possible to alter these landscapes before unacceptable consequences arise.

8.8.8.2. In terms of methodology, it is noted that the assessment has been undertaken in accordance with best practice, legislation and guidance notes which recommend baseline studies to describe, classify and appraise the existing landscape and visual properties, focusing on any sensitive receptors in the area and the ability of the landscape to accommodate the changes that will occur at the site. The proposed methodology is summarised in Table 8.8.6 below.

Table 8.8.6: Methodology

Desktop Study	- Establishing an appropriate Study Area from which to study the landscape and visual effects of the proposed development; - Review of a Zone of Theoretical Visibility (ZTV) map, which indicates areas from which the proposed development is potentially visible in relation to terrain within the study area; - Review of relevant County Development Plans, particularly with regard to sensitive landscape and scenic view/route

	designations; - Selection of potential Viewshed Reference Points (VRPs) from key visual receptors to be investigated during fieldwork for actual visibility and sensitivity
Fieldwork	Site visits were carried out at various times in order to: - Select a refined set of VRP's for assessment. - Record a description of the landscape elements and characteristics within the study area generally and also within view from each VRP. - Capture high quality base photography from which to prepare Verified View Montages (WMs) of the proposal.

Baseline

8.8.8.3. The appeal site is currently a greenfield site consisting of several grazing fields bounded by hedgerows. The site is set back c. 460m from the public road and is accessed via a private lane which runs for a distance of approximately 500m from its junction with the R756 to the south-west. The lane is owned by a neighbour and the applicant has right-of-way access to the site via the lane. The setting is rural with surrounding land uses of agriculture, forestry and a number of one-off residential dwellings. The general surrounds of the site are covered with existing hedgerows, shrubs of gorse on dry areas and rushes on the wetter, and a scatter of trees. The closest river network waterbody is the King's River which is mapped as running along the eastern boundary of the Applicant's land holding which flows northwards towards the Blessington Lakes.

8.8.8.4. In terms of the site's designation, the proposed development is located in The Mountains Uplands Area of Outstanding Natural Beauty (AONB) and is situated proximate to The Blessington Lakes Area AONB. It is highlighted within Section 10.3.6 of the EIAR that there are 3 protected views in the broader landscape being:

- V28 - N81 Hollywood. View of Slievecorragh Hill from N81 - located 4km from the site and there is no visibility to the site (all section of N81).
- V29 - R756 at Hollywood, Wicklow Gap Drive. View to west over N81 and towards Kildare - located 3.2km from the site and the view orientation is opposite to the site.
- V30 - R758 Annacarney, Valleymount. View north-eastwards of Poulaphuca Reservoir -located 2.3km from the site and the view orientation is opposite to the site.

In addition, there are 2 Prospects of Special Amenity Value or Special Interest (as shown in Figure 10-23 of the EIAR, being:

- Prospect 22 - L8347 Ballintober. Prospect eastwards of Lakes and Moanbane mountain - The views from this Prospect are more oriented to the north away from the site. However, it is stated that there is low visibility to the East from this road given the existing hedgerows and the large forest patches, between the road and the site and is assessed in the visual impacts section of the chapter.
- Prospect 23 - R 756 Wicklow Gap Road. Prospect of area around the Wicklow mountains extending from Laragh to Slievecorragh - The possible visibility for the site from this Prospect was assessed, having been defined Viewpoint 7,8 and 9 as having potential visibility to the site and is assessed in the visual impacts section of the chapter.

Potential Effects

8.8.8.5. Potential significant effects of the development, as identified in the EIAR, are summarised in Table 8.8.7 below.

Table 8.8.7: Summary of Potential Effects

Do Nothing	The 'do-nothing' scenario will have no impact on the receiving landscape as the site would remain in agricultural use.
Construction Phase	It is stated that the construction phase will be short in duration and will include site preparation works and some construction works to install the necessary infrastructure. The construction activities will include the construction of the set-down area, weighbridge, the wheel wash and welfare unit located in the south-east of the site. During the construction phase, the site landscape will undergo some changes and expected landscape impacts include: - A general Site clearance to remove any non-structural materials that are not required or the proposed development; - Some large, brightly coloured earth moving equipment, construction machinery, cranes operating on the site and construction site offices/facilities, security lighting and fencing etc; - Change in colour and form of topography due to the excavation, removal and storage of soils; - Removal of existing hedgerows (1,340 meters long); - Planting of proposed green structure: 8590 units of Native Evergreen Planting and 11,925 of Native Woodland & Understory Planting. The development is considered to have a minor to moderate, neutral to

	negative and short-term impact on the landscape character of the site due to the removal of existing vegetation. It is stated that similar type of impacts would occur in this landscape during the felling of forestry.
Operational Phase	The operational phase will cause some negative landscape impact in the short to medium-term within the site. It is stated that these impacts will not be very significant in the 1st phase (2 years) of the proposed development, since (Figure 10-29) as this phase only concerns a very limited area of the site (south sector). The operational phase will then extend to the rest of the site but will be counterbalanced by the proposed vegetation growth. Once the quarrying is complete the Applicant will seed the land and return it to agricultural/forestry use.

8.8.8.6. As detailed in the submitted Supplementary Information and Clarifications Report on the EIAR, the Applicant notes that the proposed development will now be seeded in line with the submitted Updated phased Restoration Plan. lt is proposed that the quarry floor and approximately 50% of the interior side slopes of the extracted area will be seeded with a grass and clover mixture and returned to agricultural use once plant growth has re-established. In light of this, it is stated that there has been no material change to the operational phase assessment of the landscape and visual impact assessment.

Mitigation

8.8.8.7. Mitigation measures are summarised in Table 8.8.8 below.

Table 8.8.8: Summary of Mitigation

Construction Phase & Operational Phase	It is contended that significant landscape and visual effects have been avoided and reduced by a number of measures. The quarry area will be surrounded by berms of varying heights. The heights have been chosen to restrict views of machinery moving within the site and of quarry excavations. Planting on the berms will further reduce potential views, as will the excavation below existing ground levels. It is stated that the quarry area will become a hole in the ground that is surrounded by a mixture of evergreen and deciduous woodland that can't be looked into in the short to medium term. The scale of the quarry is also relatively small. The colour changes of soil due to excavations will be limited and smaller in scale than existing forestry and agricultural works in the landscape. The machinery required is similar in scale to modern agricultural machinery being currently used in the landscape. The proposed machinery, if seen, will not be out of character. The location of the site also on a relatively flat, low lying area also helps to mitigate views from the surrounding landscape. The proposed planting as it matures will maintain this visual neutrality.

	The maintenance of the proposed green structure, in the long, term is essential. For those trees proposed for retention, mitigation measures will be put in place in order to prevent or reduce impact to its very minimum. Mitigation measures used will need to include the erection of protective fencing at the very start of the works, ground protection installation within root zones where fencing cannot be erected to enclose the entire root zones, monitoring of the site works by a qualified Landscape Architect throughout the construction process and the use of tree friendly techniques and products for the construction process.

8.8.8.8. Having reviewed the Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, it is stated there has been no material change to the mitigation measures associated with the landscape and visual impacts.

Residual Effects

8.8.8.9. A series of photomontages have been prepared by the Applicant to assess the potential visual impact of the proposed development. A total of 12 no. viewpoint locations were selected for use in the photomontage assessment of visual effects and the viewpoint locations were influenced by both the views available and the type of viewer. For each viewpoint, the following images have been produced:

- Existing View,
- Existing View with the Quarry area representation,
- Montage View - Year 1,
- Montage View - Year 5.

The baseline photography was captured on 20th September 2022 (beside Viewpoints 5 and 12 that were taken on 18th October 2022) and it is stated that deciduous trees were still with leaf. It is noted that seasonal factors are not considered to contribute to material differences in the visual impacts and any likely variations are described in the assessment. I note that the locations of the viewpoints are identified in Figure 10-30 of the EIAR, and the full set of the Verified View Montages have been provided in Appendix B. The results of the Applicant's Visual Impact Assessment are summarised in Table 8.8.9 below.

Table 8.8.9

VP No.	Location & Distance to Site	Value, Visual Susceptibility, Visual	Impact (Duration, Quality and

		Sensitivity and Magnitude of Visual Changes	Significance)
1	Togher Road. Quintagh (St Kevin's Way) (1,990m)	Medium to High, High, High – Medium and Low	Short Term, Neutral and Minor
2	R758 to the north-east (1,685m)	Medium, High, Medium, Low	Short term - Temporary, neutral and Minor to Imperceptible
3	Unnamed local road to the site's north. (750m)	Medium to High, Medium, Low	Short Term, Neutral and Minor
4	R758 to the east (650m)	Medium, High, Medium, Low	Short Term, Neutral and Minor
5	R758 to the east (900m)	Medium, Medium, Medium, Low	Short Term, Neutral and Minor
6	R758 to the south-east (900m)	Medium, Medium, Medium, Low - Medium	Short Term, Neutral and Minor - Moderate
7	R756 to the south-east (775m)	Medium, Medium, Medium, Low	Short term - Temporary, neutral and Imperceptible
8	Bridge R756 crossing the King's River to the south-east (515m)	Medium, Medium to High, High - Medium, Low	Temporary, neutral and Imperceptible
9	R756 to the south (375m)	Medium, Medium to High, High - Medium, Low	Temporary, neutral and Imperceptible
10	L8347 to the north-west (1,250m)	Medium, Medium to High, High - Medium, Low	Temporary, neutral and Imperceptible
11	L8350 to the south (750m)	Medium, Medium, Medium, Low	Temporary, neutral and Imperceptible
12	Church Mountain to the south-west (3,500m)	High, Medium to High, High - Medium, Low	Short Term, Neutral and Minor

8.8.8.10. In terms of residual impacts, it is stated within Section 10.7 of the EIAR that there will be imperceptible, neutral, long-term residual impacts during both the construction and operational phase of the proposed development.

Assessment / Conclusion

8.8.8.11. I have examined, analysed and evaluated Chapter 10 of the EIAR and all the information provided in respect of landscape and I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project. I have also inspected the site and the surrounding area.

8.8.8.12. Within their initial assessment of the application, the Planning Authority highlighted that the subject site is located within the Mountain Uplands AONB, an area which is

considered an important gateway to this upland area and also an important tourist axis between the east and west of the County. It was stated that the overriding priority in such areas is to protect the existing landscape quality of the AONB. Notwithstanding the submission of visual / landscape assessment, it was the Planning Authority's view that the development would impact on the rural character and scenic amenities of the area, particularly in views from the R758, would add to the deterioration of the AONB, would contravene the policies and objectives of the County Development Plan, 2022 – 2028 and would therefore be contrary to the proper planning and sustainable development of the area. The key concerns of the Planning Authority related to the proposal's reliance on mitigatory landscaping and the potential visual impact of the proposed development when viewed from the east and north-east along the R758 (Viewpoint Nos. 4, 5 & 6) and from more long-range views (i.e. Viewpoint No. 12) towards the site. Concerns were also raised regarding the absence of proposals for the quarry's restoration.

8.8.8.13. As part of the Applicant's unsolicited FI, it was noted that the use of planting and berms was considered to be a suitable landscape mitigation strategy for the type and nature of the proposed development, with the objective of the planting around the site's perimeter to re-integrate the site into the surrounding landscape character area. It was highlighted that the colour changes of soil due to excavations will be limited and smaller in scale than existing forestry and the location of the site on a relatively flat, low-lying area helps to mitigate views from the surrounding landscape. In addition, the machinery required is similar in scale to modern agricultural machinery being currently used in the landscape and if visible, would not be out of character with the surrounds. It was noted that the new planting will be in place at each of the site boundaries, and along the different slopes, creating a 'green buffer', that will mitigate, in the short to medium-term, the visual impacts of the proposed development. The proposed planting comprises the provision of:

- 1,043m of new hedgerow of a similar species.
- Native woodland planting.
- Native evergreen planting.

Within their assessment of the Applicant's response, the Planning Authority referred to the Applicant's approach with respect to berms and planting, the indicated colours

on the submitted photomontages, the expanse of landscape in which the site sits and the progressive restoration approach that the Applicant has proposed by way of unsolicited FI. Overall, they were satisfied that the development would not give rise to a significant alteration of the landscape in the long term, and it was considered that the response had adequately addressed their previous concerns.

8.8.9. As I have outlined in Section 7.1 of this report, landscape protection is of particular relevance given the site's location within an AONB, where existing landscape quality shall remain the overriding priority. There is a clear obligation on the Applicant to demonstrate that the benefits of proposals will outweigh any adverse environmental consequences. When undertaking my inspection of the site and surrounding area, it was evident that the proposed development will be most visible from the R758 to the east and north-east of the site. The appeal site sits at a lower elevation and there are expansive views towards the site from this regional road. I would agree with the Planning Authority that views are less critical from the R756 to the south, as the site is largely masked from view. Views to the site from the L8347 (Prospect No. 22) are obscured by the existing woodland area to the west of the site. It is understood that this woodland is in private ownership, so it is unclear whether this woodland area would be felled in short to medium term. Irrespective of this, the Applicant is proposing mitigation measures in the form of berms and landscaping around the perimeter of the site (north, west and east boundaries). Details of the proposed landscaping has been provided on the landscaping drawings that were submitted with the application (i.e. Drawing Nos. P-08, P-09, P-10 P-11 and P-12). These drawings show a native hedgerow (1,043m long) around the perimeter of the quarry and then an indicative buffer zone of native evergreen planting and native woodland and understorey planting.

8.8.10. Whilst I accept that there will be impacts to the receiving landscape from certain vantage points (i.e. from the R758), I note that the impacts will be short-term in duration and can be successfully mitigated by landscaping proposals and the phased restoration of the site in tandem with the extraction activities. As detailed previously, it is proposed to rip the extracted area and the lower levels of the interior side slopes to a depth of 150mm and allow for natural regeneration as illustrated in the Updated

Restoration Plan (Drawing No. AI-03). It is highlighted that the restoration will commence within 2 years following the beginning of the operational phase.

8.8.11. When undertaking my inspection of the surrounding area, I visited an existing quarry which is located c. 1.2km to the south of the appeal site. Although this existing quarry occupies a smaller footprint, the visual impacts of this development are not insignificant and are pronounced when viewed from the surrounding road network, notably from the R756 to its east which sits at a higher elevation. The lack of appropriate mitigatory planting is evident in the case of this established quarry and highlights the need for a comprehensive suite of landscaping proposals in the case of the subject proposal. Whilst landscaping proposals are enclosed with the application as discussed above, they are indicative only and lack sufficient detail in my view. Drawing No. P-09 is included which shows the berm and associated landscaping extending through the area where it is proposed to retain a number of existing mature trees, i.e. adjacent the existing dilapidated structures. In addition, site section diagrams have been provided in Drawing No. P-11 which appears to show indicative growth of c. 5m within 5 years of planting. It is unclear whether the native woodland planting would achieve this projected level of growth. It is therefore my recommendation that a condition be included which requires the preparation of a detailed landscape masterplan which is to be prepared by a suitably qualified landscape architect. The landscape masterplan shall be submitted to the Planning Authority for written agreement prior to the commencement of development and shall provide full details of the proposed planting, including the species and size of the hedgerow, evergreen and native planting. As detailed, I have recommended a condition which shall require the Applicant to prepare an arboricultural impact assessment which clearly identifies the trees which are proposed to be retained, with details provided of appropriate tree protection measures. This assessment shall inform the preparation of the updated landscape masterplan and clearly identify the trees that are proposed to be retained, notably within the southern portion of the quarry lands adjacent to the existing structures. The condition shall stipulate that all landscaping shall be implemented in full prior to the operation of the proposed quarry. In addition, there shall be an obligation on the Applicant to demonstrate that the restoration of the proposed quarry is being carried out in line with Table 10-2 of the Supplementary

Information and Clarifications Report on the EIAR and the Applicant shall be restricted from commencing each phase of extraction (i.e. Phases 1-5) until evidence of same (i.e. restoration) is submitted to the Planning Authority.

8.8.12. Given the sensitive location of the site within an AONB, it is my view that the Applicant should be required to lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement.

8.8.13. The proposed development will result in the loss of trees and hedgerows along the roadside boundary in order to facilitate safe access to the site. Although it was acknowledged by the Planning Authority that this would result in a negative impact at the early stages of the development, the loss was deemed to be acceptable given the need for such extraction and the proposed mitigation measures. As detailed previously, the actual extent of tree removal required to provide the required sightlines remains unclear. Therefore, it is my recommendation that a condition be included which requires a landscape plan for this portion of the site to be prepared which provides specific details of the proposed native hedgerow planting and fence details (height, material etc.) along either side of the proposed entrance. As noted, the landscape plan shall be informed by the arboricultural impact assessment and existing trees shall be retained where possible.

8.8.13.1. Having regard to the overall scale of the extraction activities, the location and topography of the site in a relatively low-lying area of the landscape, the landscaping proposals for the proposed development and the restoration proposals which are now proposed to be carried out in tandem with the extraction activities and subject to compliance with appropriate conditions, mitigation measures and monitoring, I am satisfied that the subject development will not give rise to significant direct, indirect, or cumulative effects on the receiving landscape.

8.9. Interactions

8.9.1. **Issues Raised**

8.9.1.1. No issues have been raised in the course of the planning application in respect of significant environmental effects arising from interactions of impacts.

8.9.2. **Examination, analysis and evaluation**

Context

8.9.2.1. Chapter 14 (Interactions) of the EIAR addresses potential interactions and inter-relationships between the environmental factors discussed in the preceding chapters during both the construction and operational phase of the proposed development. Chapter 17 presents an assessment of the identified interactions, a summary of which is provided in Table 8.9.1 below.

Table 8.9.1: Summary of Interactions

Interaction	**Population and Human Health**
Air Quality and Climate	Interactions with air quality during operational phase has the potential to cause dust nuisance issues. There is also potential for quarry workers to be exposed to silica dust can arise from the quarrying activities.
Noise and Vibration	During the operational phase, the outward noise impact to the surrounding environment will be limited to any additional traffic on surrounding roads and the operation of on-site machinery and equipment.
Hydrology	No public health issues associated with the water (hydrology and hydrogeology) conditions at the site have been identified.
Landscape and Visual	The proposed development will constitute a change in the landscape and visual appearance which may impact the amenity and therefore human health of surrounding residents and road users.
Material Assets: Traffic	There is potential for interaction with traffic during the operational phase.
Conclusion	There is a potential for impact on air quality, noise and vibration, and traffic during the operational phase of the proposed development. However, no public health issues or negative impacts are expected due to the implementation of the mitigation measures outlined in the respective Chapters.
Interaction	**Biodiversity**
Land, Soils and Geology	Potential impacts are considered in Chapter 6 and these impacts are considered to be relevant to the ecological sensitivities associated with the Site. The bulk removal of soils, sands and gravel at the site can have implications for biodiversity. Natural regeneration of native and local seeds is the preferred option for re-vegetating areas to be retained for biodiversity.
Hydrology and Hydrogeology	The interaction has the potential to result in impacts on habitats and fauna that are hydrologically linked to the site.
Air Quality and Climate	Dust emissions arising from the operational and construction phase of the proposed development were identified as having potential impacts on local biodiversity.
Noise and Vibration	There is potential for interactions between noise and sensitive fauna, e.g., birds, that occur in adjacent habitats from increased noise levels during the operational phase.
Material Assets	Construction waste arising from Site operations could negatively affect local fauna through entrapment.
Landscape and Visual	Landscaping at a development site can have significant implications for biodiversity.

Conclusion	There are several interactions expected during both the construction and operational phase. However, with the implementation of mitigation and monitoring measures outlined in the respective Chapters, significant negative effects are not predicted.
Interaction	**Land and Soils**
Population and Human Health	The potential for quarry workers to be exposed to silica dust can arise from the quarrying activities.
Biodiversity	An assessment of the potential impacts of the proposed development on the Biodiversity, with emphasis on habitats, flora and fauna which may be impacted a result of the importation of soil and stone is included in Chapter 5 of the EIAR.
Hydrology and Hydrogeology	An assessment of the potential impact of the proposed development on the hydrological and hydrogeological environment is included in Chapter 7 of the EIAR.
Landscape and Visual	An assessment of the potential impact of the proposed development on the landscape and visual environment is included in Chapter 10 of the EIAR.
Other Interactions	Land, soils and geology interact with other environmental attributes such as air quality (Chapter 8), noise (Chapter 9) and traffic (Chapler 12) and are examined in relevant chapters of the EIAR.
Conclusion	There are several potential interactions during both the construction and operational phase. However, with the implementation of mitigation and monitoring measures outlined in the respective Chapters, significant negative effects are not predicted.
Interaction	**Hydrology and Hydrogeology**
Population and Human Health	It is noted that specific issues relating to public health associated with the proposed development are set out in chapter 4 of the EIAR.
Biodiversity	An assessment of the potential impacts of the proposed development on the Biodiversity of the Site, with emphasis on habitats, flora and fauna which may be impacted a result of the proposed development are included in Chapter 5 of this EIAR. A hydrological connection has been identified between the proposed development Site and the King's (Liffey) River which discharges to the Poulaphouca Reservoir SPA.
Land, Soils and Geology	An assessment of the potential impact of the proposed development on the existing land, soils and geological environment are set out in Chapter 6 Land, Soil and Geology.
Material Assets: Waste and Utilities	Hydrology and hydrogeology interact with other environmental attributes such as waste (Chapter 12) are examined in the relevant chapters of the EIAR.
Conclusion	There is a potential for impact on Population and Human Health, Biodiversity, Land, Soil and Geology and Waste and Utilities during the construction and operational phases of the proposed development. However, no public health issues or negative impacts are expected due to the implementation of the mitigation measures outlined in the respective Chapters.
Interaction	**Air Quality and Climate**
Population and Human Health	Interactions between Air Quality and Population and Human Health have been considered as the operational phase has the potential to cause health issues as a result of impacts on air quality from dust nuisances, including silica dust, and potential traffic derived pollutants.
Material Assets: Traffic	Traffic derived pollutants which may affect Air Quality and Climate are deemed insignificant due to the marginal change in traffic volume and movement associated with the proposed development.
Conclusion	There are potential interactions between Population and Human Health, Traffic and Air Quality and Climate during both the construction and operational phases of the proposed development. However, no significant adverse impacts are expected due to the implementation of appropriate mitigation and monitoring measures outlined in the respective Chapters of the EIAR.
Interaction	**Noise and Vibration**

Population and Human Health	Potential noise impacts associated with the construction and operational phases of the development.
Material Assets: Traffic	Potential noise impacts associated with additional traffic during construction and operational phases of the development.
Conclusion	There are potential interactions between Population and Human Health, Traffic and Noise and Vibration during both the construction and operational phases of the proposed development. However, no significant adverse impacts are expected due to the implementation of appropriate mitigation and monitoring measures outlined in the respective Chapters of the EIAR.
Interaction	**Landscape and Visual**
Population and Human Health	Potential impacts on the visual amenity of the surrounding area.
Biodiversity	The proposed landscaping of the site interacts with its biodiversity and ecology through the changes that will occur to the existing habitats and flora at the Site. The landscaping proposals will entail losses and contributions in terms of vegetation at the Site, which in turn will affect the ecology of the site.
Archaeology and Cultural Heritage	Potential impact of works on features of archaeological significance.
	No significant adverse effects are expected for any of the interactions above and mitigation and monitoring measures are outlined in the respective Chapters within this EIAR.
Interaction	**Archaeology and Cultural Heritage**
Landscape and Visual	No impacts predicted
Conclusion	There are no expected negative interactions between landscape or visual amenities and archaeology and cultural heritage.
Interaction	**Material Assets – Waste & Utilities**
Population and Human Health	In the event of uncontrolled releases of dust, noise or vibration, this could negatively impact on the surrounding human population and their overall health.
Land, Soils and Geology	In the event of spillage/ leaks from waste storage areas, this could negatively impact on the land and soil.
Hydrology and Hydrogeology	Uncontrolled releases from the quarry during the operational phase could negatively impact on the downstream Poulaphouca Reservoir.
Conclusion	Although risks are posed to Population and Human Health, Land, Soil and Geology, and Hydrology and Hydrogeology throughout the construction and operational phases of the proposed development, no significant adverse impacts are expected due to the upholding of industry and environmental standards as well as the implementation of appropriate mitigation and monitoring techniques discussed in the relevant Chapters of the EIAR.
Interaction	**Material Assets – Traffic**
Noise and Vibration	Potential noise impacts associated with increased traffic.
Conclusion	Increased volume of HGV traffic using the R756 to the N81, which would equate to a 1.470 increase in the Weekday Average Traffic Flow (WADT) on the R756 between the site access and Hollywood village. Over the life of the operational phase this will have a marginal impact on the road pavement and standard development contributions for road infrastructure will offset this impact as WCC will carry out maintenance and resurfacing of key regional routes in the road network as and when appropriate.

Mitigation

8.9.2.2. The EIAR refers to the mitigation measures which are set out for each environmental

parameter and set out in detail within Chapter 15 (Mitigation and Monitoring Measures) of the EIAR.

Residual Effects

8.9.2.3. Any potential interactive negative impacts have been identified and are addressed by the mitigation measures included in the relevant sections of the EIAR, with residual effects as presented in each relevant chapter.

Assessment / Conclusion

8.9.2.4. I have examined, analysed and evaluated Chapter 14 of the EIAR and the associated chapters of the EIAR. I am satisfied that the applicant has identified the key interactions arising for the subject development.

8.10. Risk Management

8.10.1. Issues Raised

8.10.1.1. No issues have been raised in the course of the planning application in respect of the vulnerability of the proposed development to risks of major accidents and/or disasters.

8.10.2. Examination, analysis and evaluation

Context

8.10.2.1. Chapter 13 (Risk Assessment) of the EIAR seeks to assess the expected effects of the project to risk of major accidents and disasters relevant to the project. In terms of methodology, the relevant legislation that applies to this Chapter is the Planning and Development Regulations 2001 - 2022, as amended, and in particular Schedule 6 - Information to be contained in EIAR. Additionally, regard is given in the EIAR to the Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.1. No. 209 of 2015) (the "COMAH Regulations"), which implement the Seveso lll Directive (2O12l1B|EU), and which revoked the 2006 Major Accident Regulations also applies to the Chapter. The assessment reviewed:

- The vulnerability of the project to major accidents or disasters.
- The potential for the project to cause risks to human health, cultural heritage and the environment, as a result of that identified vulnerability.

A methodology has been used which includes the following phases:

- Phase 1 Assessment: The DOD Consolidated List of National Hazards was used to identify a preliminary list of potential major accident and disasters.
- Phase 2 Screening: The list was screened and major events such as volcanoes were not included given the unlikely event of one occurring.
- Phase 3: Mitigation and Evaluation: In the event that mitigation measures included did not mitigate against the risk, then, the potential impacts on receptors are identified in the relevant chapter.

8.10.2.2. Table 13-3 of the EIAR lists the major accidents and/or disasters reviewed. The major accidents and/or disasters which have been identified as being relevant to the proposed development are summarised in Table 8.10.1 below:

Table 8.10.1: Major Accidents and/or Disasters

Major Accident or Disaster	Relevance	Covered in EIAR
Civil		
Pandemic	The Proposed Development poses no additional COVID-19 risk. All workers directly and indirectly employed during the Operational Phase of the Proposed Development will comply with the relevant Government protocols.	Chapter 4 (Population and Human Health) of the EIAR assessed potential effects of the proposed development on human beings, loving, working and visiting in the vicinity of the site.
Natural		
Air Quality Events	Vehicular emissions Dust emissions	Chapter 8 (Air Quality) of this EIAR Identifies the impact of the construction and operation of the development on ambient air quality.
Other		
Fire	The risk of fire in machinery on-site which might lead to loss of life. The risk is very small and localised.	Maintenance checks system will be employed once the facility is operational All plant will have appropriate fire extinguishers on board.
Utilities Failure	Water, electricity, wastewater, sewage. The risk is very small and localised.	Chapter 6,7 and 12 contains information on containment and operational systems.
Invasive Species	Risk of invasive species from the importation of soil to the Site during restoration. No invasive species of plant were recorded during survey of the site of the Proposed Development.	Chapter 5 (Biodiversity) of the EIAR discusses invasive species surveys carried out for the proposed development.
Utilities Failure	Water, electricity, wastewater, sewage	Chapter 6,7 and 12 of the EIAR.

Residual Effects

8.10.2.3. It is stated that control measures will put in place for health and safety and environmental management as per conditions of the planning permission, relevant code of practices and relevant legislation. In this regard, the residual impacts will be negligible once all control, mitigation and monitoring measures have been implemented. The potential for dust or noise from the site operations to cause any nuisance to nearby receptors is deemed to be negligible and the adherence and full implementation of the appropriate control and mitigation measures will ensure there is no potential for cumulative impacts to arise.

8.10.2.4. Having reviewed the Supplementary Information and Clarifications Report on the EIAR as part of the unsolicited FI response, it is stated there has been no change to the residual impacts in relation to risk, after consideration of the reports and information specified in the EIAR.

Assessment / Conclusion

8.10.2.5. I have examined, analysed and evaluated Chapter 13 of the EIAR and I am satisfied that the information submitted in the EIAR adequately demonstrates an understanding of the potential impacts of the proposed project. The EIAR addresses the issue Major Accidents and Disasters, and I note that the development site is not regulated or connected or close to any site regulated under the Control of Major Accident Hazards (COMAH) Involving Dangerous Substances Regulations i.e. SEVESO. Therefore, this is not a source for potential impacts. The site is not located in an area that has historically been subject to natural disasters. The implementation of the CEMP and mitigation measures will ensure risk of minor accident/ spillage on the site is low. In terms of flood risk, fluvial and coastal flood mapping published by the identify the site as being located within Flood Zone C, where the probability of flooding is low (less than 0.1AEP or 1 in 100) for both river and coastal flooding. Given the nature and location of the proposed development, and the mitigation measures proposed, together with the low probability of a major accident/natural disaster, it is not likely that significant effects on the environment would arise in this regard.

8.11. Reasoned Conclusion

8.11.1. Having regard to the examination of environmental information set out above, to the EIAR submitted with the application on 7th December 2022, the Supplementary Information and Clarifications Report on the EIAR received by the Planning Authority on the 8th day of June 2023, other information provided by the Applicant in support of the appeal, and to the submissions from the Planning Authority, Prescribed Bodies and Third Parties 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

8.11.2. The potential for significant adverse impacts on human health during the construction and operational phases can be avoided, managed, and mitigated by the measures that form part of the proposed development, the proposed mitigation measures and through suitable conditions. In addition, the proposed development would have a neutral impact on the local socio-economic environment.

Biodiversity

8.11.3. The proposed development will result in the permanent loss of habitats within the site to facilitate the proposed extraction activities. As a result of the habitat loss, negative impacts to mammals on site (Small Mammals, Badger, Birds and Bats) will arise that range from slight to moderate. Significant impacts will not arise given the overall scale of the development and the suite of mitigation measures proposed. In addition, the proposed development provides for the site's phased restoration in tandem with the extraction activities and will allow the site to return to its original use upon the cessation of the quarrying activities, i.e. agriculture. It is considered that potential impacts will be mitigated by the application of best practice construction methodologies, as set out in the project documentation and the application of proposed site and species specific mitigation measures, such that no significant adverse effects arise.

Land, Soil, Water, Air and Climate

8.11.4. Given the nature of the proposed development, significant impacts will arise in terms of the loss of soil and subsoil. In addition, the proposed development will result in the

permanent loss of land (i.e. land take (moderate impact)) due to the proposed extraction activity and its restoration will not involve the use of inert materials to bring back the site back to its original levels. Notwithstanding this, the site can return to its current use upon the cessation of the quarrying activities.

8.11.5. In terms of water, a Conceptual Site Model (CSM) has been developed for the site which demonstrates that rainfall to the site will infiltrate to the ground or discharge as overland flow to the Toor and King's River. I note that there is no requirement for wet working or dewatering for the proposed development and all extraction will be above the groundwater table. The implementation of mitigation measures and compliance with suitable conditions will ensure that the potential impacts on the ground and surface water environment do not occur during the construction and operational phase of the proposed development and the residual impact will be imperceptible. Therefore, no significant adverse direct, indirect, or cumulative effects on the water environment, water quality or WFD objectives will arise as a consequence of the proposed development.

8.11.6. In terms of Impacts on Air Quality, the Applicant's Disamenity Dust Assessment and Air Dispersion Model demonstrates that no significant, adverse direct, indirect, or cumulative effects will arise as a consequence of the proposed development. Noting the size and duration of the construction phase, the predicted traffic movements during the operational phase, the quantity and scale of machinery and the mitigation measures proposed, the effect of the proposed development on national GHG emissions will be insignificant in terms of Ireland's obligations under the Kyoto Protocol. Therefore, the proposed development will have no considerable impact on climate.

8.11.7. No residual impacts are anticipated with respect to Noise and Vibration.

Material Assets, Cultural Heritage, and the Landscape

8.11.8. In terms of material assets, the proposed development will not generate traffic levels during construction and operational phases that will give rise to a significant impact. No impact on waste and utilities are anticipated.

8.11.9. Potential direct impacts on unknown features of archaeology may arise during the construction and operational phase. However, these impacts will be mitigated by archaeological monitoring of groundworks and compliance with the various mitigation measures and suitable conditions.

8.11.9.1. In the context of landscape, moderate impacts to the receiving landscape from certain vantage points (i.e. from the R758) will arise during the initial years of the construction and operational phase. However, the impact will be short-term in duration and can be successfully mitigated by the proposed landscaping proposals and its phased restoration. Having regard to the overall scale of the extraction activities, the location and topography of the site in a relatively low-lying area of the landscape, the landscaping proposals for the proposed development and the restoration proposals which are now proposed to be carried out in tandem with the extraction activities, and subject to compliance with appropriate conditions, mitigation measures and monitoring, the subject development will not give rise to significant direct, indirect, or cumulative effects on the receiving landscape.

8.11.9.2. The EIAR has considered that the main significant direct and indirect effects of the proposed development on the environment which will be primarily mitigated by environmental management measures, as appropriate. The assessments provided in many of the individual EIAR chapters are satisfactory to enable the likely significant environmental effects arising as a consequence of the proposed development to be satisfactorily identified, described and assessed. Therefore, having regard to the foregoing, I am satisfied that the proposed development would not have any unacceptable significant direct, indirect, or cumulative effects on the environment.

9.0 Recommendation

9.1. Grant of permission is recommended.

10.0 Reasons and Considerations

10.1. Having regard to:

a. The policies and objectives of the Wicklow County Development Plan, 2022-

2028 that seek to support the Extractive Industry in rural areas of the County Wicklow,

b. The policy provisions of the Climate Action Plan 2024, Ireland's 4th National Biodiversity Action Plan 2023–2030, National Planning Framework (Project Ireland 2040), Regional Spatial and Economic Strategy for the Eastern and Midlands Region 2019-2031 and the Quarries and Ancillary Activities - Guidelines for Planning Authorities 2004,
c. The distance to dwellings or other sensitive receptors,
d. The submissions made in connection with the application,
e. The likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites,
f. The nature and scale of the proposed development, as set out in planning application documentation and the pattern of development in the surrounding area;

it is concluded that subject to compliance with the conditions set out below, the proposed development would not have unacceptable impacts on the environment, including biodiversity, water, air quality, landscape and cultural heritage, would not seriously injure the residential amenities of the area, in particular with respect to associated noise impacts and would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

11.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and as amended by the further plans and particulars received by the Planning Authority on the 8th day of June 2023, and as amended by the further plans and particulars submitted with the appeal, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the

development shall be carried out and completed in accordance with the agreed particulars.
Reason: In the interest of clarity.

2. The mitigation measures identified in the Environmental Impact Assessment Report (EIAR) submitted (and the Supplementary Information and Clarifications Report on the EIAR received by the Planning Authority on the 8th day of June 2023) and other plans and particulars submitted with the planning application and appeal, shall be implemented in full by the developer in conjunction with the timelines set out therein, except as may otherwise be required in order to comply with the conditions of this permission.
Reason: To protect the environment.

3. The mitigation measures contained in the submitted Natura Impact Statement (NIS), shall be implemented.
Reason: To protect the integrity of European Sites.

4. Prior to the commencement of any works associated with the development hereby permitted, the developer shall submit a detailed Construction Environmental Management Plan (CEMP) for the written agreement of the planning authority. A record of daily checks that the construction works are being undertaken in accordance with the CEMP shall be kept at the construction site office for inspection by the planning authority. The CEMP shall be prepared in conjunction with and signed off by the project ecologist and shall detail and have regard to the various mitigation measures included within the NIS and the EIAR (and the Supplementary Information and Clarifications Report on the EIAR received by the Planning Authority on the 8th day of June 2023) submitted with the application. The agreed CEMP shall be implemented in full in the carrying out of the development.
Reason: In the interest of environmental protection.

5. The Applicant/operator shall submit to the Planning Authority an annual monitoring report throughout the lifetime of the permission. The monitoring report shall be prepared by the Ecological Clerk of Works (ECOW) and shall

demonstrate the ongoing maintenance of the proposed on-site water treatment infrastructure (i.e. drains, silt fences etc.).
Reason: In the interest of environmental protection.

6. This grant of permission shall be for a period of 10 years from the date of the commencement of the quarrying activities on site. The Applicant/operator shall notify the Planning Authority upon the commencement of operations on site. Extraction is limited to a maximum of 50,000 tonnes of sand and gravel materials per annum.
Reason: In the interest of visual amenity and orderly development.

7. The site restoration works described in the application shall be undertaken in a phased basis in accordance with the Restoration Plan (Drawing No. AI-03) as received by the Planning Authority on the 8th day of June 2023. The developer shall submit annually, for the lifetime of the permission, an aerial photograph which adequately enables the Planning Authority to assess the progress of the phases of extraction. The Applicant shall be restricted from commencing each additional phase of extraction (i.e. Phases 2-5) until evidence of same (i.e. restoration) is submitted to the Planning Authority.
Reason: In the interest of visual amenity and orderly development.

8. No extraction of rock, sand or gravel shall take place below 2m above the level of the winter groundwater table.
Reason: To protect groundwater in the area.

9. A wheel-wash facility shall be provided adjacent to the site exit as detailed on the further plans and particulars received by the planning authority on the 8th day of June 2023. The specifications, details and provisions for washwaters shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development.
Reason: In the interest of traffic safety and convenience, and to protect the amenities of the area.

10. Prior to the commencement of development, the applicant shall provide a copy of consent from the OPW, under Section 50, to install the new prefabricated bridge over the Toor River, or alternatively provide a copy of a letter or email from the OPW confirming that the bridge is exempt from section 50.
    Reason: In the interest of the proper planning and sustainable development of the area.

11. Prior to the commencement of development, the applicant shall submit a lighting design for the construction and operational phases of the proposed development and shall be prepared in conjunction with a bat specialist.
    Reason: In the interest of environmental protection.

12. The Applicant shall comply with the requirements of the Planning Authority with regard to traffic management and access arrangements and the details of such works, including general road works, shall be agreed in writing prior to the commencement of development. In particular, the Applicant shall:
    a. Be responsible for maintaining the adjoining public road in a clean state free from mud and debris cause by the extraction of materials from this facility.
    b. Conduct regular condition surveys with the Council on the public roads during the lifetime of the extraction and any issues identified that can be attributed to the extraction are to be dealt with in a timely manner by the applicant in agreement with the Council.
    c. Submit details of new advance warning signs to be installed on the public road and at the development access point. These shall be agreed with Planning Authority and shall be installed prior to commencement of development.
    d. All loads of dry fine materials shall be either sprayed with water or covered/sheeted prior to exiting the quarry.
    e. All unladen trucks entering the site shall approach from the N81 Hollywood to the west of the site.

    Reason: In order to safeguard local amenities.

13. The disposal of surface water shall comply with the requirements of the planning authority for such works and services.
    Reason: To prevent flooding and in the interests of sustainable drainage.

14. Monitoring
    a. The developer shall monitor and record groundwater, surface water flow, noise, ground vibration, and dust deposition levels at monitoring and recording stations, the location of which shall be submitted to and agreed in writing with the Planning Authority prior to commencement of development.
    b. On an annual basis, for the lifetime of the facility (within two months of each year end), the developer shall submit to the Planning Authority copies of an environmental audit. Independent environmental auditors approved in writing by the planning authority shall carry out this audit. This audit shall be carried out at the expense of the developer and shall be made available for public inspection at the offices of the planning authority and at such other locations as may be agreed in writing with the authority. This report shall contain:
        i. A written record derived from the on-site weighbridge of the quantity of material leaving the site. This quantity shall be specified in tonnes.
        ii. A record of groundwater levels measured at monthly intervals.
        iii. A written record of all complaints, including actions taken in response to each complaint.
    c. In addition to this annual audit, the developer shall submit quarterly reports with full records of dust monitoring, noise monitoring, surface water quality monitoring, and groundwater monitoring. Details of such information shall be agreed in writing with the planning authority. Notwithstanding this requirement, all incidents where levels of noise or dust exceed specified levels shall be notified to the planning authority within two working days. Incidents of surface or groundwater pollution or incidents that may result in groundwater pollution, shall be notified to the planning authority without delay.

d. Following submission of the audit or of such reports, or where such incidents occur, the developer shall comply with any requirements that the planning authority may impose in writing in order to bring the development in compliance with the conditions of this permission.

Reason: In the interest of protecting residential amenities and ensuring a sustainable use of non-renewable resources.

14. Dust levels at the site boundary shall not exceed 350 milligrams per square metre per day averaged over a continuous period of 30 days (Bergerhoff Gauge).

Reason: To control dust emissions arising from the development and in the interest of the amenity of the area.

15. The noise levels generated during the operation of the sand and gravel quarry shall not exceed 55 dB(A) Leq,1hr] when measured at the boundary of the site during permitted operating hours and shall not exceed 45 dB (a) leq 15 mins at any other time. When measuring the specific noise, the time shall be any one hour period during which the sound emission from the quarry is at its maximum level.

Reason: In order to protect the residential amenities of property in the vicinity.

16. The quarry, and all activities occurring therein, shall only operate between 0800 hours and 1800 hours, Monday to Friday and between 0800 hours and 1400 hours on Saturdays. No activity shall take place outside these hours or on Sundays or public holidays. Deviation from these times shall only be allowed in exceptional circumstances where prior written agreement has been received from the Planning Authority.

Reason: In order to protect the residential amenities of property in the vicinity.

15. Prior to the commencement of development, the Applicant shall submit for the written agreement of the Planning Authority, an arboricultural impact assessment for the site which includes a tree survey plan and details of all tree protection measures. This shall include an assessment of trees and hedgerows

on either side of the entrance to the site on the R756. In addition, a pre-felling survey shall be carried out by a qualified bat specialist to confirm the presence or absence of bats. Should bats be found, felling will be postponed until advice is obtained from the NPWS.

Reason: In the interest of visual amenity and orderly development.

16. Prior to the commencement of development, the Applicant shall submit for the written agreement of the Planning Authority, a comprehensive landscape masterplan for the site which is to be prepared by a suitably qualified landscape architect. The landscape masterplan shall provide full details of the proposed planting across the site, including the species and size of the hedgerow, evergreen and native planting. The landscape masterplan shall be informed by the arboricultural impact assessment and shall clearly identity the trees which are proposed to be retained**,** with details provided of appropriate tree protection measures. All landscaping shall be implemented in full prior to the operation of the proposed quarry.

    Reason: In the interest of visual amenity and orderly development.

17. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

    Reason: To ensure the satisfactory restoration of the site in the interest of visual and residential amenity.

18. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development

Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

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.

Enda Duignan
Planning Inspector

30th October 2024

Appendix 2

Screening for Appropriate Assessment
Screening Determination

Step 1: Description of the project

I have considered the proposed quarry development, in light of the requirements of S177U of the Planning and Development Act 2000 as amended. An Appropriate Assessment Screening Report (December 2022) and a Natura Impact Statement (NIS) (December 2022) was submitted with the application and prepared by Enviroguide Consulting. These documents were also included as appendices to the Applicant's unsolicited FI. In addition, the application is supported by the following documentation

- Environmental Impact Assessment Report (EIAR) (and associated appendices which included a Hydrogeological Risk Assessment Report), and,
- Supplementary Information and Clarifications Report on EIAR as part of the FI response,

These documents have been prepared on behalf of the Applicant and the objective information presented informs the screening determination.

The appeal site has a stated area of c. 8.44ha. and is located within the townland of Walterstown, Hollywood, Co. Wicklow. I have provided a detailed description of the site location and its surrounding context in section 1 of my report, while the development is described in detail in section 2. Detailed specifications of the proposed development are provided in the AA Screening Report, the NIS and in other planning documents provided by the Applicant, including the EIAR. In summary, the development seeks planning consent for the development of a sand and gravel quarry on the subject site. It is proposed to extract a maximum of 50,000 tonnes of material over a ten year period (i.e. maximum of 500,000 tonnes per annum). In terms of the operational phase of the quarry, it stated that there will be no dewatering or wet working of the quarry and a buffer of at least 2m above the groundwater table will be maintained for the duration of the operational phase and any areas where groundwater is within 2m of the quarry floor will be excluded from extraction.

I note that the AA Screening Report was prepared in line with current best practice guidance and provides a description of the proposed development and identifies any European Sites within a possible zone of influence of the development. Having reviewed the documents and submissions on the application, I am satisfied that the information allows for a complete examination and identification of any likely significant effects of the development, alone or in combination with other plans or projects, on European Sites.

The nearest designated site (Poulaphouca Reservoir SPA (Site Code 004063)) is located c. 700m to the north of the appeal site. SACs and SPAs within the potential zone of influence (ZoI) have been identified within the Applicant's Screening Report which indicates that there are three (3) no. SACs and two (2) no. SPAs within the development's ZoI.

European site (SAC/SPA)	Site code	Distance to subject site	Connections (source, pathway, receptor)	Considered further in Screening (Y/N)
Poulaphouca Reservoir SPA	004063	0.7km	Hydrological connection exists	Y
Wicklow Mountains SPA	004040	3.2km	No potential connections	N
Wicklow Mountains SAC	002122	3.2km	No potential connections	N
Slaney River Valley SAC	000781	7.7km	No potential connections	N
Red Bog, Kildare SAC	000397	12.8km	No potential connections	N

In the case of the Wicklow Mountains SAC, Red Bog, Kildare SAC, Slaney River Valley SAC and the Wicklow Mountains SPA, there are no direct or indirect hydrological pathways from the proposed development site to the European Sites. In addition, the intervening distances between the subject site and the SPA and SACs are sufficient to exclude the possibility of significant effects on the European Sites arising from:

- emissions of noise, dust, pollutants and/or vibrations emitted from the site during the construction and operational phases;
- increased traffic volumes during the construction and operational phase and associated emissions;
- potential increased lighting emitted from the site during construction and operational phase; and
- increased human presence at the site during construction and operational phase.

Therefore, it is considered that the construction and operation of the proposed development will not impact on the conservation interests of the Designated Sites and no potential impacts are foreseen.

However, a hydrological connection exists between the site and Poulaphouca Reservoir SPA as detailed above. The subject site has hydraulic connectivity to the Toor River which outflows to the King's River. The King's River ultimately discharges into Poulaphouca Reservoir at a location c. 700m to the north of the appeal site. This site is examined in further detail below.

I note that a submission has been received on the application from the DoHLGH dated 3rd February 2023 stating that the proposed application is situated in a location likely to impact on the Poulaphouca Reservoir SPA and it is their view that the application requires further Information in the form of a full Appropriate Assessment. A submission has also been received from IFI which has recommended suitable conditions.

Step 2: Potential impact mechanisms from the project

The Poulaphouca Reservoir SPA is located downstream from the proposed site and is

hydrologically connected to the site via the Toor River and the King's River. As part of the proposed development, it is proposed to install a prefabricated bridge over the existing crossing over the Toor River during the construction phase and this bridge is proposed to be used for the transportation of loads containing sand and soil from the quarry during the operational phase. The potential arises for sediment laden runoff to enter this watercourse during both the construction and operational phases of the proposed development.

Both the subject site and Poulaphouca Reservoir SPA are located within the Kilcullen groundwater body and the vulnerability of the groundwater beneath the site is mapped by the GSI as High (GSI, 2022). As detailed in Chapter 7 of the EIAR, the vulnerability rating will be increased to "extreme" for the operational phase of the proposed development as the unsaturated zone will be reduced to 2m above the water table during the wettest recorded groundwater levels. Groundwater from beneath the proposed development has been identified to flow towards the King's [Liffey] River (GSI, 2022). In the absence of mitigation measures, there is potential for construction and operational related contaminants to enter the groundwater body, the Toor River or King's [Liffey] River and potentially reach this SPA.

Steps 3 & 4: European Sites at risk from impacts of the proposed project and likely significant effects on the European site(s) 'alone'

Natura 2000 Site	Source Pathway Receptor	Impact Assessment	Screening Conclusion
Poulaphouca Reservoir SPA (004063) To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. Greylag Goose *Anser anser* (A043) Lesser Black-backed Gull *Larus fuscus* (A183)	There is hydrological connectivity between the proposed site and this SPA during the construction and operational phase of the proposed development. As indicated, the site has hydraulic connectivity to the Toor River, which outflows to the King's River and then which ultimately discharges into Poulaphouca Reservoir at a location c. 700m to the north of the appeal site	In terms *habitat loss and fragmentation,* the Applicant's AA Screening Report notes that no Greylag Geese or Lesser Black-backed Gulls were recorded nor were goose droppings found during field surveys or site walkover visits. It is stated that the overgrown nature of much of the Site provides negligible suitability as an ex-situ feeding resource for the above species. The bracken habitats and rank grass swards at the site render it largely unsuitable for the SCI species listed for Poulaphouca Reservoir SPA. I would agree with the Applicant's ecologist that there will be no significant loss of any ex-situ foraging/roosting habitat, to any of the SCI species listed for the relevant SPAs, as a result of the Proposed Development. In the context of *Habitat / Species* Fragmentation, as there will be no direct habitat loss within any European sites, I am satisfied that no habitat fragmentation will arise as a result of the proposed development. When considering *Changes in Water Quality and Resource,* a hydrological pathway exists between the subject site and Poulaphouca Reservoir SPA via inadvertent surface water discharges from the site and groundwater flows potentially reaching the Toor River and King's River which are hydrologically	The possibility may not be excluded that the proposed development could have a significant effect on the SPA. AA is therefore required.

		connected to Poulaphouca Reservoir SPA. In the absence of mitigation measures, there is the potential to give rise to potentially significant effects on Poulaphouca Reservoir SPA during the construction and operational phases due to groundwater and surface water run-off containing pollutants such as hydrocarbons and silt to enter the groundwater body or adjacent Toor River and King's [Liffey] River and downstream Poulaphouca Reservoir. In terms of *Disturbance and / or Displacement of Species*, the hydrological link that exists has the potential to cause disturbance and/or displacement to the bird and aquatic species associated with the Poulaphouca Reservoir SPA due to effects on the water quality and resource indicator during both the construction and operational phases.	

Step 5: Where relevant, likely significant effects on the European site(s) 'in-combination with other plans and projects'

The development of the proposed quarry is catered for through land use planning, including the Wicklow Dublin County Development Plan, 2022-2028, covering the location of the application site. This has been subject to AA by the Planning Authority, which concluded that its implementation would not result in significant adverse effects to the integrity of any Natura 2000 areas.

Section 3.5.26 of the Applicant's Screening Report considered 'In-Combination' effects. This section of the Applicant's report has had regard to the planning policy content and planning history of the surrounding area. It is indicated that there are several existing planning permissions on record in the area, ranging from extensions and alterations to existing residential properties to one-off housing developments. Recent permissions within the site surrounds include:

- 211549: Planning permission was sought for the construction of a new single storey dwelling house, on site sewerage treatment system, alterations to existing entrance, new bored well and all ancillary site works. Decision date, 18/05/2022.
- 21832: Planning permission was sought for a single storey dwelling serviced with a small on-site wastewater treatment system to current EPA guideline, entrance via existing field access and all associated site works. Decision date, 14/12/2021.
- 21104: Planning permission was sought for a single storey dwelling, small on site wastewater treatment system to current EPA guidelines, shared entrance and all associated site works. Decision date, 26/03/2021.

Having reviewed the Planning Authority's online planning application register, I note that there are other residential and agricultural related permissions within the wider surrounds which are typical of the area's rural location. Overall, I conclude that the proposed development would have no likely significant effect in combination with other plans and projects on the qualifying features of any European site(s).

Overall Conclusion - Screening Determination

The proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually or in-combination with other plans or projects could have a significant effect on the Poulaphouca Reservoir SPA (004063) in view of the site's Conservation Objectives, and Appropriate Assessment (and submission of a NIS) is therefore required.

Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually or in combination with other plans or projects would not be likely to give rise to significant effects on the Wicklow Mountains SPA (004040) Wicklow Mountains SAC (002122), Slaney River Valley SAC (000781) or the Red Bog, Kildare SAC (000397) in view of the site's Conservation Objectives, and Appropriate Assessment (and submission of a NIS) is not, therefore, required.