An Bord Pleanála

Inspector's Report

ABP-315323-22

Development	Continuation of use of existing factory site and permission for 3 elements of development at Knocknaboola to supply existing site. An EIAR and NIS have been submitted with this application.
Location	Rangue and Knocknaboola, Killorglin, Co. Kerry
Planning Authority	Kerry County Council
Planning Authority Reg. Ref.	22/33
Applicant(s)	Michael F. Quirke & Sons
Type of Application	Permission
Planning Authority Decision	Grant permission
Type of Appeal	Third Party
Appellant(s)	Geraldine O'Shea & Others Patrick McGillycuddy Dan Ahearne Jer Mangan

	Michael Ryan
Observer(s)	Rolf Bachem
Date of Site Inspection	5th July 2024
Inspector	Sarah Moran

Contents

1.0 Site Location and Description

1.1. The site is an existing sand and gravel quarry with associated concrete factory and adjacent lands located in the townlands of Rangue and Knocknaboola, c. 2.5 km northwest of Caragh Lake in Co. Kerry, c. 1.7 km east of Caragh village and c. 3 km southwest of Killorglin. It is located at the junction of two local roads, the L4021 Caragh Lake Road and the L7504 connection between the N70 and the Caragh Lake Road. The wider area is primarily agricultural, with scattered one-off houses including several dwellings immediately adjacent to both parts of the development site. There are two other quarries located west and northwest of the Rangue quarry, comprising c. 4.62 ha and 7.27 ha respectively, which are not owned by the applicant and are no longer in operation.

1.2. The overall site has a stated area of 43 ha and includes lands to the north and south of the L4021. The lands within the red line site boundary comprise the following areas:

- Existing quarry and processing area in the townland of Rangue north of the L4021, stated area 18.5 ha, east of the L7504 with frontages to both roads and existing vehicular accesses to both. This area contains a well-established quarry with a network of access routes, worked out extraction areas, processing area, plant and equipment, stockpiling of materials, settling ponds, a large garage, concrete batching plant, block yard, weighbridge, wheel wash, offices, workshops and parking. The processing area is used to screen, wash and crush extracted material. The existing factory is located in the centre of the site, as permitted under PL08.125728 (see planning history below). The factory produces concrete and concrete blocks. It is stated that there are c. 38 permanent employees at the existing premises. The Glashacoomnafanida stream runs along the eastern site boundary (referred to as the Douglas River in some of the documentation on file). There are hedgerows at site boundaries.
- Lands to the south of the L4021 in the townland of Knocknaboola, total stated area 24.5 ha, currently undeveloped with hedgerows at site boundaries. Land cover is this area is a mixture of dry heath and bog. It has been subject to turf cutting over many years and drainage channels are present. The

Glashacoomnafanida Stream also runs along the eastern perimeter of these lands.

1.3. The lands within the blue line site boundary (stated as in the ownership of the current applicant) include an area to the west of the L7504, north of the L4021, which has been excavated and is currently under reinstatement. This area is referred to as the 'Riordan's Pit' in the documentation on file (stated area 11 ha and 11.75 ha in the revised EIAR). It previously provided aggregate material for the factory at the current development site and is connected to that area via an existing underpass beneath the L7504. The blue line boundary also contains other areas to the east of the red line site boundary, both north and south of the L4021. There is another quarry to the immediate north of the site, also accessed from the L7504, which is in separate ownership and is not in use at present. There is also a scrapyard to the northwest of the site, on the western side of the L7504.

1.4. The Glashacoomnafanaida Stream to the east of the site ultimately drains to Castlemaine Harbour. The documentation on file notes that this stretch of the stream may dry out during periods of dry weather. The applicant details that some drainage works have been carried out at the stream, including the opening of a new drainage channel to the east of the southern part of the development site.

2.0 **Proposed Development**

2.1. According to the EIAR and to other documentation on file, excavation commenced at this location prior to 1963. The extraction site at Riordan's Pit is now exhausted and the applicant now seeks to establish a new extraction area at Knocknaboola, south of the L4021, which will provide material for the continued use of the existing factory at Rangue.

2.2. The proposed development as per the application originally lodged with Kerry County Council (KCC) on 19th January 2022 comprises the following key elements:

- Continuation of use of the existing factory site at Rangue as permitted under PL08.125728, total stated area 18.5 ha. It is stated that there are little remaining viable aggregates in this area and that it is not used for aggregate extraction. The factory processed aggregates from the Riordan's Pit site. It is proposed to continue extraction at the factory site north of the L4021, until the aggregates are

exhausted or until the expiry of PL08.125728, whichever is earliest. There is to be no change of production at the factory site and the layout of all plant, aggregate processing and settling ponds is to remain as they have over the duration of the existing planning permission. The continued activities to be carried out at the factory comprise:

  - Crushing, screening and washing of raw aggregate, with storage of washed aggregates in stockpiles until they are used for further processing. Wastewater from the washing process is recycled in a series of lagoons / settlement ponds, with fine silts and sands removed regularly to retain flows.
  - Production of concrete and concrete blocks using washed aggregates. Storage, drying and maturing of concrete blocks on a concrete apron.
  - The factory site also includes a large garage where plant and machinery are stored and the applicant's head office.

  The factory has an existing connection to the public water supply and water management within the factory site is to remain as per existing, subject to some modifications as detailed below, with continuing pumped discharge to the Glashacoomnafanida Stream subject to an existing discharge licence. An existing septic tank and soak pit serving the factory site are to be decommissioned and replaced by a new on site wastewater treatment system.

- New 16.75 ha extraction area for quarrying of sand and gravel and pre-processing by dry screening and grading, within an overall area of 24.5 ha, which is contiguous site to the south of the L4021 in the townland of Knocknaboola, to supply the existing factory site. The predicted annual extraction rate is stated to be 100,000 cu.m. per annum, giving average daily tonnage of 600-800 tonnes over a 20 year period. The proposed quarry extension area is to be extracted in five stages over a period of 20 years (16.3 years to exhaustion at full extraction). Phase 1 is to commence at the northern end of the site and extraction is to progress southwards over four further phases with each phase taking approximately four years over the total 20 year lifespan, depending on aggregate demand. The active face will have a maximum height of 8m above the pit floor in Phases 1 and 2 and 12-13m in Phases 4 and 5 with extraction progressing

southeast to northwest for each phase. Overburden removed from the site is to be used to construct berms at / around the extraction area.

- Construction of a temporary entrance from the L4021 to the proposed new extraction site at Knocknaboola, to be constructed in conjunction with a new underpass beneath the L4021 to facilitate the direct transportation of aggregates between the Knocknaboola site and the factory site at Rangue. These works will take place during Phase 1 of the overall extraction operation. The application states that the temporary entrance will be closed once the underpass is completed and will be used for a maximum of 12 months. Also a new haul road linking the factory at Rangue via the underpass to the new extraction site at Knocknaboola.
- The initial application proposed to sell a proportion of aggregates from the new extraction area direct to customers, little altered from their raw state, with a separate road access to the Knocknaboola site and with primary crushing, screening and grading to take place there using a mobile screening plant. KCC sought further information on this matter, see below.
- The application states that the Riordan's Pit site is now exhausted and will not be subject to any further extraction. The remaining small reserves and aggregates in the area are to be sold off and it is to be restored as per the reinstatement plan granted under PL08.125728.
- The new extraction area is to be subject to phased site restoration and revegetation as it is worked out. of the new extraction area are proposed, along with an invasive species management plan.
- The drawings on file indicate that an area of peatland to the west of the proposed new extraction area, which is stated as being subject to turbary rights, is to be retained.
- The application includes a Report in Support of Appropriate Assessment Screening and Natura Impact Statement (NIS) dated December 2021 and an Environmental Impact Assessment Report (EIAR) dated January 2022.

2.3. The applicant submitted significant further information, including a revised EIAR dated August / September 2022 and an updated NIS dated August 2022, to KCC on 12th September 2022, which was readvertised. The following additional information and amendments to the original proposed development are noted:

- The proposed temporary access is to be in place for twelve months, while the underpass is under construction. Reinstatement proposals are submitted.
- A 10ha area of lowland blanket bog habitat at Knocknaboola in the southern part of the site is to be retained.
- There is now a total buffer zone of 15 m along the Glashacoomnafanida Stream comprising a 10 m setback and a 7m wide mineral berm with a silt fence.
- The direct sale of aggregates from the new extraction area is no longer proposed, aggregates are to be sold from the Rangue site only.
- There will be no screening of aggregates at Stage 1 of the new extraction area. This will take place at Stages 2-5 using a mobile screening plant. Aggregates extracted at Knocknaboola will be transported to Rangue for processing via the underpass with 30 truck movements per day proposed. No blasting or rock breaking will be carried out.
- The existing water recycling system of ponds located on the eastern side of the existing quarry at Rangue is to be decommissioned and the area re-graded to slope away from the Glashacoomnafanida Stream. The development also includes other modifications to surface water management at the existing quarry and proposed ongoing continuous monitoring of the surface water discharge to the Glashacoomnafanida Stream.
- The development includes an upgrade to the existing wastewater treatment plant (WWTP) serving the existing quarry.
- Revised landscape restoration plans are proposed, ref. drawing no. 2155-1-102, dated June 2022.

2.4. The applicant submitted unsolicited further information to the planning authority on 11th November 2022, comprising a detailed response to matters raised in third party submissions.

3.0 **Planning Authority Decision**

3.1. **Further Information Request and Decision Reg. Ref. 22/33**

3.1.1. The application was originally lodged with Kerry County Council (KCC) on 19th January 2022. KCC issued a request for further information (RFI) on 14th March 2022, in relation to the following matters.

- Roads issues including details of movements of aggregates between the extraction and factory sites while the underpass is under construction; intended timeframe for selling of materials to customers at Phase 1 of the new extraction site; details of selling of raw aggregates to customers on Phase 1 of the Knocknaboola site after the temporary permission has expired and with no access to the site; volume of traffic generated by the proposed selling of trunking from Phase 1 of the Knocknaboola site via the temporary entrance; details of proposed underpass including gradient, sections, retaining wall and other technical specifications; reinstatement plan for the closure of the proposed temporary road entrance; sight distances at proposed temporary entrance; details of compliance with condition no. 3 of PL08.125728 relating to road improvements at the L4021.
- Noise and dust issues including nature of pre-processing and screening of aggregates at the mobile screening plant and associated noise and dust emissions; dust control measures to protect nearby residential amenities during excavation and transportation of materials; applicant to address issues about noise, dust and air emissions data collected during Covid restrictions; details of EIAR Air Dispersion Modelling exercise; mitigation measures to ensure no effects due to interaction of development with air quality, human health and biodiversity; comment on noise impacts during operation in certain scenarios modelled.
- Issues relating to the Knocknaboola extraction site including proposed timeframe of extraction and processing; legal ownership of site and turbary rights; potential blasting or rock breaking at the site; requirement for additional surface water monitoring data; proposals for wheel washing facilities at the temporary access; response to IFI submission; proposals for the 10 ha blanket bog habitat located within the landholding which does not form part of the extraction area; biological

and aquatic habitat assessment for the Glashacoomnafanida Stream; revised proposal for a minimum 10m setback to the stream; consideration of depth of extraction and potential impacts on the stream bed; indicate proposed fencing at the site perimeter.

- Issues relating to the existing processing facility at Rangue including reinstatement of excavated areas in accordance with PL08.125728; reinstatement plan for Riordan's Pit; waste management plan for disposal of machinery and tyres at the site; details of existing soakaway at the site as permitted; confirmation if materials to be processed at the site will be imported from elsewhere; current Extractive Waste Management Plan; confirmation if any C&D waste is to be imported onto the site; updated surface water management plan and proposals for the existing quarry site; proposals for the removal of any material stockpiled at the existing processing facility that adjoins the Glashacoomnafanida Stream; details of mitigation measures in AA; revised NIS and EIAR to take any proposed amendments into account; Environment Management System document to be submitted as per EPA guidelines.

3.1.2. The applicant submitted a response to the RFI on 12th September 2022. They also submitted unsolicited further information to KCC on 11th November 2022, comprising a letter which clarified various matters raised in third party submission to the planning authority. KCC issued a notification of a decision to grant permission on 2nd December 2022, subject to 10 no. conditions. The following conditions are noted in particular:

- Condition no. 3 requires a cash bond to secure the satisfactory restoration of the site.
- Condition no. 4 states that permission shall cease to have effect 20 years from the date of permission, with the quarry to then cease and all remedial works and reinstatement works to be carried out to the satisfaction of the planning authority.
- Condition no. 5 states that no screening or processing shall take place at the Knocknaboola site. All screening and processing shall be carried out at the Rangue processing facility only.
- Condition no. 6 states that the daily rate of export of material from the site shall not exceed 800 tonnes per working day (Monday to Saturday inclusive). Sand

and gravel shall not be extracted from the proposed quarry extension area until such time as the reserves of same from the existing quarry have been exhausted. The planning permission does not permit the extraction of aggregates located at the Rangue site, as indicated on the site layout map no. PL 04a and PL 04b, labelled 'unexcavated area 0.41 ha'.

- Condition no. 8 requires a 17m buffer zone to be maintained between the boundary of the proposed excavation area and the Glashacoomnafanida Stream, also provision of a berm and silt fence between the excavation area and the stream.
- Condition no. 14 requires water management measures and specifies that no aggregate extraction shall take place below the level of the water table or within 1m of same.

The other conditions imposed required various mitigation measures and ongoing dust and noise monitoring.

3.2. **Planning Authority Reports Reg. Ref. 22/33**

3.2.1. Planning Reports

KCC Assistant Planner report 14th March 2022. Recommends a request for further information as set out above.

Second report of KCC Assistant Planner, 2nd December 2022. Notes additional information submitted and revised EIAR, also the submitted NIS. Considers that the matters raised in the RFI have been addressed. Recommends permission subject to conditions. The revised EIAR and the submitted NIS are also considered satisfactory.

3.2.2. Other Technical Reports

KCC County Archaeologist, 31st January 2022. Notes that there are no recorded monuments listed in either the Record of Monuments and Places or the Sites and Monuments Record in proximity to the development. No further mitigation is required other than that set out in the application.

KCC Ecologist, Environmental Assessment Unit, 8th March 2022. AA Assessment and Biodiversity Assessment. Recommends RFI for issues relating to proposals for a

10 ha area of blanket bog in the southern part of the site; biological and aquatic habitat assessment for the Glashacoomnafanida Stream; revised proposals for minimum setback of 10m to the stream; removal of material stockpiles over the stream at the existing factory site; amended surface water proposals for the existing quarry site to ensure that waters pumped off-site are free of silt at all times; revised mitigation measures to meet legal requirements; revised NIS and EIAR taking any proposed amendments into account. Second report dated 16th November 2022 in response to the further information submission. The revised surface water management proposals are considered acceptable in principle and the revised buffer zone to the Glashacoomnafanida Stream, along with silt fencing proposals, are adequate to protect water quality in the stream and to maintain a corridor of riparian landscape connectivity for species including for potential otter use. The further information response adequately addresses biodiversity related issues raised in the RFI, including proposals regarding the retention of lowland bog habitat and landscape restoration. Conditions are recommended.

KCC Roads, Transportation and Marine Dept. Area Engineer, 11th March 2022. States concerns about sight distances at the proposed temporary entrance; further details of proposed underpass required. Second report dated 30th November 2022 in response to the further information submitted. Sight distances are acceptable. Recommends conditions.

KCC Environment memo 14th March 2022. Additional surface water quality monitoring is required. Also requires details of proposed blasting, wheel washing facilities, current Extractive Waste Management Plan, assessment of existing settlement lagoons, details of EIAR Air Dispersion Modelling exercise; potential noise impacts on residential properties. Additional comment by KCC Environment dated 14th March 2022 states that the information submitted on the proposed on-site WWTS appears to be satisfactory. Second Memo by KCC Environment 29th November 2022. Notes that the noise report submitted with the revised EIAR identifies potential background noise increases in some areas. Recommends refusal of permission to carry out screening activities in the proposed quarry extraction areas. Otherwise recommends conditions.

3.3. **Prescribed Bodies Reg. Ref. 22/33**

3.3.1. HSE Environmental Health Officer

Submission of HSE EHO, 18th February 2022. Predicted dust deposition levels are below the health protection standards outlined in the section 28 guidelines. Proposed mitigation measures provide adequate protection of surface and groundwater.

3.3.2. HSE South Emergency Management Office

Submission dated 1st February 2022. No specific observations in relation to the proposed development. General recommendations in the context of site operations.

3.3.3. Irish Water / Uisce Éireann

Submission dated 23rd February 2022. The applicant will be required to divert an existing watermain when the underpass is being installed and will be required to install a new watermain crossing the underpass upon its completion. No other issues raised.

3.3.4. Inland Fisheries Ireland

The following points are noted:

- The Glashacoomnafanaida stream is a salmonid spawning and nursery ground, feeding into Castlemaine Harbour SAC.
- Potential impacts on the aquatic environment include runoff from lands during the stripping of overburden, the control of contaminated site and storm water runoff from the new and old sites, pumped discharge from silt ponds and interference with ground waters leading to surface water drawdown.
- The submission recommends detailed water management measures including in relation to the removal of any existing migratory impasse to fish; the management and control of contaminated waters within the new extraction area, silt containment measures during soil stripping and construction management measures, management of runoff from access roads, monitoring of discharge from silt ponds.

3.4. **Third Party Observations Reg. Ref. 22/33**

3.4.1. There was a large volume of third party submissions to the planning authority both in response to the initial application (20 no.) and to the further information submitted (17 no.). I have read all the submissions in detail. Many of them were made by local residents and raised issues similar to those raised in the grounds of the third party appeals as summarised below. The following submissions, which raise other relevant issues, are noted in particular.

3.4.2. Submission by Brendan O'Brien and Others

The main points made may be summarised as follows:

- This submission is made on behalf of a group of employees of the applicant. It is submitted that many of the employees have worked for the applicant for up to forty years or more but are currently in an uncertain situation pending the outcome of the subject appeal.
- It is submitted that the subject quarry has not resulted in pollution and that hundreds of trees are to be planted as part of a bonded restoration plan at the overall site.
- The proposed development is necessary to facilitate the production of construction materials close to their end usage and supporting the local construction industry, in accordance with national planning policy on the production of aggregates.
- The development will not result in any intensification of activities or traffic movements at the overall site as the previous pit is now exhausted.

3.4.3. Submission by the McDonnell Family

The following points are noted in particular, in addition to other matters as summarised elsewhere in this report:

- There are incorrect drawings / maps submitted with this and previous applications, ref. folio 14194F land registry map, which indicates that the property is 0.8 acres in size and borders the new extraction site at stage 4 of the development. It is submitted that this has been incorrectly incorporated into the subject application and the EIAR.

3.4.4. Submission of John Kelliher

The submission of John Kelliher includes a map of part of the existing extraction area to the north of the L4021. It is submitted that the proposed development includes a roadway under property owned by the observer's late wife Shiela Kelliher, and that the applicant does not have permission to include this land as part of the proposed development.

3.4.5. Submission of Una Ni Raifeartaigh

This submission by a local resident includes a report by an Ecologist, which submits that there are several deficiencies in the submitted EIAR and AA as follows:

- The subject site is subject to turbary rights.
- The data presented in several chapters of the EIAR is inaccurate with several lacunae, e.g. Chapter 5 Biodiveristy does not refer to the fact that the application area is recorded in the NBDC Database as occurring with the area categorised as being of the second highest importance for suitability for all bat species, the highest importance for Lesser Horseshoe Bat and the second highest importance for Daubenton's Bat. The bat surveys avoid the peak maternity season of July.
- The NIS contains numerous lacunae and deficiencies including failing to take into account cumulative impacts of the development, e.g. through analysis of cumulative impacts of peat extraction at sites within the zone of influence.
- The submission includes a detailed Peer Review of the AA Screening Report dated August 2020 submitted with the application to KCC on 19th January 2022, which relates to a different development / project, namely a drainage channel to the east of the Glashacoomnafanaida Stream. I have read this document for reference purposes.

4.0 Planning History

4.1. Planning and Regulatory History Prior to 2008

4.1.1. EIAR sections 1.7 and 3.3 detail the following planning history at the site:

- Reg. Ref. 915/83 Permission for the construction of a plant for the manufacture of ready-mix concrete.

- Reg. Ref. 98/89 Permission to retain the use and extension of gravel pit at Rangue.
- W61 License to discharge trade and sewage effluent from the applicant's site at Rangue in accordance with section 4 of the Water Pollution Act 1977.
- Reg. Ref. 1512/94 Permission to retain garages, stores and offices and use of extended gravel pit at Rangue.
- Reg. Ref. 3746/00 Permission to extract aggregate from 11.785 ha site at Rangue.

4.2. **PL08.125728, PL 08.125729 and PL 08.125731**

4.2.1. Three concurrent, interrelated appeals relating to the following developments at Rangue, Killorglin, Co. Kerry:

- PL08.125728 (reg. ref. 3744/00) Permission sought for the retention of the production of concrete, concrete blocks and surface dressing chippings and all associated buildings and works at the existing quarry to the north of the L4021, overall site area 17.8 ha.
- PL08.125729 (reg. ref. 3746/00) Extraction of aggregates from a 11.75 ha site at the lands known as the 'Riordans Site', to the west of the L7504. No processing to take place in this part of the site.
- PL08.125731 (reg. ref. 3745/00) Extraction of aggregates from a 4.05 ha site on lands to the south of the L4021, northeast of the current development site at Knocknaboola. No processing to take place in this part of the site.

4.2.2. The Board issued a decision to grant permission for PL08.125728 on 18th June 2002, subject to 18 no. conditions including:

- Condition no. 1 (2) clarified that the order does not include permission for extension of the existing permission for the quarrying of aggregates on the site.
- Condition no. 2 specified that the production of concrete, concrete blocks and surface dressing chippings at this site shall not continue after the 15th May 2005, unless, by that date, extraction of aggregates from the adjacent site to the south-west (subject of PL 08.125729) has commenced and that aggregates from that

source are available as a raw material for such production. The permission was otherwise to cease to have effect 15 years from the date of the order.

- Condition no. 3 required the widening and improvement of local road L7504, between the entrance to the site from that road to the junction with the L4021.

4.2.3. The Board also issued a decision to grant permission for PL08.125729 on 18th June 2002, subject to 21 no. conditions including:

- Condition no. 2 prohibited residential development within the site boundaries, as authorised by a previous grant of outline permission (reg. ref. 00/485) if the permitted development is commenced.
- Condition no. 3 limited the permission to have effect 15 years from the date of the order.
- Condition no. 4 required works to the L7504 as per condition no. 3 of PL08.125728.

4.2.4. The Board refused permission for PL08.125731 for the following stated reasons:

1. It is considered that the proposed development, by reason of noise from extraction activities and from associated traffic, would seriously injure the amenities of residential property in the vicinity, and would thereby be contrary to the proper planning and development of the area.
2. It is considered that the proposed development would endanger public safety by reason of a traffic hazard, because of the traffic turning movements it would generate on a narrow, substandard road, at a point where sightlines are restricted in both directions, and would therefore be contrary to the proper planning and development of the area.

4.3. Reg. Ref. 00/93744 and 00/93746 Extension of Duration of Permissions

4.3.1. On 11th April 2017, KCC granted permission to the current applicant for extension of duration of the above permitted developments at Rangue, Killorglin, Co. Kerry, until 17th June 2022.

4.4. ABP-300566-18 Similar Development in the Vicinity

4.4.1. Relating to a site c. 2 km to the west of the development site, also to the north of Caragh Lake. Permission sought by the current applicant for the extraction of

aggregate in a 14.38 ha extension to an existing quarry and removal of same unprocessed aggregate to the existing quarry for processing at Glannagilliagh, Caragh Lake, Killorglin, Co. Kerry. The Board issued a decision to refuse permission on 18th January 2019, for the following stated reasons:

1. On the basis of the submissions made in connection with the planning application and the appeal, and in the absence of a Natura Impact Statement, the Board is not satisfied that the proposed development individually, or in combination with other plans or projects, would not be likely to have a significant effect on the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment Special Area of Conservation (Site Code 00365), and Castlemaine Harbour Special Area of Conservation (Site Code 00343) in view of the conservation objectives for those sites. In such circumstances, the Board is precluded from giving further consideration to a grant of planning permission.
2. The proposed development is situated in a Rural General area in close proximity to Lough Caragh, which is located within an area designated as a Rural Prime Special Amenity Area in the Kerry County Development Plan 2015-2021. Notwithstanding the history of sand and gravel extraction in the area, it is considered, on the basis of the submissions made in connection with the planning application and the appeal, that the proposed extension to the south and south-west would seriously injure the rural and tourism amenities of the area and the amenities of property in the vicinity. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

4.4.2. The Board is referred to section 4.0 of the Inspector's report of ABP-300566-18, which sets out the detailed planning and regulatory history of that site.

5.0 Policy Context

5.1. National Planning Policy

5.1.1. The following section 28 Ministerial Guidelines are considered to be of relevance to the proposed development:

- Quarry and Ancillary Activities, Guidelines for Planning Authorities (2004)

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018)

5.1.2. The following guidance documents are also relevant:

- Guidelines on the Information to be contained in Environmental Impact Statements EPA, (2002)
- Environmental Management Guidelines, Environmental Management in the Extractive Industry (Non-Scheduled Minerals), EPA, (2006)
- Guidelines for Landscape and Visual Impact Assessment, Landscape Institute (2013)
- National Landscape Strategy for Ireland, 2015-2025

5.2. **Development Plan**

5.2.1. It is highlighted to the Board that the previous Kerry County Development Plan 2015-2021 was in force when the subject application was lodged with KCC on 19th January 2022. The Board is referred to the KCC planning report on file dated 14th March 2022, which sets out relevant provisions of that development plan.

5.2.2. The current Kerry County Development Plan 2022-2028 was adopted on 4th July 2022 and came into effect on 15th August 2022. It was therefore in effect when the subject decision was issued by KCC on 2nd December 2022. The site is located in an unzoned rural area. Development plan section 9.7.6.2 deals with natural resources and states the following objectives:

KCDP 9-64 Maximise the economic potential and development of natural resources in a sustainable manner.

KCDP 9-65 Maximise the employment potential of the natural resources within the County in a sustainable way through the promotion of associated industries at appropriate locations.

KCDP 9-66 Ensure that the development and exploitation of natural resources does not result in any significant adverse effects on the local community.

Section 9.7.6.2.1 deals with the extractives industry and states the following objectives:

KCDP 9-67 Facilitate the sustainable development of the extractive industry and seek to ensure the ongoing availability of an adequate supply of aggregates for the construction industry.

KCDP 9-68 Facilitate and support the development of bitumen plants and reprocessing aggregate facilities within existing quarries subject to environmental assessment.

KCDP 9-69 Ensure all extractive development proposals comply with the objectives of this plan including development management standards, flood risk management requirements and the protection of landscape, biodiversity, infrastructure, water and air quality, built and cultural heritage.

5.2.3. The development site is not located in a Visually Sensitive Area as per development plan Map J. There are no designated views or prospects in the immediate vicinity of the site. Development plan section 11.6.3.2 Rural General applies:

Rural landscapes within this designation generally have a higher capacity to absorb development than visually sensitive landscapes. Notwithstanding the higher capacity of these areas to absorb development, it is important that proposals are designated to integrate into their surroundings in order to minimise the effect on the landscape and to maximise the potential for development.

Proposed developments should, in their designs, take account of the topography, vegetation, existing boundaries and features of the area. Permission will not be granted for development which cannot be integrated into its surroundings.

5.3. Natural Heritage Designations

5.3.1. The following designated Natura 2000 sites are located within 15 km of the development site, see Appropriate Assessment section below for further details:

- Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365)
- Castlemaine Harbour SAC (000343)
- Lough Yganavan and Lough Nambrackdarrig SAC (000370)
- Slieve Mish Mountains SAC (002185)

- Castlemaine Harbour SPA (004029)
- Iveragh Peninsula SPA (004154)
- Dingle Peninsula SPA (004153)
- Killarney National Park SPA (004038)

5.3.2. The following National Heritage Areas (NHAs) are located within 15 km:

- Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment pNHA (000365)
- Castlemaine Harbour pNHA (000343)
- Lough Yganavan and Lough Nambrackdarrig pNHA (000370)

6.0 The Third Party Appeals

6.1. Grounds of Third Party Appeals

6.1.1. There are four separate third party appeals, which may be summarised separately as follows.

6.1.2. Appeal of Dan Aherne

The appellant states that the appeal is submitted on behalf of a group of local residents and landowners, who are referred to as Knocknaboola: Environmental Enhancement and Protection (KEEP). The main points made in the grounds of appeal may be summarised as follows (note that the submission refers to the previous County Development Plan).

General Issues:

- Lack of consultation with local residents regarding the proposed development. Lodgement of the planning application before Christmas 2021 frustrated local residents. This is a breach of Article 6 of the Habitats Directive and Part XAB of the Planning and Development Act 2000.
- The submitted planning application is not searchable and is therefore in breach of the Aarhus Convention.

- The appellants are concerned about the applicant's failure to comply with other permissions in the area. Refers to reg. ref. 17/14 PL08.300566 relating to Glannagilliagh quarry at Caragh Lake and reg. ref. 19/839 PL08.307835 relating to a quarry at Ballahacommane and Ardaneanig, Killarney, Co. Kerry, both of which were refused by ABP. Also the alleged failure of the applicant to register the Gleanagallagh Quarry with the EPA.
- Enforcement Notice No. 8217 relating to the development site at Knocknaboola has been only partially complied with as there are still ridges of spoil along the length of the temporary diversion of the Glashacoomnafanaida stream. It is submitted that KCC has allowed for a diversion of a locally important riparian stream and ecological corridor, in contravention of development plan sections 11-19.
- Refers to a material stockpiled at the existing quarry, subject to enforcement action by KCC, which has been in place for over 20 years and is a constant threat to the Glashacoomnafanida Stream. Notes the IFI submission on potential water impacts associated with the aquatic environment associated with run off.
- There is a large disparity between the RFI issued in March 2022 and the conditions issued in December 2022, lack of explanation for same.
- Lands at the proposed quarry extension are commonage and are subject to turbary rights. There is a lack of proof of ownership on file. Permission for the development would set an adverse precedent in the absence of same.

Tourism, Landscape and Amenity Impacts:

- Potential adverse impacts on tourism in the area. The proposed quarry development is in conflict with the Tourism Strategy and Action Plan 2016-2022.
- The development will conflict with the Ring of Kerry cycle route on the L4021. The development does not adequately address this matter.
- The site is close to Caragh Lake which is designated as a Rural Prime Special Amenity Area.
- Refers to development plan sections 11-69, 11-70 and 11-71 in relation to landscape impacts. The development would have adverse visual impacts in

contravention of these policies. The design of the quarry takes no account of the topography, vegetation, existing boundaries or features of the area.

- The development would have adverse impacts on the Coillte viewpoint at the top of Caragh Lake Forest Recreation Area, a popular local amenity.
- Potential visual impacts are intensified by a lack of adequate details and timeframe of the progressive restoration of the quarry.
- The development will result in the loss of a local amenity area, in contravention of development plan tourism and recreation objectives, ref. development plan 10-1 and 10-2.
- The natural and cultural heritage of areas is likely to become more important as development in rural areas is more balanced and increasingly driven by factors other than agriculture as per the Rural Development Programme (RDP) 2014-2022. The proposed development does not fit in with the integrated development of the area. Refers to the Rural Development Policy Our Rural Future 2021-2025, which promotes a place based approach to rural development, including sustainable tourism and development of the Green Economy by rural communities. Also related development plan objectives 6-1, 6-10.

General Environmental Impacts:

- It is submitted that KCC has failed to consider the international, European, national, regional and local dimensions to the Biodiveristy emergency and climate crisis in permitting the proposed development and that the development does not support integrated rural development in accordance with regional and national planning policy as per the RSES and the NPF, including objectives relating to strengthened rural economies and communities and to sustainable management of water and other resources. Also refers to the Blue Green Infrastructure and Nature-based Solutions Framework created as part of the Interreg Europe Blue Green Cities Project and the UN 2030 Agenda for Sustainable Development.
- The quarry is potentially damaging to the environment and to biodiversity in the area as it fails to meet the objectives of the European Green Deal and the EU Biodiversity Strategy to 2030.

- Notes the RSES for the Southern Region, which includes objectives to protect and enhance the environment, also related development plan objectives 2-1, 2-2, 2-4, 2-5, 2-7, 2-8 and 2-10, also development plan environmental objectives 11-1, 11-2, 11-3, 11-4, 11-5, 11-8, 11-12 in relation to wetlands and 11-18 to 11-21 in relation to biodiversity.
- Knocknaboola Bog is hydrologically and ecologically connected to or adjacent to several Special Areas of Conservation. It is connected to the Reeks SAC via the Glashacoomnafanida Stream and is therefore hydrologically and ecologically connected to the Kerry UNESCO Biosphere Reserve.
- It is submitted that the EIAR is based on limited biodiversity surveys and that it is not objective.
- The submitted EIAR does not consider the new Climate Action Plan 2021 and should therefore be invalidated.
- The EIAR does not consider impacts on pollinators as required under development plan sections 11-17, including 76 no. moth species recorded locally and in particular the rare White Prominent Moth previously thought to be extinct for over 80 years. The EIAR is inconsistent with the current biodiversity requirements of the Kerry County Development Plan, the National Biodiveristy Plan or the All-Ireland Pollinator Plan 2021-2025.
- There is no calculation of the carbon budget of the proposed development. Peatlands are important carbon stores. KCC is now required to carbon proof all decisions as per the Climate Action Plan 2021.
- It is submitted that KCC has not registered the subject quarry with the EPA.

Air Quality and Dust Impacts:

- Refers to the new national Clean Air Strategy, also EU aim for zero pollution by 2050 and Ambient Air Quality Directives.
- The existing operation has exceeded dust limits on local roads the L4021 (particulates PM10 and PM 2.5). This has occurred during dry periods, particularly the summer months.
- Dust from the quarry is also washed into the Glashacoomnafanida Stream in wet periods and eventually into the Castlemaine Harbour SAC at Tullig Pier.

- Refers to several exceedances of a 350 mg/sq.m/ day limit in June/ August 2021, with regard to the German government TA Luft guidance, 2002.
- Concerns about health impacts, in particular in relation to PM2.5, which is associated with various adverse health issues, noting that the TA Luft limit relates to non-hazardous dust and referring to Ireland's obligations under the Aarhus Convention to protect the right of every person of present and future generations to live in an environment adequate to his or her health and wellbeing.
- Refers to the Ambient Air Quality and Cleaner Air for Europe (CAFÉ) Directive (2008/50/EC), as transposed into Irish legislation by the Air Quality Standards Regulations 2011. The transposed CAFÉ Directive supersedes the TA Luft standard. Particulate matter measurements are above the national and EU emission limits for this quarry.
- The subject permission granted by KCC does not state that the fugitive particular emissions will reduce in line with reducing the maximum limits of revised EU Ambient Air Quality Directives
- Also refers to WHO recommended maximum levels of air pollutants (2021), which have been tightened, submits that there is no safe level of air pollution.

Water Impacts:

- It is submitted that the Karstic hydrology of the land at the development site makes it unsuitable for quarrying.
- The pollution of the aquifer under the quarry at Rangue prevents its use by Irish Water to serve the local population. The existing pit has been dewatered for years. Concerns about impacts on the WFD status of the groundwater and potential pollution of the groundwater by the carcinogenic Tetrahydrofuran, as identified in the EPA Laune-Maine-Dingle Bay Catchment Assessment 2010-2015.
- The proposed berm along the southern and western sides of the excavation would probably destabilise the peat underneath and result in material washing into the Glashacoomnafanida Stream.

- The proposed septic tank will be 1m above the Laune Muckross groundwater body winter water level and could therefore have adverse groundwater impacts. The development would breach the WFD in this regard.
- The EIAR does not demonstrate consistency with the next national River Basin Management Plan 2022-2027 with regard to the Glashacoomnafanida Stream.

Traffic Impacts:

- HGV movements associated with the development will result in traffic hazard on local roads, particularly in association with vulnerable road users including local children.
- There have been many traffic incidents associated with same in the area.

The grounds of appeal are accompanied by the following particulars:

- Copy of the decision of KCC issued on 2nd December 2022 and RFI issued by KCC on 14th March 2022
- Copy of KEEP submission to KCC in response to the further information submitted by the applicant.
- Copy of decision issued by KCC on extension of time of reg. ref. 09/93744, issued on 11th April 2017, also copy of Bond submitted to KCC in relation to same, submitted to KCC on 13th October 2022.
- Photographs of recent traffic incidents in the area dated November 2021and September 2022.
- Copy of an article about the applicant from Kerry's Eye newspaper dated September 2022.
- Information about the White Prominent Moth and recent surveys of same in the area.
- Photographs of spoil heaps at the quarry site, in relation to Enforcement Notice 8217
- Copy of objection to the application submitted to KCC by local stakeholders.

6.1.3. Appeals of Michael Ryan, Ger Mangan and Patrick McGillycuddy

The above named appellants have submitted very similarly worded appeals. Michael Ryan and Patrick McGillycuddy both own dwellings fronting onto the L4021 at Rangue, to the south of the existing quarry and north of the proposed quarry extension. Ger Mangan owns a dwelling also on the L4021, nearby to the southwest. The main points made in the grounds of the appeals may be summarised as follows:

- The development will have a serious impact on the appellants' enjoyment of their properties due to noise, dust and vibration impacts.
- The development will contravene development plan policies on quarry development. It is less than 600m from a Visually Sensitive Area and will have adverse impacts on the environment, landscape, biodiversity, air quality and residential amenity of the local area.
- The location of the proposed quarry extension is an area of wild bogland. The development will result in habitat loss as stated in the EIAR. The development will also result in the drainage of bogland outside the development site. There is a risk of peat slippage if peatland at the development site is excavated, which could also have impacts on the Glashacoomnafanida stream. This issue should be assessed by a geotechnical engineer. Areas of peatland at or adjoining the site should not be drained and developed or excavated.
- The appellants have checked peat depths at the development site and submit details of same, noting that their survey found varying depths of peat between 2-3m, sketch details of same are submitted.
- The EIAR notes the presence of bats at the site and that there is a colony of Lesser Horseshoe Bat c. 1.5 km from the site, within foraging distance. The development will result in the loss of foraging / commuting habitat for bats, as set out in the EIAR.
- The development will have adverse visual impacts in a tourist amenity area, in contravention of development plan policy. It will be visible from an elevated viewing point in the Caragh Lake area, within a designated "visually sensitive area", in addition to existing quarries at the development site and at

Glannagillagh. The proposed berm and planting will provide minimal screening from elevated locations.

- The proposed temporary access to the L4021 is unnecessary and unjustified and will result in the proposed extension area being effectively a standalone quarry, with the use of a local road by overloaded trucks and HGVs with resultant traffic hazards and noise impacts. Concerns that the temporary access would remain in place for much longer than envisaged, resulting in significant inconvenience to local residents.
- The submitted drawings do not indicate any suitable bunded area for refuelling of HGVs, as stated in the EIAR. Refuelling within the excavated area poses a significant risk to groundwater.
- The permission issued by KCC excludes screening of aggregate at the Knocknaboola extension. It is important that the Board does not permit this activity, noting that the proposed temporary access would allow the area to operate as a standalone quarry where material can be exported quickly off site. The screening and stockpiling would create additional noise and dust in the area.
- Adverse impacts on amenities associated with increased noise emissions, particularly at houses within 500m, in close proximity to the excavation works. Estimated noise impacts in the EIAR do not take account of the location of the works relative to the appellant's property, also the noise generated by reversing trucks.
- The existing quarry generates a significant amount of dust nuisance, particularly during dry weather, despite any current mitigation measures. Concerns about likely additional dust nuisance to the rear of the appellant's property, particularly associated with screening and stockpiling. No confidence in proposed mitigation measures as these have not been implemented in the past.
- Concerns about water impacts of the proposed septic tank close to the water table. Also impacts on the Glashacoomnafanida stream associated with runoff from existing stockpiling.

6.1.4. Appeal of Geraldine O'Shea & Others

The appeal submits that the location of the proposed quarry extension is not owned by the applicant and has been "in commonage" for generations. It also repeats points made in other appeals, as summarised above, in relation to peatland impacts, traffic impacts, adverse impacts on amenities relating to noise, dust and the applicant's lack of compliance with previous planning permissions.

6.2. Applicant Responses to Third Party Appeals

6.2.1. The applicant has submitted responses to each of the above third party appeals, as well as an overall submission addressing general issues. The main points made in all of the submissions may be summarised as follows.

6.2.2. General Issues

- The lands within the development site are owned by the applicant. A deed of conveyance was provided to the planning authority on 23rd August 2022 as part of the applicant's RFI response. Further correspondence from the applicant's solicitor is submitted with the response.
- The 2022 development plan recognises the importance of the extractive industry. The overall operation at Rangue has been a reliable source of aggregates for over 50 years and the site is a known reserve of high quality materials. Yearly geological inspections of the reserve have indicated that the material produced is of high quality complying with relevant standards. The applicant employs c. 40 people over several sites in the area, with the main headquarters at Rangue. The development will support local economic activity.
- The existing pit and extraction area at the development site are both zoned Rural General under the 2022 development plan, with a higher capacity to absorb development than previous rural designations. The site is not located within a Visually Sensitive Area or within any designated views or prospects.
- The subject application complies with development plan objectives relating to development management standards, flood risk, landscape protection, biodiversity, infrastructure, water and air quality and built and cultural heritage, ref. development plan objective 9-67. The submitted EIAR and other information

submitted by the applicant demonstrate that the predicted impacts on biodiversity, visual impact, infrastructure, water quality, air quality, noise and cultural heritage are not significant. The development includes mitigation measures including berms and screen planting to further reduce impacts on amenities.

- The proposed new extraction area will replace the defunct Riordan's Pit site, now being restored, and will not result in any intensification of activity at the overall lands. The proposed rate of extraction will match previous extraction levels at the site. The development will not result in any new discharge to the Glashacoomnafanaida stream. The development will not include screening or processing at the new extraction area as per condition no. 5 of the permission.
- The applicant supports numerous tourist festivals in Co. Kerry, details of same are provided. The supply of high quality aggregates, such as those at the proposed development site, is essential to the development of tourism infrastructure. The applicant has operated at Rangue for over 50 years and tourism has thrived in the area during this time. The submitted EIAR sets out mitigation measures that will ensure that impacts on local tourism are negligible.
- It is submitted that recent property transactions in the area indicate that properties near the development site have a high value.
- Refers to the Climate Action Plan updated to December 2022. Notes objectives in same for rehabilitation of peatlands with targets for Bord na Mona landholdings and measures to deliver sectoral emission reductions. Notes the limited amount of peatland to be removed a part of the proposed development, measures to prevent impacts on existing peatlands outside the extraction area and restoration measures at the site and the overall landholding.

6.2.3. Impacts on Residential Amenities

- The proposed new extraction area is within a land bank of 24.5 ha, with a total proposed extraction area of 16.75 ha. The remaining 7.82 ha will be used to provide a buffer to residential dwellings. No residential dwelling will be located within 100m of the extraction area.

- Several of the appellants live due south of the existing Riordan's quarry site. Extraction has now ceased at this location and restoration work has commenced. Views of the area are screened by extensive tree planting at site boundaries.
- The proposed new extraction area is 91m from the boundaries of appellants' properties at the L4021 and c. 10m further from individual dwelling houses, increasing to 166m at the floor of the extraction area. Excavation will not take place up to the perimeter of the site.
- The applicant has not received any complaints regarding dust or noise and has carried out extensive noise, dust and surface water monitoring over the years and submitted results to KCC. Predicted noise and dust impacts from the development are lower than the limits typically applied to the extractive industry. Processing at the existing factory site and not at the new extraction area will minimise dust and noise emissions.
- The EIAR noise analysis indicates that existing noise levels at the facility (including full processing and ancillary activities) are low in the vicinity of appellants' dwellings, also that the proposed development will result in lower noise levels as screening will not be carried out at the new extraction area. The working face of the extraction area will provide substantial acoustic screening to nearby dwellings. The main source of noise at the development outside periods of overburden removal will be truck movements. Extraction rates at the site are limited by condition no. 6 such that c. 4 no. truckloads of material per hour will be moved at the site, therefore noise emissions will not be continuous. Noise emissions from reversing alarms can be prevented by the installation of flat spectrum alarms. The overall increase in noise levels above existing noise levels will not exceed 3dB and noise at nearby dwellings considerably lower than the 55 dB limit. Additional noise modelling for appellants' dwellings is submitted with the response. It is submitted that the increased noise impacts will be imperceptible.
- The EIAR includes detailed air quality modelling with predicted dust fall rates. There are no European or national ambient standards for dust deposition associated with sand or gravel extraction activities. Dust monitoring has been carried out at the site during the period 2019-2021 and again in 2022, all recorded levels are well below 350 mg/sq.m./day. Dust modelling has been

carried out at the appellants' properties indicating predicted dust deposition of < 10 mg/sq.m./day, or below 5% the monthly limit value.

6.2.4. Environment and Biodiversity

- The EIAR outlines proposed mitigation measures, including a comprehensive Environmental Management System (EMS). It is submitted that ongoing monitoring of dust, noise and water quality is carried out at the site and that an environmental audit in 2021 found the quarry operating within all emission limit values.
- The degraded cutover bog within the proposed extraction area is not located within any designated site. Habitat mapping of the development site indicates that the proposed extraction area is covered by cutaway bog, which is substantially degraded due to past drainage and peat cutting activities. The applicant is committed to retaining an adjacent 10 ha area of lowland peat bog, within the overall landholding boundary.
- The applicant's total landholding at Rangue and Knocknaboola is 67.56 ha, of which 27.631 ha of lands will be available for local biodiversity as reinstated or maintained areas, including 10ha of lands in the site south of the existing extraction area, 4.68 ha of lowland peat west of the proposed new extraction area, 11 ha of lands reinstated at the Riordan's site and 1.951 ha of existing mature woodland planted within the existing factory site. It is submitted that habitats have already been created within the existing factory site. The applicant has also created plantations of forestry and woodland at other locations in Co. Kerry, details of same are provided.
- The applicant is currently restoring the Riordan's Pit site and is fully committed to restoring the proposed new extraction area, details of the proposed restoration of same are provided. The value of the relevant bond is set by KCC. Photographs of reinstatement works are submitted with the response.
- Soil stockpiles at the site will be removed by the applicant and regraded when permission for the proposed development is granted.
- The peat probe results submitted with the grounds of appeal are noted. It is submitted that the vast majority of the 36 probed with peat depths >1m are within

the area which will not be excavated. The proposed extraction of sand and gravel will not significantly drain bogland to the south of the site any more than it already is for peat harvesting. A mineral soil berm will be constructed along the southwestern boundary to retain the upgradient wetlands, with an interceptor drain to allow runoff from the upgradient peatlands to continue to discharge to the Glashacoomnafanaida stream. Details of the proposed structure are submitted. The berm will also prevent peat slippage. Details of site hydrology are also submitted.

- Extensive surface and groundwater testing have been carried out at the Glashacoomnafanaida stream and in situ site wells. All testing has concluded that no pollution of groundwater of surface water is occurring at the site. A biological assessment upstream and downstream has indicated unpolluted conditions wit Good ecological quality at all three sites. The development will provide a buffer to the Glashacoomnafanaida stream.
- Refuelling of vehicles will occur within a designated bunded area at the existing pit at Rangue with the exception of a single tracked elevator located in the new extraction area. This will be fuelled by a double skinned fuel track with a spill tray underneath and emergency spill kit. It is envisaged that machinery will become electrified during the lifetime of the extraction area.
- The proposed on-site wastewater treatment system is designed to cater for c. 16 no. employees at the site and site visitors. The site is suitable for wastewater treatment as per the site characterisation report on file.
- The EIAR addresses potential impacts on habitats and bats in detail and provides details of proposed mitigation measures. The development would not have any significant detrimental impact on local ecology overall.
- The EIAR concludes that there would be a net loss of bat foraging habitat due to loss of bog habitat, however residual impacts on bats are identified as negative, slight and long term. The only species of bat recorded at the site, Soprano Pipistrelle, is a common species. No bat roosts or potential impacts on Lesser Horseshoe Bat were identified.

6.2.5. Roads and Traffic Impacts

- The local road network has been assessed as part of the EIAR and found to have capacity for the development. All quarry production traffic will remain within the overall site via the underpass. There will be no intensification of traffic as a result of the development. The EIAR includes detailed analysis of traffic impacts.
- The proposed temporary entrance is necessary to construct the underpass with enabling works to minimise the length of closure of Caragh Lake Road. The temporary entrance will no longer be necessary once the underpass is constructed and will be closed in a timely manner as directed by KCC. The temporary access has good visibility and will not result in any traffic hazard.
- The applicant's consultants OES have never regarded Rangue as an unsuitable location for a quarry for traffic reasons, contrary to as stated by the appellants.

6.2.6. Visual and Landscape Impacts

- The existing pit and extraction area at the development site are both zoned Rural General under the 2022 development plan, with a higher capacity to absorb development than previous rural designations. The site is not located within a Visually Sensitive Area or within any designated views or prospects.
- The new extraction area will be screened from surrounding roads and residential properties by extensive woodland planting.
- The development would not be visible from the South Kerry Greenway or from the N70 tourist route. The main views from Caragh Lake Forest us towards Caragh Lake and not in the direction of the development. The view east from Caragh Lake forest is not a protected view or prospect under the development plan.
- The applicant submits additional photomontages to support assessment of visual impacts with the grounds of appeal, including elevated views from the Caragh Lake area, along with additional landscape and visual assessment.

6.3. **Planning Authority Response to Third Party Appeals**

None on file.

6.4. **Observation of Rolf Bacham**

6.4.1. There is one third party observation to the appeal on file, which may be summarised as follows:

- The observer is a member of KEEP and generally agrees with their appeal, as summarised above.
- The submission repeats points made in the appeal of Dan Aherne, representative of KEEP, as summarised above, particularly in relation to adverse impacts on tourism, visual amenity, the Glashacoomnafanida Stream and nearby designated sites, also adverse impacts on residential amenities and human health associated with dust, noise, water and traffic impacts.
- It is submitted that the applicant has not carried out development and reinstatement of other worked out areas in accordance with planning permissions, refers to enforcement action by KCC ref. 8219, that the existing excavated area at the subject quarry has not been reinstated, also that excavation has allegedly continued at another site owned by the applicant after the original planning permission has expired.

6.5. **Further Responses**

6.5.1. The appellant Dan Ahearne has made an additional submission to the Board dated 9th February 2023, subsequent to the above third party appeals, which makes further comments on the documentation on file. The following points made in same are noted, in addition to the grounds of appeal as summarised above:

- Significant issues raised by the local community are ignored in the KCC planning report on file, including in relation to the EIAR, which was found to be acceptable by the planning authority. It is submitted that KCC assessed the EIAR in relation to planning matters only, in breach of the EIA Directive, and did not adequately evaluate impacts in the Glashacoomnafanaida Stream.
- Notes repeated exceedances of the TA Luft dust deposition limit of 350 mg/m^2/day at the site in June / August 2021, submits that the planning authority has failed to act on this lack of compliance with conditions of permission.

- The submitted NIS has failed to adequately consider potentially significant impacts on Q.I.s of the Castlemaine Harbour SAC and SPA and should be read in conjunction with the KEEP submissions / appeals, noting also matters raised in relation to Sea Lamprey in the NIS for Laune Bridge remedial works at Killorglin.
- The development will have adverse effects on peatlands at the site, with consequent climate change impacts.
- Potential adverse groundwater impacts and consequent issues in relation to the Water Framework Directive.

7.0 **Planning Assessment**

7.1. This assessment is divided into a Planning Assessment, an Environmental Impact Assessment and an Appropriate Assessment. There is an inevitable overlap between the assessments, with matters raised sometimes falling within more than one of the assessments. In the interest of brevity, matters are not repeated where possible but such overlaps are indicated in subsequent sections of the report.

7.2. I have had regard to all the documentation before me, including, inter alia, the planning and other technical reports on file from Kerry County Council; the third party appeal submissions and further responses received; submissions of Prescribed Bodies; the provisions of the Kerry County Development Plan 2022-2028; relevant section 28 Ministerial guidelines and other national policy guidance; the National Planning Framework; provisions of the Planning Acts, as amended and associated Regulations and the relevant designated sites. I have visited the site and its environs.

7.3. I consider that the issues arising in the case can be assessed under the following headings:

- Scope of Appeal
- Principle of Development
- Noise Impacts
- Dust and Air Emissions Impacts
- Drainage and Water Impacts

- Peatland Issues
- Landscape, Visual and Amenity Impacts
- Roads and Traffic Issues
- Ecology
- Other Matters

These issues may be considered separately as follows.

7.4. **Scope of Appeal**

7.4.1. The planning history available on file and in public records of Kerry County Council (KCC) and An Bord Pleanála indicate that the quarry works north of the L4021 have been in operation since at least the mid 1970s, with permission originally granted for concrete production at the site in 1983 under reg. ref. 915/83. There were several subsequent permissions for excavation and associated quarry works granted under reg. ref. 98/89, 1512/94 and 3746/00. The most recent permissions ref. PL08.125728 (concrete processing north of the L4021) and PL08.125729 (Riordan's Pit) were granted by the Board on 18th June 2002 and expired in June 2022. Any activity carried out at the existing site north of the L4021 since then would therefore be outside the scope of those permissions, noting that the factory site was in operation site inspection. There was no requirement to register the quarry under Section 261 of the Planning and Development Act 2000 (as amended) as it had been granted permission less than four years before section 261 came into effect in 2004 and there is no record on file of any such registration, or to any substitute consent for unauthorised quarrying activity at the site.

7.4.2. The third party appeals refer to alleged non-compliance with several conditions of PL08.125728 and PL08.125729 including stockpiling of materials at the existing quarry; unauthorised diversion of the Glashacoomnafanaida Stream and lack of consistent monitoring of various parameters set out in conditions of the permissions, including noise and dust emissions. They also refer to enforcement action carried out by KCC in relation to the overall landholding, ref. Enforcement Notice 8217 relating to works at the Glashacoomnafanaida Stream, and lack of compliance with same. Third parties also allege that the applicant has failed to comply with other planning permissions in the area and has failed to carry out adequate restoration works at the

development site, as required by conditions of the previous permission. With respect to the alleged non-compliance with conditions imposed in respect of previous grants of planning permission, or to other potentially unauthorised activity at the development site or the overall landholding, I note that the Board has no function in respect of issues pertaining to enforcement and therefore such matters should be referred to the planning authority. Similarly, any potential future unauthorised activity at the overall site cannot be anticipated at this time and would be addressed by the planning authority if the matter arose. This current assessment therefore relates solely to the proposed continued use of the existing factory facility and the new extraction area, as defined in the documentation on file. I also note that the planning authority agreed to accept the current application to continue the factory operation and to create a new extraction area and that it has validated the planning application in accordance with the requirements of the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended).

7.5. **Principle of Development**

7.5.1. Third parties submit that the proposed continued concrete processing facility and new extraction area are not in keeping with the integrated development of this rural area and that the development would mitigate against the promotion of the natural and cultural heritage of the area in accordance with national policy on rural development, ref. Our Rural Future: Rural Development Policy 2021-2025, which provides a national framework for the development of rural Ireland.

7.5.2. Section 1.9.3.4 of the Kerry County Development Plan refers to Our Rural Future and states that key deliverables contained in that policy document have been integrated throughout the plan including within its Core Strategy and in its policies on economic development. The site is located in an unzoned rural area as per development plan map J and development plan policy on Rural General areas applies (see further consideration of same below with regard to visual impacts). There are several development plan policies which recognise the economic importance of natural resources. Objective KCDP 9-67 specifically deals with the extractives industry and seeks to facilitate same to ensure the ongoing availability of an adequate supply of aggregates for the construction industry and objective KCDP 9-68 is to facilitate the development of reprocessing aggregate facilities within existing quarries subject to environmental assessment. I note in addition that the

existing factory use and quarrying activity at the overall lands have both previously been accepted in principle by both the planning authority and An Bord Pleanála. The planning authority states that, having regard to the long-established nature of quarry activities on this site, it is considered that the development is consistent with relevant national and local policies and is acceptable in principle, subject to normal proper planning and sustainable development considerations. Having regard to all of these matters, and particularly to the nature, scale and established use of the development proposed, taken in conjunction with existing development within the wider area, I am of the opinion that the proposed continued factory operation and new extraction area are generally in compliance with development plan policies and objectives and are therefore acceptable in principle at this location, subject to further consideration of potential impacts on residential amenities, environmental impacts and other matters, which are assessed in detail in the remainder of this report.

7.6. **Noise Impacts**

7.6.1. Third parties submit that noise and vibration impacts from the development will have detrimental impacts on the amenities of nearby residential properties. I note the following points at the outset with regard to potential noise and vibration impacts, which form the basis for the following assessment:

- The development does not involve any intensification of use at the existing concrete processing facility as permitted under PL08.125728. The description of the development provided in the EIAR states that there is to be no change of production at the factory site and that the layout of all plant, aggregate processing and associated settling ponds are to remain as they have over the duration of the existing planning permission. The number of truck movements will remain as at present (see below consideration of traffic impacts for further details). The proposed new extraction area is to replace Riordan's Pit, which is now exhausted, and there will be no other concurrent extraction activity within the overall landholding.
- The further information and the revised EIAR submitted to KCC on 12th September 2022 state that the works carried out at the new extraction area do not include any processing of aggregates at the lands south of the L4021. The area is to be extracted in five stages 1-5 from northwest to southeast, with no

screening carried out during Stage 1 and screening using a mobile screening plant during stages 2-5. Condition no. 5 of permission amends this aspect of the development, stating that no screening or processing is to take place at the Knocknaboola site and the applicant's response to the grounds of appeal does not state any objection to same. However the following assessment of noise impacts is on the basis of screening being carried out as proposed.

- The removal of overburden at the proposed new extraction area includes the stockpiling of material in berms around the perimeter of the extraction area. These will gradually extend southwest in tandem with each phase. The presence of these berms is taken into account in the assessment of noise impacts of the development alone, prior to mitigation measures, on the basis that it is an integral part of the development.
- EIAR section 4.13 states that the traditional and permitted hours of business at the sand and gravel pit are 7.00 am to 7.00 pm Monday to Friday and 7.00 am to 16.00 pm on Saturdays, closed on Sundays and Bank Holidays. However, it is submitted that the usual working hours are now 8.00 am to 18.00 pm, also HGV movements for customer deliveries outside these hours. Noise impacts are therefore assessed for daytime only.
- The EIAR scopes out potential vibration impacts given that the proposed quarry operation will extract sand and gravel only and does not involve blasting and noting that vibration impacts are not typically associated with sand and gravel pits. This point is accepted and potential vibration impacts are therefore not considered further in this assessment.

In addition to the above points, this section of the planning assessment should be read in conjunction with the section on Noise in the EIA section below.

7.6.2. With regard to relevant noise parameters, section 4.7 of the Quarries and Ancillary Activities Guidelines recommends that if the total noise level from all sources is taken into account, the noise level at sensitive locations should not exceed a daytime level of $L_{Aeq\ 1\ hour}$ of 55 dB(A). Audible tonal or impulsive components in noise emissions (e.g. the reversing siren on a lorry, required for safety reasons) can be particularly intrusive, and such components should be minimised at any noise-sensitive location. Development plan objective KCDP 11-40 is to assess all planning

applications with respect to noise and their potential impact on noise sensitive receptors in accordance with the WHO and EPA Guidelines 'Environmental Noise Guidelines for the European Region' 2018, and the UK publication 'ProPG: Planning & Noise, Professional Practice Guidance on Planning & Noise New Residential Development, May 2017'. The WHO document provides recommendations for policy guidance for EU member states for protecting human health from exposure to environmental noise originating from the specific sources of transportation (road traffic, railway and aircraft) noise, wind turbine noise and leisure noise. The recommendations on traffic noise, for example, are to reduce noise levels produced by road traffic below 53 dB L_{den}, as road traffic noise above this level is associated with adverse health effects. The ProPG document, published by a working group comprising members of the Association of Noise Consultants (ANC), the Institute of Acoustics (IOA) and the Chartered Institute of Environmental Health (CIEH), is primarily to be used as guidance for new residential developments in noisy environments such as those affected by transportation sources, in order to design them to achieve satisfactory internal noise standards. It is generally considered as a best practice guidance and has been widely adopted in the absence of equivalent Irish guidance. ProPG refers to external noise standards as per British standard BS4142:2014 in relation to sites exposed to industrial or commercial noise, which states that if commercial/industrial noise is 10 dB or more higher than the background noise level then this is an indication of a significant adverse impact and if the commercial/industrial noise is c. 5 dB higher than the background noise level then this is an indication of an adverse impact. It refers to external amenity areas in the context of BS8233:2014, which provides guidance on sound insulation and noise reduction for buildings and recommends noise levels below 50 – 55 dB $L_{Aeq\ 16hr}$ for such locations. Finally, the EIAR also refers to the BS 5228-1:2009 Code of Practice for noise and vibration control on construction and open sites, as updated in 2014, which sets threshold values based on ambient $L_{Aeq\ T}$ levels, and applies a 65 dB limit on this basis for the construction stage of the development.

7.6.3. The permissions granted under PL08.125728 and PL08.125731 imposed conditions limiting noise emissions to 55 dB(A) $L_{Aeq\ 1hr}$,when measured outside any dwelling in the vicinity of the site. There are 24 no. dwellings within 500m of the proposed extraction area. These are identified as the relevant Noise Sensitive Receptors

(NSRs) for the purposes of noise monitoring and consideration of potential noise impacts. EIAR Chapter 8 also generally applies a 55 dB $L_{Aeq\ 1hr}$ noise limit at NSLs for audible tonal and impulsive components, as set out in the Quarries and Ancillary Activities Guidelines. It presents the results of historic noise monitoring carried out at nearby houses during working hours since 2003, also additional noise monitoring carried out in 2019 and 2021 such that levels are below the 55 dB limit. The detailed results indicate that the existing local noise environment is dominated by road traffic, however noise emissions from the existing processing operation were audible at the nearest dwellings. The estimated residual noise levels (excluding the factory and extraction operations are presented in Table 8.10 and are in the order of 29-32 dB.

7.6.4. The EIAR noise modelling for construction works is considered in the context of the 65 dB limit specified in BS 5228, with regard to the removal of overburden at Stage 1 of the new extraction area, also the construction of the underpass, temporary access and new haul road. EIAR section 8.5.1 presents the results of 'worst case scenario' construction noise modelling, based on detailed construction noise sources including vehicular movements. Predicted construction noise levels are 60-64 dB at the nearest dwelling during construction, prior to the creation of any berms at the new extraction area. Cumulative noise modelling for levels at the nearest dwelling, when construction noise is combined with historic noise levels associated with the existing operation at this location result in a predicted noise levels of 61-64 dB $L_{Aeq\ 1hr}$ at this location and also will not exceed the 65 dB limit.

7.6.5. The EIAR assessment of noise impacts associated with the ongoing factory operation and new extraction area includes notes that predicted operational noise levels will lessen as berms are constructed during stages 2-5 of the operation of the new extraction area. There is an 80m buffer with perimeter berms between the west and southwest sides of the extraction area and nearby residential properties. Predicted EIAR Section 8.5.2 models predicted cumulative operational noise levels based on detailed noise sources (combined noise levels from the existing processing operation and the proposed new extraction area, including screening and vehicular movements). The highest levels will arise at the closest dwelling to the northeast of the extraction area, adjacent to the main site access roadway, with predilected $L_{Aeq\ 1h}$ levels of 47-49 dB. The EIAR notes that these levels will be lower than previous noise levels at this location associated with the permitted extraction and processing

operation and vehicular traffic. Predicted noise levels at the other nearby NSRs are generally between 30 and 43 dB. All are less than the 55 dB $L_{Aeq\ 1h}$ limit at noise sensitive locations for audible tonal and impulsive components.

7.6.6. The EIAR also considers predicted noise levels in relation to background noise levels. As presented in EIAR Tables 8.15 – 8.20. Increases > 5dB occur in the following instances:

- Increase in noise levels of up to 7 dB at the cluster of dwellings to the northwest of the extraction area, towards the end of stages 4 and 5.
- The increase will reach 7 dB during stage 2 and 6 dB during stages 3, 4 and 5 at an isolated dwelling on a minor road to the east of the site.
- The increase will reach 6dB during stage 5 at several dwellings to the south.

I note with regard to these figures the guidance provided in ProPG and BS4142:2014, which states that commercial noise > c. 5 dB higher than the background noise level is an indication of an adverse impact. The EIAR notes that the identified increases arise due to the relatively low background $L_{AF90\ T}$ levels used. However, these background noise levels used also do not include noise from passing road traffic. A second assessment, which takes traffic noise into account and compares predicted cumulative $L_{Aeq\ 1h}$ levels (from the existing and proposed operations) with residual $L_{Aeq\ 1h}$ levels. This analysis finds that some predicted increased are 0 dB at some locations and do not exceed 4 dB in most instances. However, increases at the isolated dwelling to the east will reach 7 dB during stage 2 and 6 dB during stages 3-5. Predicted $L_{Aeq\ 1h}$ levels at this dwelling are 39-40 dB at their highest, therefore predicted cumulative noise levels are less than the 55 dB $L_{Aeq\ 1h}$ limit.

7.6.7. The above modelling of predicted operational noise impacts includes mobile screening at the new extraction area, which was excluded under condition no. 5 of the permission issued by KCC, on the basis of a report by KCC Environment, dated 29th November 2022, which recommends this measure to reduce noise impacts. The applicant's submission in response to the grounds of appeal states that the development will not include screening at the excavated area and includes updated noise modelling omitting this aspect of the development. The revised modelling finds that the overall development including the new extraction area will result in

cumulative $L_{Aeq\ 1hr}$ levels in the order of 29-43 dB. Predicted noise levels are also similar to existing baseline noise levels with increases between 0-3 dB. A similar condition to omit screening could be imposed if the Board is minded to grant permission. I note that the submitted EIAR and Environmental Management System (EMS) set out proposed noise mitigation measures, which are to be implemented as part of ongoing environmental management. I am satisfied overall, with regard to the information presented in the EIAR, that the development will not result in significantly greater noise levels than those associated with the historic permitted operation at this location, including the factory, processing area and previous extraction area at Riordan's Pit. The development will not involve an intensification in use at the overall landholding since the proposed extraction rate is not greater than that previously permitted. In addition, the proposed new extraction area will be further from nearby dwellings than Riordan's Pit and there will be a berm between the dwellings and the extraction area. Noise monitoring will continue to be carried out at the site and any deviation from conditioned noise levels may be subject to enforcement action by the planning authority if necessary, however same cannot be anticipated at this stage. To conclude, I have considered all of the written submissions made in relation to noise impacts and I am satisfied that the identified impacts would be avoided, managed and mitigated by the measures which form part of proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of noise or vibration.

7.7. Dust and Air Emissions Impacts

7.7.1. Third parties submit that dust and air emissions from the development will have adverse impacts on residential amenities and potentially adverse health impacts on local residents. EIAR Chapter 9 addresses Air Quality and Odour and is summarised below, this section should be read in conjunction with that part of this report.

7.7.2. There are no European or national ambient standards for dust deposition associated with sand and gravel pit activities. The EIAR considers potential air quality impacts in the vicinity with regard to the German TA Luft legislation monthly average dust deposition limit value of 350 mg/m^2/day, which is recommended in the Quarries and Ancillary Activities Guidelines. Third party submissions and the EIAR also refer to the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC),

which was transposed into Irish legislation by the Air Quality Standards Regulations 2011, including specific National Air Quality Standards (NAQS) relating to PM_{10} particulates and other pollutants. In addition to these standards, the conditions of permission of PL08.125728 and PL08.125729 limited total dust emissions arising from the on-site operations to 130 mg/m^2/day, averaged over a continuous period of thirty days when measured as deposition of insoluble particulate matter at any position along the boundary of the development.

7.7.3. EIAR section 9.5 presents the results of dust monitoring carried out at three locations along the L4021 in the period 2019-2021. The results indicate monthly dustfall rates of 83-317 mg/m^2/day with highest levels reported close to the boundary of Riordan's Pit (no longer in use). The deposition rate recorded at the L4021/ L7504 junction, closest to the nearest dwelling, is 83-281 mg/m^2/day. These figures are less than the monthly average 350 mg/m^2/day limit value but do exceed the 130 mg/m^2/day limit specified in the conditions of permission. The monitoring recorded lower dust deposition rates at other locations, ref. EIAR Table 9.3. Additional dust deposition monitoring was carried out at the same locations in the periods March to August 2021 and April to June 2022, ref. EIAR Table 9.4, which recorded monthly average dust deposition rates of up to 431 mg/m^2/day at the factory site entrance from the L4021 and up to 467 mg/m^2/day at the northwest boundary of the Riordan's Pit site, indicating that the 350 mg/m^2/day limit has been exceeded at these locations. Lower rates were recorded at the Knocknaboola lands, consistent with the current land use at that location. It is evident therefore that, as stated by third parties, there has been significant dust deposition associated with the existing factory and the Riordan's Pit extraction area, in excess of both the limit specified in the conditions of permission and in excess of the TA Luft limit.

7.7.4. The EIAR models potential air quality impacts associated with the proposed development using an Atmospheric Dispersion Modelling System – Roads, with the results of same detailed in EIAR Appendix 4 and EIAR section 9.8. Potential air quality impacts are considered at houses within 500m of the Rangue factory site, with particular attention to the cluster of houses along the L4021, c. 100-200m from the new extraction area. The predicted maximum monthly dust deposition rates at the Rangue factory site 'future emissions scenario' are 500-750 mg/m^2/day at 25m from the haul route edge, decreasing to <100 mg/m^2/day beyond 100m from the

road. The predicted rate at the nearest house on the L4021 is <10 mg/m^2/day. Predicted cumulative dust deposition levels including the factory operation and extraction close to the northwestern site boundary indicate maximum dust deposition levels of 25-30 mg/m^2/day at the houses nearest to the site boundary. The predicted cumulative daily and annual average particulate matter PM_{10} concentrations are well below the daily NAQS for particulates at the western site boundary and at the nearest residential property, with lower figures at other houses close to the site boundary.

7.7.5. I note and accept third party concerns about historic high levels of dust deposition associated with the existing factory operation, the Riordan's Pit site and the associated haul routes, given that the EIAR surveys recorded continuing high rates of dust deposition. However, I also accept that the modelling, which does not include any reduction in fugitive emissions as a result of rainfall or spraying of surfaces, indicates that the development will result in acceptable levels of dust deposition. I consider that the nature of the existing and proposed uses are such that a certain level of dust is to be anticipated, however the proposed new extraction area will be further from adjacent dwellings than the previous extraction operation at Riordan's Pit and there will be intervening berms which can provide some mitigation against dust deposits. I also note the submission on file by the HSE Environmental Health Officer, dated 18th February 2022, which does not state concerns regarding the predicted dust deposition measures. I consider that, on balance, the development will not result in significant adverse impacts on air quality, in particular if satisfactory environmental management measures are implemented at the site, and I do not consider the matter of previous dust deposition levels would warrant a refusal of permission. Any previous non-compliance with conditions is a matter for enforcement for the planning authority. The applicant has detailed proposed dust management measures in the submissions on file and deposition limits may be required by condition, with ongoing dust monitoring to be carried out. I recommend that if the Board is disposed towards a grant of permission, that conditions in this regard be attached to any such grant.

7.8. Drainage and Water Impacts

7.8.1. Third parties state concerns that the development would have adverse impacts on water quality in the Glashacoomnafanaida Stream along the eastern site boundary,

which consequent downstream impacts at Castlemaine Harbour and on designated sites at that location. There are also concerns about potential adverse impacts on groundwater quality and associated impacts on drinking water in the area, including in relation to the proposed replacement wastewater treatment system (WWTP) at the concrete processing facility. This section of the planning assessment considers potential water quality impacts in isolation, with related environmental impacts considered separately below in the context of peatland impacts, ecology, EIA and AA, and should be read in conjunction with same. Potential water impacts may be considered with regard to the following interrelated topics:

- Surface Water Impacts
- Groundwater Impacts
- Proposed Wastewater Treatment System

7.8.2. Surface Water Impacts

There are existing water management measures in place at the Rangue excavated area including drainage ditches and settlement lagoons with a pumped discharge to the Glashacoomnafanaida Stream subject to Discharge Licence W61. The licenced discharge is monitored for various parameters, including suspended solids. As described in the EIAR, the water management system at Rangue includes management of groundwater abstraction at the excavated area. There is no abstraction from the Glashacoomnafanaida Stream. The concrete processing facility is connected to the mains system and water used to wash aggregates and produce concrete is recycled via a series of ponds / settlement lagoons. The EIAR details that c. 90 m^3 / hour is used to wash the aggregate over an eight-hour period. Surface water quality monitoring carried out at the stream in April and May 2022, as detailed in the EIAR, indicates that it was at "Good" status under the WFD with one exception of slightly elevated BOD in one downstream sample in May 2022. All parameters monitored were within the EPA Emission Limit Values for the extraction industry and the Quality of Surface Water Intended for the Abstraction of Drinking Water Regulations and the Salmonid Regulations. It is submitted that these results compare favourably with those of previous analysis and indicate no deterioration in surface water quality as a result of historic activities at the Rangue lands. Water used at the continued operation of the concrete processing facility will be recycled

within one of the existing ponds at Rangue at the northwestern side of those lands. The existing water recycling system of ponds on the eastern side of the quarry, adjacent to the stream, is to be decommissioned and the area regraded to slope away from the stream. There are also other surface water drainage ditches at the Rangue lands, which prevent runoff from surrounding lands from entering the pit, these also discharge to the Glashacoomnafanaida Stream.

There are existing drainage ditches at the Knocknaboola lands which also discharge to the Glashacoomnafanaida Stream. These will continue to drain surrounding lands and will be installed with silt traps to prevent silt from discharging to the stream. The applicant submitted a detailed Surface Water Management Plan for the development, dated September 2022, with the RFI response. Surface water is to be directed into the pit void to avoid risk of sediment laden discharge to the stream, with runoff from access roads to be controlled with silt traps prior to discharge to the pit floor. The existing licenced discharge from the Rangue lands to the stream is to continue under the same licence. The EIAR states that all extraction at Knocknaboola will be at least 1m above the water table and therefore there will be no dewatering / abstraction or increase in the water discharge rate off the site.

There are risks of adverse impacts on surface water quality associated with the removal of overburden and excavation at the new extraction area, including suspended peat content or other contaminants entering the surface water network. However, I note the existing satisfactory water quality at the Glashacoomnafanaida Stream and that the development involves continued surface water management measures at the Rangue lands including the recycling of water from concrete processing, further away from the stream than the existing settlement ponds. I also note the proposed detailed surface water management measures for the new extraction area, as set out in the submitted Surface Water Management Plan, EIAR, EMS and other documentation on file. These include the ongoing management and storage of peat and overburden as they are removed from the excavated area in phased stages, for future reuse in site restoration works. Soil will be stored in screening berms, located at the eastern side of the site between the excavated area and the stream, which will be planted with native species. Other measures to reduce sediment generation during soil storage include the location of stockpiles within the excavated area rather than at elevated locations, for use in restoration of excavated

areas as they are worked out. It is also proposed to install sediment traps in existing drains at the site, to slow surface water flow and to allow for settlement of any suspended load prior to discharge off the site.

While I note in particular third party concerns about potential silt laden runoff from overburden removal and the introduction of soil berms at the Knocknaboola lands, the development includes a 17 m buffer to the stream with a silt fence between the berms and the stream. I note the report of KCC Ecologist on file dated 16th November 2022, which considers that the proposed buffer zone and silt fencing are adequate to protect water quality at the stream. I am therefore satisfied that these measures will prevent adverse impacts on surface water quality. In addition, the overall development will not result in any additional volume of surface discharge to the stream beyond that already in place under the current discharge licence, noting that it does not involve any intensification of the factory use or increase in the rate of extraction from that previously permitted at the site. The proposed mitigation measures set out the EIAR and the EMS also detail measures to reduce the risk of surface water contamination by hydrocarbons including hydrocarbon interceptors and management of emergency spillages. It is also proposed to continue ongoing monitoring of water quality at the stream. I note that the site is not within any flood zone as per CFRAM flood maps and that the EIAR indicates no significant flood risk at the site, also no increase to flood risk since the surface water discharge rate will not increase. I am satisfied on this basis that the development will not result in any significant adverse impacts on surface water, subject to the implementation of the proposed surface water management measures, which may be required as a condition of permission.

7.8.3. Groundwater Impacts

The overall lands are not located in any Source Protection Zone. The existing concrete factory and the area around the site are served by mains water and there are no known groundwater abstraction wells in the vicinity or within 3km of the site. The site investigations carried out in support of the EIAR indicate that the surface water features at the site are ‘perched’ at least 9m above the groundwater table due to the presence of an iron pan below permeable overburden. As detailed in the EIAR, the existing pit at Rangue has been excavated to a levels of c. 17 m above Ordinance Datum (AOD) with extraction below the water table. The abstracted

groundwater is managed via a pumped licenced discharge to the Glashacoomnafanaida Stream, as detailed elsewhere in this report, and this aspect of the overall lands is to remain unchanged in the proposed development. EIAR section 6.4.19 states that there is limited and localised interference with groundwater at the Rangue lands. This will not result in drawdown of the perched surface water network as there is no hydraulic connection between the surface water network and the underlying groundwater table at the site due to the presence of the iron pan and compacted sand and gravel layers between the surface water features and the groundwater table.

The site investigations carried out at the Knocknaboola lands, as detailed in EIAR section 6.4, encountered groundwater from depths of 9.05 m below ground level (BGL), with depths of c. 12-13m BGL recorded in various parts of the site. The downward movement of streams and other surface water to the local aquifer and consequent risks of impacts on groundwater quality are limited due to the presence of an iron pan below permeable overburden, notwithstanding the increased groundwater vulnerability as a result of removal of overburden and sand/gravel deposits. As detailed in the EIAR, extensive borehole drilling at the site has established that the maximum depth of the proposed new extraction area is 22.4m AOD, which is >1m above the maximum monitored winter groundwater level at the site. and therefore will not result in any abstraction or consequent groundwater impacts The EIAR and EMS detail proposed mitigation measures including management of hydrocarbons and measures to deal with emergency spillages.

The extraction of sand and gravel from the deeper unsaturated zone above the water table may result in some reduction in groundwater storage. However, the impact of increased recharge will be minimal as adequate storage will remain in the underlying sand and gravel aquifer with a minimum of 1m unsaturated overburden between the base of the excavated area and the underlying water table. There may be a small reduction in baseflow to the Glashacoomnafanaida Stream, however, this will be offset by a similar scale increase in base flow to surface water downgradient of the site. Implementation of the proposed quarry restoration measures will ultimately allow the site to return to a condition whereby there will be a negligible impact residual on the underlying aquifer and downstream surface water impacts. The alteration to the hydraulic regime is therefore deemed not significant.

I am satisfied overall that, subject to implementation of the proposed mitigation measures, the proposed new excavated area at Knocknaboola will not result in any significant adverse impacts on groundwater. I also note that the existing comprehensive measures for abstraction and management of groundwater at Rangue will continue (see EIAR section below for details of same). I therefore consider that the development does not present any significant risk to groundwater quality at this location.

7.8.4. Proposed WWTS

The existing factory, office and staff facilities at Rangue are connected to mains water and are served by a septic tank. This drains to a soakaway located under the concrete block yard associated with the processing area. The application proposes a new WWTS for the factory facility, to facilitate its continued use, with a tertiary treatment system. The existing septic tank is then to be decommissioned.

EIAR Appendix 7.5 provides a Site Characterisation Report in support of the proposed WWTS. This details that the proposed WWTS is to cater for 16 full time staff at the quarry plus four visitors per day. The site has a groundwater response of R2, i.e. suitable for wastewater treatment subject to normal good practice. Site testing found gravel to a depth of 2.1m BGL at the trial hole. The Site Characterisation Form details test results such that subsoil conditions have good percolation characteristics and the proposed WWTS provides tertiary treatment with a sand polishing filter with discharge of treated effluent to the ground. These proposals are generally acceptable and I note that the technical reports on file of the KCC Ecologist state no objection. I also note the comment on file by KCC Environment, dated 14th March 2022, with states that the information submitted on the proposed WWTS is satisfactory.

Given the limited scale of the discharge from the new WWTS and the proposed tertiary treatment of wastewater, no significant impact on groundwater or surface water is predicted. While I note third party concerns that the WWTS could have adverse impacts on groundwater quality, I am satisfied that on this basis that it is generally acceptable, noting also that it would replace an existing outdated system and would therefore result in an improvement on the current situation with an improved quality of wastewater effluent discharging to the ground. I do, however,

note that the proposed system is to cater for c. 20 no. users of the premises daily. The documentation provided by the applicant states elsewhere that there is a higher number of employees at the premises. I therefore recommend a condition that the upgraded WWTS be provided to the satisfaction of the planning authority, to cater for an adequate number of staff and visitors per day.

7.8.5. Water Impacts Conclusion

I note the submission on file of the HSE Environmental Health Officer, dated 18th February 2022, which states that the proposed mitigation measures provide adequate protection of surface and groundwater. I am satisfied overall, having regard to the above assessment, that the development will not result in any significant adverse impacts on surface water, or on water quality at the Glashacoomnafanaida Stream, or on groundwater in the vicinity, subject to the implementation of the proposed mitigation measures.

7.9. **Peatland Issues**

7.9.1. There is peatland present at the Knocknaboola lands south of the L4021. Third parties submit that the proposed berm at the eastern side of the new excavated area at this location could have adverse impacts on the underlying peatland. There are also concerns about potential peat slippage as overburden is removed from the excavated area and potential peatland impacts associated with the berm at the eastern site boundary.

7.9.2. EIAR Chapter 6 addresses Land, Soil, Geology and Hydrogeology and this assessment should be read in conjunction with my summary of same as set out below. The Knocknaboola lands are characterised by peat of varying depths, which has accumulated above permeable soils due to the presence of an iron pan that inhibits drainage to groundwater. The site investigations carried out in the course of the preparation of the EIAR, including a peat depth survey carried out on 16th April 2021, found that most of the site is underlain by peat depths of <0.3m. This finding is contested by third party appellants, which submit results of their own peat survey at the site, stating that peat depths of 2-3 m were recorded. However, the applicant's site surveys also found deeper peat at some locations, particularly at the southern end of the site where up to 6.1m peat depth was recorded. This area is outside the proposed extraction area and is to be retained, therefore will not be affected by the

development. In addition, the archaeological testing at the site, which excavated 50 no. test trenches, also found details relatively shallow peat depths < 1m at most locations tested, as detailed in EIAR Attachment 7. I am therefore satisfied that peat depths at the proposed excavation area are relatively shallow.

7.9.3. There are drainage ditches at the Knocknaboola lands and they have been subject to active peat harvesting for many years. The EIAR states that the peat in this part of the site is highly drained and poorly degraded due to same. EIAR section 6.5.1 concludes that the effect of removal of 16.75 ha of highly degraded shallow peat / cut away bog from this part of the site is not considered significant in the wider blanket peat landscape. I concur with this point given that the area has evidently been subject to agricultural drainage and ongoing turf cutting for many years and noting the third party comments on turbary rights in this regard. The proposed site restoration works include the revegetation of excavated areas and the overall site layout of the site restoration works retains c. 10.7 ha total area of lowland bog within the site, including c. 3 ha of lowland blanket bog habitat that will remain undisturbed, as detailed in drawing no. 21555-2-101. These proposals are considered further in the context of potential ecological impacts elsewhere in this report, however I am satisfied that they will generally result in positive residual impacts.

7.9.4. While there is a slight possibility of a peat slide as a result of site clearance works, this is assessed in the EIAR as an unlikely, very significant and permanent effect, due to the gently undulating low topographic gradient, which significantly reduces the likelihood of peat slippage. I also accept this conclusion, given the lack of any steep slope at Knocknaboola. I note in addition that it is proposed to plant the peat berms with native vegetation, which will also help stabilise them. While I note concerns stated in third party submissions that the proposed berm could, or itself, result in adverse peatland impacts, no scientific basis bas been submitted for this potential impact and I consider it unlikely in the context of other proposed surface water management measures as outlined above.

7.9.5. I am satisfied on this basis that the development does not present any significant risk of adverse peatland impacts or peat slippage with consequent adverse impacts on water quality at the Glashacoomnafanaida Stream.

7.10. **Landscape, Visual and Amenity Impacts**

7.10.1. Third parties submit that the development will result in adverse landscape and visual impacts, including at local roads and in the wider area, and state related concerns about impacts on tourism in the region including at the nearby N70 Ring of Kerry route and at Caragh Lake and in particular at a viewpoint at Caragh Lake Forest Recreation Area. This section should be read in conjunction with the EIAR section below, which summarises the EIAR Landscape Assessment.

7.10.2. Appendix 7 of the current development plan comprises a landscape review of Co. Kerry. The development site and surrounding area are located in Landscape Character Area no. 25 Killorglin and Beaufort. The review notes that the landcover in the area around the development site is generally pasture with some peat bog, moors and heathland towards the MacGillycuddy's Reeks mountains to the south, noting also the presence of the existing quarry at the Rangue site. The area is assessed as Medium sensitivity and development plan Map J indicates that the site is not located in a Visually Sensitive Area and is located in a Rural General area as per the landscape assessment. Development plan section 11.6.3.2 states that landscapes within the Rural General designation generally have a higher capacity to absorb development than visually sensitive landscapes, however proposals in these landscapes should be designed to integrate into their surroundings in order to minimise the effect on the landscape and to maximise the potential for development. Permission will not be granted for development which cannot be integrated into its surroundings. There are Visually Sensitive Areas located to the north of the site along the coastline of Castlemaine Harbor and at the mountainous area to the south. There are also designated views and prospects at the N70 Ring of Kerry / Wild Atlantic way to the north of the site (views in both directions), and views over the lake from both sides of Caragh Lake to the west of the site. Development plan policy KCDP 11-79 is to preserve views and prospects and policy KCDP 11-81 is to prohibit developments that have a material effect on views designated in the plan from the public road or greenways towards scenic features and/or public areas.

7.10.3. EIAR Chapter 14 addresses landscape and visual impacts. It considers views from the N70/ Ring of Kerry, from Caragh Lake Viewing Point, from the L4021 Killorglin/ Caragh road and from the L4021 and local roads at Knocknaboola to the east and south of the development. I am satisfied that these selected views are representative

of potential visual impacts from the development, having inspected the site and viewed if from a wide variety of vantage points both in the immediate vicinity and in the wider area and noting third party comments on this issue. Potential visual impacts at each of these locations may be considered as follows, with regard to the EIAR Landscape Assessment including submitted photomontages, the site inspection, technical reports on file and third party comments.

N70/ Ring of Kerry

Development plan Map J indicates designated views south from the N70 to the north west of the development site. Having driven this stretch of the N70, I note that views towards the site are intermittent as the southern roadside has hedgerows interspersed with houses and other structures, as indicated in EIAR Plates 14-12 and 14-13. The proposed extended use of the existing concrete block factory at the site will not change views from this location and, given the low profile of the proposed new extraction area, it will not be visible. The EIAR eliminates this viewpoint form further consideration on the basis that the development will not be visible and I concur with this assessment.

Caragh Lake Viewing Point

Several third parties raised concerns about adverse visual impacts on this location. The viewing point is located on a hilltop within a Coillte Forest Recreation Area on the shores of Caragh Lake and is accessible only to pedestrians. Map J indicates this side of the lake as a Visually Sensitive Area and indicates designated views and prospects at this location, however they are directed over Caragh Lake and face the opposite direction from the development site. Existing views from the point are shown in EIAR Plates 14-14 and 14-15 and the existing and proposed views of the development from this location are presented as VP1 in the submitted photomontages. The existing processing area and quarry are clearly visible in views to the east from the vantage point. The proposed new extraction area will also be visible. The EIAR assesses impacts at this location as high visual sensitivity, moderate magnitude of change, resulting in a significant visual impact. Given the elevated location of the viewing point, the new extraction area will be visible regardless of screening berms / vegetation. I concur that the development will have a significant visual impact on views from the viewing point, albeit not on the designated

views westwards over the lake. However, visual impacts will change over time as new areas are excavated and worked out areas are replanted. I also note the restoration works carried out at Riordan's Pit, which have reduced visual impacts of the previously excavated areas.

L4021 and Residences in Close Proximity

This area is categorised as Rural General in the development plan and there are no designated views or prospects in the vicinity. Several of the third party appellants are residents in close proximity to the site, within a cluster of properties nearby to the west, south of the L4021 / L7504 junction. These locations are indicated as viewpoints nos. 2 and 2a in the submitted photomontages. Having visited the area, I note that the higher parts of the concrete processing facility are currently visible from some adjoining roads to the west / southwest of the site. However, the existing excavated area at Rangue and the worked out area at Riordan's Pit are heavily screened by mature vegetation and are not visible in the immediate vicinity. The EIAR states that the development would not change views from this location and, given the low profile of the excavated area and the presence of screening vegetation and berms, I do not consider that the excavated area will be visible from adjacent roads. The outlook will undoubtedly change from the rear of adjacent houses to the southwest, given that they are visible from the location of the proposed excavated area. However, I accept that any associated visual impacts to the rear of houses will be ameliorated over time by the presence of berms and vegetation and noting the intervening distances to the excavated area.

Photomontages at viewpoint no. 4 indicate that only the temporary access will be visible from the L4021 and the proposed underpass will not significantly change views (note recommendations on this aspect of the development elsewhere in this assessment). The EIAR assesses impacts as moderate-significant and adverse, reducing as replacement vegetation grows over the temporary access and I concur with this conclusion, particularly having viewed the existing underpass at the L7504.

I am therefore satisfied that the development will not have any significant adverse visual impacts at the L4021 to or at adjacent residential properties to the west.

L4021 and Adjacent Local Roads to the East / South of Site

This area is also categorised as Rural General in the development plan and there are no designated views or prospects in the vicinity. The location of the proposed extraction area is currently visible from local roads to the east and south as disturbed bogland, with the higher elements of the concrete processing facility visible in the distance. The extent of visibility from various vantage points changes depending on the presence of screening hedgerows and other vegetation. The Glashacoomnafanaida Stream is visible in the landscape within a band of trees. This area is indicated as viewpoints nos. 3, 4, 5 and 5a in the EIAR. They are assessed as moderate sensitivity, given that they are located in a Rural General area with no designated views or prospects. The existing stream corridor and riparian vegetation are to be retained with a buffer to the excavated area with an intervening vegetated berm. The berm will provide partial screening of the excavated area in views from the wider area to the east of the site. The EIAR generally assesses impacts to the east as slight / moderate and adverse, reducing in the long term and screening vegetation is established. This conclusion is accepted with regard to the proposed planting and site restoration measures.

7.10.4. The applicant has submitted proposals to create screening berms and to plant vegetation, measures which have already successfully been used to screen the existing worked out areas of the quarry. Third parties comment that the applicant has submitted limited restoration proposals and that there is a lack of adequate details on the timeframe for the restoration work at the quarry. While I accept that limited restoration proposals have been submitted, I am satisfied that it will be possible to adequately restore the site having visited the existing worked out area at Riordan's Pit, where site restoration is currently ongoing. The proposed restoration is generally acceptable for the purposes of mitigating landscape impacts and further details, including a more detailed timeframe, may be resolved by condition. I am therefore satisfied, having regard to all of the above, that the development will not result in significant adverse visual impacts in the area.

7.10.5. While I note third party concerns on the matter, there is no evidence before the Board that the operation of the existing extraction area and processing facility have had a significant adverse impact on tourism or the agri-tourism economy in the area. I consider that the development would generally have an imperceptible impact on

tourism. I also note third party comments that the development will result in the loss of a local amenity area at the undeveloped lands south of the L4021. Having inspected the site, I note that this area has been used for agricultural purposes and for turf cutting / drying and that it is heavily drained and currently overgrown. I therefore consider that it is of limited amenity value and that the development would not result in the loss of a significant local amenity, or that it would contravene tourism or recreation objectives set out in the development plan.

7.11. **Roads and Traffic Issues**

7.11.1. Third parties submit that the development will generate a significant amount of HGV traffic with consequent traffic hazards at local roads. There are related concerns about conflict with cyclists, particularly at the nearby N70 Ring of Kerry route, and conflict with other tourist traffic. It is also submitted that the proposed temporary access to the L4021 is unnecessary and unjustified and will result in the proposed new excavation area effectively operating as a standalone quarry, and that this aspect of the development could be in place for longer than originally envisaged. This assessment should be read in conjunction with the EIAR section on traffic impacts, as summarised below.

7.11.2. The site is served by the local road L4021, which links Caragh village to Killorglin, also known as the Caragh Lake Road, and the L7504, which links Caragh Lake Road to the N70 / Ring of Kerry route. The Rangue lands have frontages and accesses to both roads, with the access to the L7504 being used by HGVs and the L4021 access described as ‘non-HGV’ in the applicant’s documentation on file. There is an underpass under the L7504 connecting the Rangue site to the worked out area at Riordan’s Pit to the west. The northern end of the Knocknaboola lands also has frontage to the L4021. The development includes a new temporary access from the L4021 to serve the new extraction area, to be used for 12 months while a new underpass is under construction to connect the extraction area with the existing factory at Rangue.

7.11.3. I note at the outset that, as in relation to other potential impacts, the development will not result in any intensification in use at the overall landholding beyond that already permitted at this location, as discussed elsewhere in this report. This is clearly stated in the EIAR and the applicant’s traffic analysis is on the basis that no additional traffic

is anticipated in future years over what is currently experienced. I observed multiple HGV movements to and from the existing processing facility within a window of about one hour during the site inspection, however these would be accounted for in the EIAR surveys of existing traffic in the area. The EIAR considers potential future traffic impacts as a result of the proposed development at four no. road junctions at the site and in the wider area, including the L7504 / N70 junction and the L7504 / L4021 junction, for both the opening year of the development, five years after operation and 15 years after operation. All of the junctions assessed operate well within capacity for all scenarios, assuming underlying traffic increases in accordance with TII guidance. The EIAR notes that the development will employ a limited number of people and that the morning traffic will be prior to 8am and therefore will not coincide with the local AM peak as observed in traffic counts (see recommended condition below in relation to working hours). I am satisfied on this basis that the development will not result in any significant traffic congestion. In addition, while I note concerns of third parties that traffic from the development will conflict with tourist traffic, other local traffic and vulnerable road users, I do not consider this issue to be a significant risk given that the overall development will generate a limited number of HGV movements and that it will not result in a significant amount of additional traffic over and above that of development already granted at this location.

7.11.4. The EIAR assesses predicted traffic impacts on the basis that the L4021 underpass will be in place after the first year of development. The applicant proposes that HGVs exiting the temporary L4021 access will use the existing 'non HGV' entrance to the Rangue site from the L4021, immediately opposite, rather than the usual L7504 HGV access to the Rangue site further north east. This will avoid HGVs passing adjacent residential properties and using the L4021/L7504 junction. It is projected that 15 loads per day will be generated from the Knocknaboola lands, equating to 30 no. vehicle movements at the temporary access. The application provides limited details of the proposed temporary access. However, given the existing alignment of the L4021 and that that the applicant owns a long stretch of frontage at this location, I am satisfied that it would be possible to construct a safe temporary access with adequate sightlines on the southern side of the road. I also note in this regard that the report on file of KCC Roads dated 30th November 2022 states that sight distances at the temporary access are acceptable. I note the concerns of local

residents that this aspect of the development will take longer than the stated 12 months to implement. I accept that the completion of the underpass is important to reduce HGV movements in the vicinity of local residential properties, with consequent dust and noise impacts, noting that HGVs currently do not use the L4021 access to the Rangue site. It is open to the Board to impose a condition that the underpass be completed prior to the opening of the new excavated area, rather than to allow the use of the temporary access to the L4021 for 12 months. I note that the conditions of permission of PL08.125728 and PL08.125729 required the completion of road works including the widening of the L7504 and site access prior to the commencement of development, with details to be agreed with the planning authority within two months of permission and the scheme to be completed within three months of such agreement. Given that the use of the underpass will significantly reduce HGV movements on the L4021 and reduce any potential consequent impacts on residential amenties, I consider that the structure should be completed prior to the opening of the new excavated area in a similar fashion and I recommend that a condition requiring same be imposed if permission is granted. I also note the comment of Uisce Éireann that the applicant will be required to divert an existing watermain while the underpass is being installed and to reinstated same upon completion. This requirement should also be imposed as a condition if permission is granted.

7.11.5. I am satisfied on this basis that the development will not result in any traffic hazard or adverse traffic impacts.

7.12. **Ecology**

7.12.1. The third party submissions on file raise various concerns about general environmental impacts, including impacts on water quality, noise and dust impacts, peatland impacts, landscape impacts and impacts on specific species including the Lesser Horseshoe Bat, the White Prominent Moth and pollinators at the development site. This issues are considered in detail in the context of EIAR and AA and individually, as detailed in the remainder of this report. The Board is referred in particular to the EIAR summary below in relation to biodiversity, water, hydrology and peatland impacts and to the AA set out below, which gives detailed consideration to relevant designated sites. In the interests of brevity, I will not reiterate. I note that the proposed excavated area will be restored to natural habitat

after use which will assist in enhancing the biodiversity of the site and local area given that some of the existing peatland present is cutaway or degraded. The applicant has already carried out some restoration work at Riordan's Pit and I am satisfied that further restoration can be undertaken at the proposed new excavation area as it is worked out. I am also generally satisfied that the proposed mitigation measures including construction management measures, water management measures, construction of vegetated soil berms, silt fence and 15m buffer to the Glashacoomnafanaida Stream, along with ongoing environmental monitoring, are adequate to control and prevent identified potential adverse ecological impacts. I note in this regard the report on file of the KCC Ecologist, dated 16th November 2022, which states that the surface water management proposals, including the silt fence and buffer zone, are adequate to protect water quality at the stream and to maintain a corridor of riparian landscape connectivity for species, also that the proposed site restoration and peatland retention adequately address biodiversity related issues raised in the RFI.

7.12.2. I note the submission of Inland Fisheries Ireland (IFI), which states that the Glashanacoombnafanaida stream is a salmonid spawning and nursery ground and states concerns about potential impacts on the aquatic environment including runoff from lands during the stripping of overburden, the control of contaminated site and storm water runoff from the new and old sites, pumped discharge from silt ponds and interference with ground waters leading to surface water drawdown. The submission recommends detailed water management measures including in relation to the removal of any existing migratory impasse to fish; the management and control of contaminated waters within the new extraction area, silt containment measures during soil stripping and construction management measures, management of runoff from access roads, monitoring of discharge from silt ponds. The recommended measures are similar to or compatible with the proposed water management and mitigation measures set out in the EIAR and NIS and as conditioned below and I am satisfied that they can be adequately implemented by the applicant.

7.12.3. The third party appeals submit that the development is not compatible with various regional, national, European and international policy documents including the RSES, the NPF, the Climate Action Plan 2021, the national Clean Air Strategy, the National Biodiversity Plan, the All-Ireland Pollinator Plan 2021-2025, the Blue Green

Infrastructure and Nature-based Solutions Framework and the UN 2030 Agenda for Sustainable Development, the European Green Deal and the EU Biodiversity Strategy to 2030, EU Ambient Air Quality Directives. These matters are addressed at development plan level, noting that the introductory chapters of the Kerry County Development Plan and Chapter 11 Environment of same refer to relevant national, European and international policies and legislation including the above listed documents. In addition, the development plan has been subject to SEA and AA and there are many development plan objectives relating to ecology, particularly in Chapter 11. The site is located in an area designated as Rural General under the plan, as considered elsewhere in this report, and is also subject to development plan objectives on the extractive industry, see above consideration of compatibility with these objectives.

7.12.4. I have no information me to believe that the proposed continuance of use will have any greater impact on ecology within the area, than was previously permitted at this location under PL08.125728 and PL08.125729. I consider that the restoration plan will assist in enhancing the biodiversity in the area. I am generally satisfied in this regard, subject to conditions.

7.13. **Other Matters**

7.13.1. Procedural Issues

Third party appeals have raised various procedural issues relating to lack of consultation with local residents regarding the proposed development, also the lodgement of the application before Christmas 2021, which reduced time available to residents to make submissions to the planning authority, and limited access to an online version of the application. It is submitted that these matters result in a breach of Article 6 of the Habitats Directive and Part XAB of the Planning and Development Act 2000 (as amended) and of the Aarhus Convention. I note that the subject application has been validated by Kerry County Council that that a large volume of third party submissions were accepted by the planning authority both in response to the initial application and to the further information submitted, which was readvertised. The matters raised are summarised in the planning reports on file and are given detailed consideration in same. I therefore consider that third parties had

ample opportunity to raise matters at the planning application stage and that the issues raised by third parties were given due consideration by the planning authority.

Third parties also submit that Kerry County Council has not registered the Rangue quarry with the EPA. I note that the existing discharge to the Glashacoomnafanaida Stream is subject to trade discharge licence no. W61 issued by Kerry County Council. The registration of other activities at the overall site with the EPA or other authorities, if necessary, is subject to a separate code and is outside the scope of the planning process.

7.13.2. Land Ownership and Turbary Rights

Several third party appeals have raised concerns about site boundaries and encroachment on lands outside the ownership of the applicant. There are also comments that the lands at the proposed new extraction area are in commonage. In addition, a right of way over a roadway at the existing extraction area north of the L4021 is contested by a third party. It is also submitted that there are incorrect drawings / maps submitted with this and previous applications relating to the overall landholding, with consequent inaccuracies in the EIAR. In addition, several third parties have raised the matter of turbary rights (the right to cut turf, or peat, for fuel on a particular area of bog), stating that lands at the proposed new extraction area have been subject to same. It is evident from the site inspection and from documentation on file that lands in question south of the L4021 have been subject to turf cutting over many years. EIAR Chapter 6, which considers impacts on land and soils, including peatlands, states that the area of the site that has been subject to peat extraction is not within the proposed new extraction area.

The applicant's response to the appeals submits that the ownership of the site has been clarified, including in documentation relating to same as submitted to KCC with the RFI response on 23rd August 2022. I consider any dispute over land ownership or right of way or trespass or infringement of turbary rights are all civil matters between parties and that such matters would fall outside the scope of this planning appeal.

7.14. **Planning Assessment Conclusion**

7.14.1. To conclude, having regard to the above matters, the proposed development is considered acceptable in principle at this location. I am satisfied that, subject to the

imposition of conditions, the development will not have significant adverse impacts on the residential amenities of nearby properties or on the amenities of the wider area by way of noise, dust or visual impacts. I am also satisfied that the development, again subject to conditions, will not have adverse impacts on peatlands or water quality, or consequent ecological impacts, or result in traffic hazard.

8.0 Environmental Impact Assessment

8.1. EIA Introduction

8.1.1. The application is accompanied by an Environmental Impact Assessment Report (EIAR) which was prepared by OES Consulting. This section of my report comprises an Environmental Impact Assessment (EIA) of the proposed development. An EIAR dated January 2022 was submitted with the original application and an updated EIAR, dated August/September 2022 was submitted to KCC with the further information response on 12th September 2022. The following EIA is primarily based on the updated EIAR, which considers the development as permitted by KCC and supersedes the original EIAR. However, I have examined both documents in detail and both are taken into consideration. Section 2.0 above provides detailed descriptions of the original development and the amended proposal submitted as further information. In addition, as noted above, some of the matters considered in this EIA are addressed in detail in the above planning assessment and in the following section on AA, therefore this section of the report should therefore be read, where necessary, in conjunction with those sections. The following EIA is also based on my site inspection of 5th July 2024, as well as the other documentation on file including the planning authority reports, planning history and third party appeals and observations.

8.2. Requirement for EIA

8.2.1. The European Union Directive 2014/52/EU, amending Directive 2011/92/EU, on the assessment of the effects of certain public and private projects on the environment, requires Member States to ensure that a competent authority carries out an appraisal of the environmental impacts of certain types of projects, as listed in the Directive, prior to development consent being given for the project. The EIA Directive

was transposed into Irish law under the Planning and Development Regulations 2001 (As Amended). Part 1 of Schedule 5 of the 2001 Regulations, includes a list of projects for which mandatory EIA is required. Part 2 of Schedule 5 provides a list of projects where, if specified thresholds are exceeded, an EIA is required.

8.2.2. The proposed development falls within the category of prescribed development for the purposes of Part 10 under Schedule 5. Part 2(2) of Schedule 5 of the Planning and Development Regulations 2001 relates to 'Extractive Industry' and Part (b) states as follows:

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

The proposed new extraction area at Knocknaboola is 16.75 ha, which exceeds this threshold and therefore requires mandatory EIA. In addition, the existing processing area and extraction pit at Rangue have been included within the scope of the EIA, in order that the overall contiguous operation of the extraction area and the processing facility are addressed.

8.3. **Compliance with Article 94**

8.3.1. Both the original and revised EIAR documents contain three volumes comprising:

- Volume I Main Report
- Volume II Appendices
- Volume III Non-Technical Summary

8.3.2. I have carried out an examination of the information presented by the applicant, including the EIAR documents and the submissions made during the course of the application. A summary of the submissions made by the planning authority, observers and prescribed bodies has been set out previously this report. A summary of the main contents of the EIAR documents are listed below, in tabular format, detailing the requirements of Article 94(a) of the Planning and Development Regulations 2001 (as amended).

Article 94 (a) Information to be contained in an EIAR (Schedule 6, paragraph 1)	
A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development (including the additional information referred to under article 94(b).	A description of the proposed development is contained in Chapter 4 of the EIAR including details on the existing extraction pit areas, factory and overall layout; the proposed new extraction area and its relationship with the factory to be retained; existing and proposed extraction and processing methodologies; supporting roads infrastructure including the temporary access from the L4021 and the new underpass at the L7504; existing and proposed water, drainage, spoil and waste management measures and other environmental management measures. The proposed new extraction area is to have an output of 100,000 cu.m. per annum, with a daily extraction rate of c. 600-800 tones per day and a lifetime of c. 20 years (16.3 years to exhaustion to full extraction). EIAR section 1.8 clarifies that the existing processing area and the existing sand and gravel pit are included in the scope of the EIA in order that the overall contiguous operation of the extraction and processing activities will be assessed. The January 2022 EIAR states that primary crushing, screening and grading will take place at the new Knocknaboola extraction area. This aspect of the development was amended in the revised proposal submitted to KCC as further information on 12th September 2022 and the revised EIAR dated August 2022 does not include it in the description of development as set out in Chapter 4. In each technical chapter of the EIAR details are provided on use of natural resources and the production of emissions and/or waste (where relevant). It is noted that the proposal does not involve demolition works. I am satisfied that the description of the development is sufficient to enable an assessment of the likely effects of it on the environment.

A description of the likely significant effects on the environment of the proposed development (including the additional information referred to under article 94(b).	A description of the likely significant effects of the development on the environment is provided in the technical chapters, and associated documentation, of the EIAR and additional information on file. Technical chapters reflect the environmental parameters set out in Article 94. As indicated in the environmental impact assessment below, I am satisfied that the EIAR has adequately identified the significant environmental effects with regard to population and human health, biodiversity, land, soil, geology and hydrogeology, water, air quality and odour, climate, material assets, cultural heritage, landscape, noise and vibration and traffic .
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 article 94(b).	Proposed mitigation measures are outlined in each of the technical chapters of the EIAR, as summarised below.
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 article 94(b).	EIAR Chapter 15 deals with alternatives and sets out alternative scenarios relating to the 'do nothing' scenario; alternatives to primary aggregates; alternative sources of aggregates and the operation of pit sites in other parts of Co. Kerry. The proposed new extraction area is justified on the basis of meeting existing aggregate demand in the area using existing infrastructure, rather than the development of an alternative extraction site or sourcing from a more distant location. It is also necessary to ensure the continued operation of the existing factory at the site. EIAR section 15.3 notes that the continued extraction at the location of the existing factory facility is more viable than at an alternative location due to the environmental and financial costs of increased travel from alternative sites in Co. Kerry.

	Proposed mitigation measures are set out in detail in individual chapters. Alternatives are considered in some instances. It is considered that the issue of alternatives has been adequately addressed in the application documentation. The planning authority has not raised concerns in this regard. I am satisfied, therefore, that the applicant has studied reasonable alternatives in assessing the proposed development and has outlined the main reasons for opting for the current proposal before the Board and in doing so the applicant has taken into account the potential impacts on the environment.
Article 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.	Each technical chapter provides a baseline description of the existing environment at the site, as informed by desk-based studies of publications and other relevant data sources and the following site surveys: • Site surveys carried out on 27th September 2020, 11th April, 8th May, 22nd June 2021 and 1st November 2021, including surveys of habitats, invasive species and mammals (particularly badger and otter). • Bat activity surveys conducted on 5th May, 13th May and 6th June 2021. • Breeding bird surveys carried out on 14th April, 21st April, 8th May and 22nd June 2021. Additional hen harrier surveys were carried out the same dates. • A Kerry Slug survey was carried out on 10th May 2022. • The distribution of Lesser Cudweed at the site was mapped on 28th July 2022. • A Land, Soil, Geology and Hydrogeology site survey carried out on 5th March 2021, which mapped the drainage network and recorded water

	depth in several groundwater wells. Data continued to be collected at four no. groundwater wells at the site until 13th October 2021. Groundwater sampling was carried out on 16th June 2021. • A peat depth survey was carried out on 16th April 2021 at Knocknaboola. Five no. trial pits were also dug in the area to investigate subsoil conditions. • Two boreholes were drilled at the proposed extension site in July 2019 to serve as monitoring wells. Borehole drilling was carried out at the site to depths of 8.5m below the floor of the Rangue quarry and 17.5m below ground level (BGL) at Knocknaboola. • Flow measurements were carried out at the Glashacoomnafanaida stream on 16th April, 17th May and 24th July 2021. • Surface water quality monitoring was carried out at three locations at the Glashacoomnafanaida stream in April and May 2022. Biological sampling was undertaken in accordance with EPA Q-rating methodology at three locations on June 2nd 2022. • A baseline study of dust deposition rates was carried out in the period 2019-2021 at three locations along the L4021. Additional dust deposition monitoring was carried out at the same locations in the periods March to August 2021 and April to June 2022. • A test excavation of 50 trenches at the location of the proposed extraction area was carried out in May 2021. • A landscape site visit was carried out in June 2021, which viewed the site from various viewpoints in a wider study area comprising areas west of the site near Caragh village and Caragh Lake and the area north of the site at Rangue, linking the N70 and lands along the adjoining local roads.

	• Noise measurements were carried out at the site and in the vicinity in 2019 and 2021. • Traffic counts were carried out over a 12 hour period at four no. junctions in the area on Tuesday April 5th 2022. Each of the technical chapters also considers a 'do nothing' scenario, as discussed below in relation to the significant effects.
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	Each of the technical chapters sets out the basis for the assessment of effects including any surveys of the site and surrounding area and desktop sources of information. EIAR section 5.9 details that there were difficulties in mapping faunal territory and other species in third party lands outside the control of the applicant. A conservative approach was adopted in determining impacts.
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.	EIAR section 11.4.6 addresses 'Unplanned Events'. The primary potential events identified are: • Instability following the extraction of rock • Spill from traffic accidents • Flooding The vulnerability of the development to accidents, unplanned events or natural disasters is limited due to the relatively simple nature of the development works, the established nature of the techniques, regulations and procedures to be followed, the material to be handled on site and the rural location of the proposed works. Having regard to the location of the site, to the nature of the proposed development and to the existing land use, I am satisfied that there are unlikely to be any effects deriving from major accidents and or disasters.
Article 94 (c) A summary of the information in non-technical language	Volume III of the EIAR comprises a Non-Technical summary. I am satisfied that it adequately summarises the information required under Article 94 (a) and (b).

Article 94 (d) Sources used for the description and the assessments used in the report	These are outlined in the relevant technical chapters, as summarised below. I am satisfied that the EIAR uses adequate baseline information, as summarised above.
Article 94 (e) A list of the experts who contributed to the preparation of the report	Section 2.5 of the EIAR sets out a list of the qualified and experienced environmental specialists involved in the preparation of the EIAR. Detailed descriptions of the competencies and expertise of the relevant specialists are provided in each technical chapter. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the applicant adequately identifies and describes the direct and indirect effects of the proposed development on the environment, and complies with article 94 of the Planning and Development Regulations 2000, as amended.

8.4. Section 171A Assessment of Likely Significant Effects

8.4.1. The likely significant direct and indirect effects of the proposed development are considered in chapters 5-16 of the EIAR which collectively address the following headings, as set out in Article 3 of the EIA Directive 2014/52/EU:

- Population and Human Health
- Biodiversity, with particular attention to protected species and habitats
- Land, Soil, Geology and Hydrogeology
- Water
- Air Quality and Odour
- Climate
- Material Assets
- Cultural Heritage
- Landscape
- Interactions

In addition, EIAR Chapter 8 addresses Noise and Vibration and Chapter 12 addresses Traffic. Both are also summarised below. This section of the EIA has had regard to the application documentation, including the EIAR, the submissions received and the planning assessment completed above. It should be read in conjunction with the above planning assessment, noting that this section refers to certain parts of the EIAR, which are summarised elsewhere in this report, in the interests of brevity and the avoidance of repetition.

The planning authority state that they are satisfied that the EIAR adequately describes the effects of the development on the environment and that subject to mitigation, are satisfied.

The likely significant effects of the development are considered in tabular format under the headings below which follow the order of the factors set out in Article 3 of the EIA Directive 2014/52/EU.

8.4.2. Population and Human Health

Population and Human Health Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to population and human health in the planning authority reports and the submissions on file: • Potential impacts on human health associated with noise, vibration, dust, water and traffic impacts.
Context	Chapter 11 of the EIAR deals with Population and Human Health. It is based on publicly available documentation from the CSO 2011 and 2016 Census, also County Development Plans and the Killorglin LAP.
Baseline	Chapter 11 provides an overview of population change in Co. Kerry. The population increased by 1.5% between 2011-2016 (2,205 people), with increases in population around the towns of Tralee, Killarney, Kenmare and Killorglin. Killorglin is classified as a 'Tier 2' town in the 2022-2028 development plan, with ongoing population increases in the 2000, 2006, 2011 and 2016 census, with a 28% increase between 2006 and 2011. It functions as an employment centre and plays an important role in the economy of the wider area. Extractive industries play important roles in the local and national economies. Aggregates can only be worked where they occur. Extraction of the reserves at the development site is required to continue to supply the applicant's existing concrete manufacturing facilities on site and to supply crushed stone products to the regional market. The tourism industry also

	plays an important role in the economy of the area, based on areas of outstanding natural beauty in Co. Kerry. There are significant regional disparities in the economy of the area with FDI concentrated in larger urban areas, with indigenous industries driving local economic growth.
Potential Effects	
Do Nothing	EIAR section 11.4.9 addresses a 'Do Nothing' scenario. Potential effects on population and human health associated with noise, air, dust, water, vibration and traffic would cease. There would be a negative impact on employment. Ongoing demand for aggregates in the area would have to be provided from other, more distant sources, resulting in greater vehicle emissions and carbon footprint.
Construction	Chapter 11 does not address construction impacts in detail. The primary construction impacts are those associated with the construction of the new road access and underpass at the L7504. These are considered in the relevant technical chapters.
Operation	EIAR section 11.4.2 identifies potential effects on population and human health associated with the ongoing operation of the quarry and factory. They will provide employment for an estimated 38 no. people directly on-site, in addition to indirect employment of hauliers, sub-contractors, materials suppliers and maintenance contractors. They will also contribute indirectly to the local and regional economies through a continued supply of construction aggregates. The creation of new jobs is identified as a long term, significant, positive effect. The development may result in a temporary increase in the local population, which is not identified as a significant effect. Potential direct ongoing effects on population and human health relating to the matters of safety, air and water quality, noise, landscape quality and road traffic and indirect effects relating to flora, fauna, heritage and archaeology are also addressed in the other technical chapters of the EIAR, as discussed below, where related mitigation measures and residual impacts are also identified. EIAR section 11.4.5 states that the quarry operations will have no direct impacts on local amenities including schools, sports facilities and tourism locations.
Decommissioning	The restoration of the extraction area would have positive impacts relating to biodiversity and landscape, as considered in detail in the EIAR Chapters 5 and 12 respectively.

Cumulative	The EIAR does not identify any significant cumulative impacts on population and human health. This is consistent with its conclusion of no significant effects in relation to dust, noise, vibration, water quality and traffic in other chapters and as considered elsewhere in this report.
Mitigation Measures	EIAR Table 11.7 summarises proposed mitigation measures specifically relating to population and human health including measures to minimise and manage soil, water, dust, noise and vibration emissions, traffic management measures and landscaping and site restoration, also ongoing environmental monitoring as summarised in EIAR section 11.4.12.
Residual	EIAR section 11.4.11 states that mitigation measures would successfully reduce the impacts of the development resulting in the following residual impacts, as assessed in other individual EIAR technical chapters: • Land, soils and geology: None • Water: None • Dust: insignificant to negligible • Vibration: None • Traffic: Assessed road links and proposed new junction will operate within capacity, all traffic will cease post site restoration • Landscape: Very small and beneficial post restoration The EIAR concludes that the development will have a positive, long term impact through continued employment and associated economic and social benefit.
Conclusion	The main issues raised in third party submission in relation to population and human health are noise, vibration, dust, water and traffic impacts. Having regard to the detailed assessments of these issues elsewhere in this report, I am satisfied that there is no significant likelihood of adverse effects from any of these factors, subject to the implementation of proposed mitigation measures which I consider can be satisfactorily carried out by the applicant. I therefore do not consider that the development will result in any significant health hazard for nearby residents. To conclude, I have considered all of the written submissions made in relation to population and human health and the relevant contents of the file including the EIAR. In conclusion, I consider that the proposed development will have significant positive impacts on the local socio-economic environment. I am also satisfied that the potential for significant adverse impacts on population and human health can be avoided, managed and

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

8.4.3. Biodiversity, with particular attention to protected species and habitats

Biodiversity Assessment of Likely Significant Effects	
Issues Raised	Third party submissions raise concerns in relation to general environmental impacts, which are discussed in relation to Ecology in the planning assessment above. The following main issues are raised specifically in relation to biodiversity in the third party submissions and in the planning reports on file: • The development will result in habitat loss, in particular bog habitat, and consequent adverse impacts on local biodiversity. • The development will have adverse impacts on aquatic species at Glashacoomnafanaida Stream and result in further adverse impacts downstream, particularly at designated sites in Castlemaine Harbour. • The Biodiversity chapter of the EIAR does not refer to the fact that the application area is recorded in the NBDC Database as occurring with the area categorised as being of the second highest importance for suitability for all bat species, the highest importance for Lesser Horseshoe Bat and the second highest importance for Daubenton's Bat. The bat surveys avoid the peak maternity season of July.
Context	EIAR Chapter 5 addresses Biodiversity. It is based on site surveys carried out on 27th September 2020, 11th April, 8th May, 22nd June 2021 and 1st November 2021, including surveys of habitats, invasive species and mammals (particularly badger and otter). Bat activity surveys were conducted on 5th May, 13th May and 6th June 2021. Breeding bird surveys were carried out on 14th April, 21st April, 8th May and 22nd June 2021. Additional hen harrier surveys were carried out the same dates. An additional Kerry Slug survey was carried out on 10th May 2022. The distribution of Lesser Cudweed at the site was mapped on 28th July 2022.
Baseline	There are three no. non-Natura designated sites within 15 km of the development site (see AA section for details of designated sites):

	• Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment pNHA (000365) 1.8 km SW • Castlemaine Harbour pNHA (000343) 3.9 km NW • Lough Yganavan and Lough Nambrackdarrig pNHA (000370) 3.9 km NW The site is also c. 4. Km south of the Castlemaine Harbour Important Bird Area (IBA). EIAR section 5.4 details habitats present at the existing pit and factory site and at the proposed new excavation area. Most of those listed are of local importance comprising drainage ditches, eroding reiver, improved agricultural grassland, wet grassland, wet heath, cutover bog, bog woodland, immature woodland, spoil and bare ground, mixed broadleaved / conifer woodland, recolonizing bare ground, other artificial lakes and ponds, buildings and artificial surfaces and active quarries and mines. Aside from these habitats, the following points are noted in particular: • There is an area of wet grassland outside the red line site boundary, to the southeast of the site, which is rated Local Importance (Higher Value). This corresponds to the Annex I habitat 'Molina meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caerulae) (6410)' which is a qualifying habitat for the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC. However, this area is not a significant example of this habitat type. • There are areas of wet heath habitat within the landholding but to the east of the development site and one larger area of the habitat within the proposed development area, which is rated Local Importance (Higher Value). This habitat corresponds to the Annex I habitat 'northern Atlantic wet heaths with Erica tetralix (4010)' which is also a qualifying habitat for the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC. • There is an area of c. 3.2 ha of lowland blanket bog within the proposed extraction area, rated as Nationally Important. It forms part of c. 10 ha of relatively intact blanket bog habitat on adjoining lands to the west. This corresponds to the Annex I priority habitat 'blanket bogs (*if active bog) (7130)'. The annexed habitat 'depressions on peat substrates of the Rhynchosporion (7150)' also occurs in pockets as a sub-habitat of blanket bog. Both 7130 and 7150 are qualifying habitats for the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC.

	• The site includes an area of cutover bog, rated as locally important (lower value), which includes pockets of the annexed habitat 'depressions on peat substrates of the Rhynchosporion (7150)', a qualifying habitat of the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC. • There is an area of bog woodland established along the eastern and northern site boundaries and along drainage ditches and on scattered dry mounds in cutover bog, rated as locally important (higher value). This has links with the Annex I priority habitat 'bog woodland (91D0)'. This classification refers to woodland of intact raised bog, examples of this priority habitat are very rare in Ireland and this is not a significant example of this habitat type. The following key ecological features are noted: • No bat roosts were recorded at the site. There are no potential bat roosting features present and the lands are generally assessed as having low bat roost potential. Soprano Pipistrelle were observed foraging at various parts of the site on several occasions and it is assessed as having local importance (higher value) for this species. A separate site survey of an area to the west of the site found a small colony of Lesser Horseshoe Bats at a derelict cottage c. 1.5 km northwest. A further survey of that location carried out in October 2016 found that the building was not used as a breeding site by Lesser Horseshoe Bats but it was being used as an occasional summer roost and as a transitional roosting site in the spring and autumn seasons and possibly as a hibernation site during winter. • Irish Hare were recorded foraging at the location of the proposed extraction area on several occasions. The site is assessed as of potential local value (higher importance) for Irish Hare. • No signs of Otter were noted at site surveys. The Glashacoomnafanida Stream at the site dries up periodically and does not support permanent fish populations where it adjoins the site. • Common Lizard was recorded at the proposed extraction area on 8th May 2021. The site is potentially of local value (higher importance) for Common Frog and Smooth Newt. Common frog were recorded within the existing pit but no newt were recorded at the site. • EIAR Table 5.9 lists birds of conservation concern recorded at site surveys including two red list species (Snipe and Meadow Pipit) and

	seven amber list species (Goldcrest, Hen Harrier, Mallard, Mute Swan, Skylark, Swallow and Willow Warbler). One red list species, Meadow Pipit, was recorded breeding at the proposed extraction area. The site is assessed as being of Local Importance (Higher Value) overall for birds of conservation concern and Local Importance (Higher Value) for other breeding birds. The Annex I species Hen Harrier was recorded overflying the site on 14th and 21st April 2021. Following additional vantage point surveys, it was concluded that the location of the proposed extraction area is within the foraging range of Hen Harrier but is not being used by the species for breeding purposes. There are no records of Hen Harrier breeding in the area and the nearest Hen Harrier SPA is the Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA, c. 28 km northeast of the development site. The site is classified as Local Importance (Higher Value) for Hen Harrier. • No Kerry Slug were recorded at site surveys. The habitats within the proposed extraction area are not of significant value for Kerry Slug due to the lack of rocky outcrops which would provide suitable feeding areas for these species. • EIAR section 5.4.7 states that several notable briophyte plant species were recorded within the proposed extraction area including several species protected under Annex V of the Habitats Directive. • Small Cudweed was recorded at the existing quarry. This is classed as near threatened in the Red Data book list of vascular plants 2016. • The invasive species survey found Rhodedendron within bog woodland at the proposed extraction area and Giant Rhubarb within the existing pit. Both are listed in the Third Schedule of the Birds and Natural Habitats Regulations 2011.
Potential Effects	
Do Nothing	EIAR section 5.6.4 addresses a 'do nothing' scenario. Most of the habitats at the site have been significantly modified due to human activity. There is some encroachment of scrub and bracken in areas that have been unmanaged. A general pattern of succession from scrub with patches of grassland to woodland would be expected to continue. Invasive species would continue to spread at the site. Areas of natural habitat at the site would remain largely intact and areas used for agriculture would remain under the same management regime.

Construction	EIAR section 5.6.1 identifies the following key potential effects associated with the construction phase comprising the removal of peat, overburden and aggregates from the proposed extraction area: • Removal of the majority of habitats and flora at the proposed extraction area. This impact is generally assessed as a negative, slight long term impact at local level in the case of habitats of local importance (lower value and higher value). • Dust impacts on sensitive habitats adjoining the site. • Potential spread of the invasive species recorded at the site, Rhodendron and Giant Rhubarb, with adverse impacts on landscape quality, native biodiversity and infrastructure. • Disturbance of species due to noise and lighting, including bats. Long term loss of bat foraging and commuting habitat due to the removal of vegetation and bog habitat. However, due to the availability of similar habitat in the immediate vicinity, there are unlikely to be any fragmentation impacts or loss of connectivity within the wider landscape. • There may be short term displacement impacts on Otter, however this is unlikely to result in significant impacts due to their ability to move away from and/or adapt to short term disturbance. • Disturbance effects on Irish Hare, Common Frog and Common Lizard are predicted as negative, not significant and temporary during construction in the absence of mitigation. • Direct effects on birds (including breeding birds) associated with habitat loss, fragmentation and habitat modification. Indirect effects due to disturbance during the construction phase with displacement of foraging and breeding birds from the extraction area. Generally assessed as negative, slight and long term at a local level. Potential loss of Hen Harrier foraging habitat and short term disturbance of the species are assessed as negative, not significant and short term at a local level. • Contamination of the adjoining watercourse by suspended solids including silt, peat or other matter such as hydrocarbons. Potential impacts on aquatic species in the Glashacoomnafanida Stream and downstream including the Castlemaine Harbour SAC/SPA. Assessed as a negative, significant and long term effect on local water quality and aquatic receptors.

	• Continued pumping at the southern pond at the Rangue site in order to control the water table and to provide water for concrete production could result in a pollution incident with a significant, temporary impact on aquatic species. • Potential reduced run-off to the Glashacoomnafanida Stream due to removal of overburden assessed as imperceptible, neutral and permanent impact.
Operation	The EIAR identifies the following key potential effects associated with the operational phase of the development comprising the continued use of the existing pit at Rangue for aggregate processing as well as the production of aggregate at the new extraction area: • Similar impacts associated with disturbance / displacement to those identified above for the construction stage. Also similar habitats impacts at the proposed extraction area. Associated impacts on bats, mammals, reptiles and birds are predicted as negative, slight and long term. Impacts on Otter are assessed as negative, not significant and long term. • Habitat impacts at the Riordan's Pit site (11ha), which is to be restored with native trees, shrub and grassland. This will provide new foraging habitat and nesting for birds and foraging habitats for bats, mammals and other invertebrates. Aquatic habitat in the area will be retained. • Wind blown dust could have impacts on sensitive habitats adjoining the site.
Decommissioning	EIAR section 5.6.3 sets out the proposed decommissioning and site restoration works including management of invasive species, landscape reinstatement and preservation of existing sand martin nests. The proposed quarry restoration plan is to allow the site to return to a condition where there will be a negligible / imperceptible residual impact on the surrounding environment.
Cumulative	EIAR section 5.11 considers cumulative biodiversity impacts. There are three quarries in the wider vicinity, two of which are owned by the applicant. There are no other significant developments in the area, noting that quarries adjoining the development site are not in use. The following main points are noted: • There are three quarries in the vicinity, two of which are owned by the applicant. Residual impacts on surface water and groundwater quality

	are predicted as not significant and slight to neutral. Therefore no cumulative impacts on aquatic receptors are predicted. • No significant cumulative noise impacts are predicted. • No significant in-combination effects on the designated sites Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC and Castlemaine Harbour SAC and SPA (see AA section of this report). • No significant cumulative impacts on fauna due to noise or disturbance are predicted.
Mitigation Measures	EIAR section 5.7 sets out the following main proposed mitigation measures, which are also detailed in other EIAR chapters: • Construction management measures including demarcation of habitats to be retained; storage of peat for quarry restoration; minimal stripping of overburden; avoidance of vegetation removal during the bird nesting season; measures to minimise disturbance to bats / potential bat roosts during vegetation removal; movement of common frog to alternative habitat. • Water, noise, vibration and dust management measures during operation as detailed in other relevant EIAR chapters during construction and operation and as detailed in an Environmental Management Plan • C. 10.7 ha of blanket/ cutover bog adjacent to the proposed extraction area is to be left undisturbed • Maintenance of a berm along the eastern site boundary at the Glashacoomnafanida Stream with a silt fence between the berm and the stream. • Planting of a woodland buffer along the northern and western boundaries of the new extraction area adjoining the retained bogland habitat • Stockpiles are to be graded away from the stream and planted with woodland scrub • Removal and ongoing management of invasive species as detailed in EIAR section 5.7.1 • Site restoration and landscaping and regeneration of disturbed / damaged habitats at the extraction area. Biodiversity enhancement measures during restoration including bat, bird and insect nesting boxes. Retention of small cudweed at the restored site. • Ongoing restoration of the Riordan's Pit site (11 ha).

	• Creation of sand martin nesting sites within the quarry face of the proposed extraction area
Residual	EIAR section 5.10 sets out residual biodiversity effects which may be summarised as follows: • Loss of heath, grassland and bog habitats including wet heath habitat which has links to the Annex I habitat 'northern Atlantic wet heaths with Erica tetralix (4010)' which is also a qualifying habitat for the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC. Also loss of Annex V briophyte species. This impact is assessed as negative, slight and long term at local level. • Loss of c. 0.3 ha of the Annex I priority habitat 'blanket bogs (*if active bog) (7130)' which includes pockets of the annexed habitat 'depressions on peat substrates of the Rhynchosporion (7150)', both qualifying habitats of the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC. This impact is classified as negative, slight, long term at local level and not significant at national level. • Loss of bat foraging habitat, classified as negative, slight and long term. No impacts on bat roosts are predicted. • Habitat loss and disturbance impacts on Irish Hare. Classified as negative, slight and long term. • Loss of bird nesting and foraging habitat. Classified as negative, imperceptible to slight and long term. • No significant impacts on water quality at the Glashacoomnafanida Stream are predicted and consequently no significant impacts on downstream designated sites. Any impacts on water quality will be localised and temporary and will not have a significant impact on aquatic ecology. Impacts on fish and aquatic invertebrates are classified as negative, not significant and long term. I also note that the proposed site restoration will result in some positive residual impacts on biodiversity including the creation of new habitats.
Conclusion	I do not consider that the continuation of the existing processing activity at the Rangue lands will have significant adverse effects on biodiversity beyond those of the operation already permitted in this part of the site, subject to the ongoing implementation of the proposed environmental management measures as detailed in the EIAR and the submitted Environmental

	Management System and noting that the development does not include any intensification in use of the facility. I note that the loss of existing habitats at the proposed new extraction area, including bogland, will be countered by the retention of 10.7 ha of bog habitat, including c. 3 ha of blanket bog (classified as of national importance) within the overall landholding. This impact will also be ultimately mitigated by the restoration of the site post excavation. While I accept that the applicant has submitted limited restoration proposals, I am satisfied that it will be possible to adequately restore the site having visited the existing worked out area at Riordan's Pit, where site restoration is currently ongoing by the applicant. Third parties submit that the EIAR is based on limited biodiversity surveys. I am satisfied that the assessment is based on adequate survey information, noting that surveys of habitats, invasive species and mammals were repeatedly carried out at the site at various dates in 2020, 2021 and 2022, as detailed above. The EIAR assessment of impacts on biodiversity is also based on a desktop study of relevant publicly available information sources as detailed in EIAR section 5.2.2. I am satisfied overall 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 biodiversity, as a consequence of the development have been identified. Third parties submit that the EIAR does not adequately consider impacts on pollinators and specifically on the White Prominent Moth. I note that EIAR Chapter 5 gives detailed consideration to existing habitats at the site and section 5.4.3 considers flora in particular, along with the general consideration of impacts on habitats at the site. I am satisfied on this basis that this issue has been adequately addressed. I note third party concerns about adverse impacts on water quality in the Glashacoomnafanida Stream with consequent impacts on aquatic species and downstream impacts on designated sites. These issues are considered in detail in the context of water, hydrology and hydrogeology impacts below and in the context of AA elsewhere in this report. I note the submission of Inland Fisheries Ireland in relation to potential impacts on salmonid species. The recommended detailed water management measures are similar to or compatible with the proposed water management measures and I therefore consider that any potential adverse impacts on salmonid species may be avoided or mitigated.

	Third parties refer to inadequate consideration of potential impacts on bats in the EIAR. The EIAR assessment of bat impacts is based on several site surveys and that the site was assessed for bat roost potential, including maternity roosts, noting third party comments that the bat surveys avoid the peak maternity season of July. To conclude, I have considered all of the written submissions made in relation to biodiversity and the relevant contents of the file including the EIAR. In conclusion, I consider that the proposed site restoration plan development will have significant positive impacts on biodiversity at the development site. I am also satisfied that the potential for significant adverse impacts on biodiversity can be avoided, managed and mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on biodiversity.

8.4.4. Land, Soil, Geology and Hydrogeology

Land, Soil, Geology and Hydrogeology Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to land, soil, geology and hydrogeology in the planning authority reports and the submissions on file: • Concerns about adverse impacts on peatland at the site, with risk of peat slippage and associated runoff to the Glashacoomnafanaida Stream. • Loss of soils at the site and inadequate storage of same at the new excavation area. • Hydrological relationship of the site with the Glashacoomnafanaida Stream and potential adverse impacts on same.
Context	EIAR Chapter 6 addresses Land, Soil, Geology and Hydrogeology. It is based on desktop study and a site survey carried out on 5th March 2021, which mapped the drainage network and recorded water depth in several groundwater wells. Data continued to be collected at four no. groundwater wells at the site until 13th October 2021. Groundwater sampling was carried out on 16th June 2021. A peat depth survey was carried out on 16th April 2021 at the Knocknaboola lands. Five no. trial pits were also dug in the area to investigate subsoil conditions. Two boreholes were drilled at the proposed extension site in July 2019, to serve as monitoring wells. The EIAR also refers to the findings of previous drilling and testing at two boreholes at the

	site in 2019 and 2000. Borehole drilling was carried out at the site to depths of 8.5m below the floor of the Rangue quarry and 17.5m below ground level (BGL) at the Knocknaboola site.
Baseline	The soils in the general area are classified as Rolling Lowland Soils and consist mainly of low level (Atlantic type) banket peat. Subsoils generally consist of interbedded tills (Boulder clay) and sands and gravels. GSI data indicates limestone bedrock. There is an iron pan present at the site, resulting in a perched water table and the development of blanket peat over sand and gravel deposits below. There are therefore two potential aquifers beneath the site, one within the underlying bedrock and one within the overlying sand and gravel deposits. Drilling results indicate that the streams in the area are perched above the permanent water table. Groundwater monitoring at the site found that the surface water drainage network is perched at least 9m above the groundwater table in the vicinity. It is likely that the Glashacoomnafanida Stream is losing water to ground downstream of the quarry where it crosses permeable sand and gravel strata. It is therefore recharging to the underlying groundwater body. The regional groundwater flow direction is anticipated to be downslope to the northeast, towards the River Laune. Neither the existing quarry nor the proposed new extraction area are located within the source protection zone of any public water supply or well. The Rangue quarry has an area of c. 16.75 ha. Its sand and gravel deposits have been almost completely exhausted. The existing processing area is located between two northwest to southeast trending morainic ridges and was formerly part of a large, wet, boggy area. The vulnerability of the bedrock aquifer underlying most of the Rangue site is classified as ‘high’. There is a large pond in the northwestern part of the Rangue site, which has a water level close to groundwater level. It supplies water for the processing area and acts as a settlement pond for the northern part of the quarry. The processing area uses c. 90 cu.m. of water per hour for washing aggregate over an 8 hour period. Sediment laden water from the processing area discharges to a series of settlement lagoons at the eastern side of the quarry and is recycled to the sand washing plant and the northwestern pond. There is another pond in the southern part of the Rangue site which is fed by groundwater but appears to be perched above the water table in summer. Water used in the concrete batching plant is pumped from this pond to a header tank. When the tank is full, it is diverted to a small pond beside the southern entrance road. Water from the small pond is intermittently pumped to a surface drainage system in the southern part of the site. The pumped water flows under the

	L4021 and discharges to the Glashacoomnafanaida Stream at the southeastern corner of the overall site under a trade discharge license from Kerry County Council (Licence no. W61). Flow gauging on 17th May 2021 indicates that between 0.009 and 0.036 litres per second discharges to the stream when the pumps are active. A settlement pond in the northeastern part of the Rangue quarry is being reinstated with trees and low permeability fines. The proposed new extraction area at Knocknaboola has an undulating topography with an overall topographic gradient to the northeast, towards the River Laune. The peat depth survey of this area found shallow cutaway bog with peat depths of at least 0.25m. Most of the area has peat depths of <0.3m and there are areas with no peat cover, particularly on the elevated hillock on the southeastern part of the site. The deepest part of the bog is in the southern part of the site, where a maximum depth of 6.1m of peat was recorded (this area is not within the proposed extraction area). There is small scale peat extraction from the deeper parts of the bog along the southwestern site boundary, also not within the proposed extraction area. The Knocknaboola site and bog are heavily drained with numerous shallow drains discharging to the Glashacoomnafanaida stream. Trial pits indicated a wide variety of sand and gravel materials to a depth of at least 17m below the site. There is an iron pan present with peat and perched groundwater above and free draining sand and gravel sediments below. Groundwater monitoring between March to October 2021 found groundwater levels at 12.87m – 13.19 m BGL. The sand and gravel beneath the Knocknaboola site is not classified as an aquifer by the GSI. The vulnerability of the groundwater at Knocknaboola is classified as 'moderate'. I note the separate record of peat depths at Knocknaboola, as provided in the results of archaeological testing of 50 no. trenches at the site, presented in EIAR Attachment 7, which details relatively shallow peat depths < 1m at most locations tested.
Potential Effects	
Do Nothing	The existing quarry at Rangue is exhausted, decommissioned and a quarry restoration plan is implemented. There are no significant impacts on land, soil, geology and hydrogeology. No significant potential impacts on land, soil, geology or hydrogeology are identified.
Construction	EIAR section 6.5.1 address construction effects on land, soil, geology and hydrogeology. The following points are noted:

	• C. 16.75 ha of peat and soils overburden will be removed from the extraction area. This is assessed as a temporary impact as soils will be stored for re-use within worked out areas. Assessed as long term, negative and not significant effects in the wider blanket peat landscape. The shallow peat land is already heavily degraded, peat depths are shallow over the majority of the proposed extraction area and the deeper portions of peat along the southern site boundary will be retained. • Peat removal will expose subsoil to erosion and could lead to increased sedimentation of surface and groundwater. Assessed as a short term, negative effect and unlikely. • Removal of overburden will result in increased groundwater vulnerability, increased potential recharge to groundwater and a possible increase in sediment laden waters percolating to ground. Assessed as negative, slight and long term effects. • Potential destabilisation of upgradient peat lands and peat slide. Assessed as a negative, very significant, unlikely and permanent effect. • Potential contamination of underlying soil, geology and groundwater by leakage of fuel and other contaminants. Assessed as short term, negative, moderate and likely effect. • No impact on underlying bedrock geology is anticipated due to the depth of overburden beneath the site. • Perched water will now discharge to deep groundwater rather than surface water, which will result in an imperceptible reduction in base flow to surface water in the vicinity. A small reduction in baseflow to the Glashacoomnafanida Stream is offset by a small increase in base flow to surface water downgradient of the site (i.e. River Laune and Castlemaine Harbour SAC). The potential increase in baseflow is considered negligible given the scale of the quarry compared to the groundwater catchment.
Operation	EIAR section 6.5.1 address operational effects on land, soil, geology and hydrogeology. The following points are noted, in addition to the above construction effects which will be ongoing: • Permanent removal of the sand and gravel aggregate resource is a permanent negative significant effect. An estimated 1,630,400 cu.m. will be removed over 20 years.

	• Groundwater storage within the unsaturated zone will be slightly reduced. Assessed as an insignificant, negative, imperceptible and long term effect. • No quarrying will take place below the groundwater table. • Abstraction and discharge to the Glashacoomnafanida Stream from the southern pond at the Rangue site will continue under license. This is necessary to control the water level in the excavated area at Rangue. Continued abstraction could result in depletion of the underlying groundwater resource. Assessed as a negative, not significant and medium term effect.
Decommissioning	Quarry restoration during decommissioning will ultimately allow the site to be returned to a condition whereby there will be negative / imperceptible residual effect on the surrounding environment.
Cumulative	Discharge of pumped groundwater from the southern pond at the Rangue site to the Glashacoomnafanida Stream could affect the stream and downstream designated sites. This is currently under licence and not resulting in adverse impacts, therefore cumulative impacts on groundwater are unlikely. There are two other quarries to the west and northwest of the Rangue quarry, not owned by the applicant, are not in operation at present, therefore no significant risk of cumulative impacts arises. There is a risk of cumulative hydrocarbon contamination associated with the adjacent end of life vehicle facility at Rangue. The EIAR proposes mitigation measures to address the risk of contamination by hydrocarbons or other spillages, see below. There are in the order of 9 no. residential dwellings in the immediate vicinity of the site, which are not connected to mains sewerage infrastructure and therefore discharge foul effluent to the ground, presumably via individual septic tanks / wastewater treatment systems. The development includes a new WWTS at the existing factory, which will result in improved wastewater treatment then the existing septic tank system, and no significant risk to land, soil, geology or hydrogeology is identified in association with same, therefore no significant cumulative impact is predicted. There are no other developments in the immediate vicinity of the site that could result in potential cumulative impacts on land, soil, geology or hydrogeology.
Mitigation Measures	EIAR Table 12 and section 6.6 set out proposed mitigation measures. Proposed environmental management measures are also detailed in

	Attachment J of the further information submitted to KCC on 12th September 2022. The following are noted: • Construction of a soil berm along the interface with the Glashacoomnafanida Stream with a silt fence between the stream and the berm, to prevent silt laden runoff entering the stream. A buffer zone of 17m will be maintained between the excavation area and the stream. • Overburden will only be stripped as required in order to limit the time that soil is exposed and reduce risk of erosion and subsequent siltation of runoff. Areas will be reinstated as they are worked out, in order to reduce surface water runoff and prevent generation of suspended solids. • Existing drainage of access roads will be maintained with silt traps to allow suspended solids to settle before discharging to the floor of the excavated area. • Careful storage and management of hazardous materials on site including oil and fuel. • Monitoring of quarry works, groundwater abstraction and discharge to the stream. • Implementation of a quarry restoration plan. • No excavation of aggregate within 1m of the water table at Rangue. • All site facilities will be located at the existing factory site.
Residual	The following residual effects on land, soil, geology and hydrogeology are noted from EIAR section 6.8/ Table 12: • Removal of sand, gravel and rock will have a positive impact on the construction industry. • Sedimentation of surface and groundwater assessed as imperceptible, neutral and short term. Water contamination by fuel / oils assessed as slight, neutral, short term. • Increased groundwater vulnerability assessed as slight, negative, long term. • Topsoil and subsoil stripping and the removal of sand and gravel aggregate will result in increased vulnerability of the aquifer to contamination and reduce potential runoff from the site while increasing percolation of effective rainfall to deep groundwater. Reduced baseflow and runoff to the local drainage network will be offset by slightly

	increased baseflow to hydraulically downgradient surface water bodies. Residual effects are assessed as imperceptible, neutral and long term. • No significant adverse impacts on peatlands are identified.
Conclusion	The development will involve the permanent removal of c. 16.75 ha of soils and overburden at the site, which is identified as a significant impact. The proposals to store overburden and the ultimate restoration of the site will somewhat mitigate this impact. The development will present an increased risk of groundwater contamination due to the removal of overburden. However, there will be no excavation below the water table and I am satisfied that the proposed environmental management measures, including the management of stored soil and peat, will prevent significant adverse residual contamination impacts on groundwater. I also note the detailed hydrological assessment presented in EIAR Chapter 7, which supplements the assessment of impacts on groundwater. I am satisfied that this provides an adequate assessment of potential impacts on hydrogeology overall, which is based on adequate information with regard to the detailed site surveys and I am satisfied on this basis that the development will not have adverse impacts on baseflow at the Glashacoomnafanaida Stream. I note third party concerns about adverse impacts on peatland. I am satisfied having regard to the details provided of ground conditions at the site and given the relatively flat topography of the area, that the development does not present a significant risk of peat slippage (see also the detailed assessment of peatland issues in the planning assessment above) To conclude, I have considered all of the written submissions made in relation to land, soil, geology and hydrogeology and the relevant contents of the file including the EIAR. I am satisfied that the potential for significant adverse impacts on land, soil, geology and hydrogeology can be avoided, managed and mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on land, soil, geology and hydrogeology.

8.4.5. Water

Water Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to water in the planning authority reports and the submissions on file: • Potential adverse impacts on water quality at the Glashacoomnafanaida Stream due to silt laten run off from the excavation area or from contaminated run off from any area of the site, particularly with hydrocarbons or other spillages.
Context	EIAR Chapter 7 addresses Water (Hydrology). It is based on desktop study and the site surveys outlined above in relation to land, soil, geology and hydrogeology. In addition, flow measurements were carried out at the Glashacoomnafanaida stream on 16th April, 17th May and 24th July 2021. Surface water quality monitoring was also carried out at three locations at the Glashacoomnafanaida stream in April and May 2022. Biological sampling was undertaken in accordance with EPA Q-rating methodology at three locations on June 2nd 2022.
Baseline	The regional hydrology is dominated by the River Laune, located c. 3.1 km northeast and downgradient of the development site, which is part of the Castlemaine Harbour SAC. There is no direct connection between the development site and the River Laune. There following streams adjoin or are adjacent to the site: • The Upper Keal Stream rises c. 530m southwest of the site and flows into Castlemaine Harbour. It is not considered further due to distance and lack of hydrological connection to the site. • The Glashacoomnafanida Stream adjoining the eastern site boundary. This receives discharge from the Keal Stream c. 3.26 km northwest of the site and also flows into Castlemaine Harbour. • The Knocknaboola Stream is located c. 1.5 km east of and in a separate topographical catchment to the site. It is not considered further in the EIAR. As outlined above in relation to hydrogeology, the surface water features in the area are likely to be perched and are likely to be losing varying amounts of water to the ground where they flow over permeable overburden. Pumped water flows from the Rangue quarry are discharged under licence to the Glashacoomnafanaida Stream. There are also several existing drains at the Knocknaboola site, which discharge to the stream. Flow measurements

	upstream and downstream of the site in 2021 indicate increases in flows between upstream and downstream associated with runoff from the Knocknaboola lands and from the Rangue quarry discharge. Low flows were measured in April and July 2021 after extended dry periods. EIAR section 7.3.1 comments that this indicates that there is no baseflow entering the stream, which is consistent with its position perched >9m above the underlying overburden water level. It is reported that the stream dries up in very dry weather. Records of the stream 700m north of Rangue on 24th July 2021 indicate that it had dried up at this location with water sinking into underlying permeable strata. There is no abstraction from the Glashacoomnafanaida Stream at the site. The Glashacoomnafanaida Stream is part of the Douglas_010 waterbody, which has no assigned WFD ecological status. Surface water monitoring upstream and downstream of the site in April and May 2022 found that the stream is at 'Good' WFD status, with one exception of slightly elevated BOD in the downstream sample on 3rd May 2022. EIAR section 7.3.1 states that these results compare favourably with results from previous analysis, indicating no deterioration of surface water quality as a result of the quarry at Rangue. The biological water quality monitoring indicates Good Q4 quality upstream and downstream of the existing quarry and processing area. The site is not within any CRFAMS flood zone. There is flood risk associated with low lying agricultural lands at the Keal stream, c. 1.45km downgradient from the site, however no flood event has been logged at that location.
Potential Effects	
Do Nothing	The existing quarry at Rangue is exhausted, decommissioned and a quarry restoration plan is implemented. There are no significant impacts on land, soil, geology and hydrogeology. No significant potential impacts on water / hydrology are identified.
Construction	Potential construction impacts are primarily associated with the stripping of peat and topsoil and associated runoff to surface water. There is a moderate risk that a pollution incident at the site could impact on downstream designated sites, c. 3.8 km downstream of the site. There is a similar risk associated with the continued pumped discharge to the stream from the Rangue quarry. EIAR section 7.1.5 assesses this as a significant, likely and temporary impact. The removal of the perched (winter) water table at the Rangue quarry as a result of the existing excavation has likely resulted in a small decrease in winter flow of the Glashacoomnafanaida Stream. Water budget calculations

	indicate that there will be increased percolation rates to groundwater during the proposed excavation as follows: • 0.2 l/s pre development • 0.56 l/s during Phase 1 • 1.47 l/s during Phase 2 • 1.25 l/s during Phase 3 • 2.0 l/s during Phase 4 • 1.64 l/s during Phase 5 This is assessed as an imperceptible, neutral and permanent impact as the reduced runoff to groundwater will be offset by the increased baseflow in the Glashacoomnafanaida Stream to the downgradient drainage network. There are potential impacts associated with silt laden runoff to the stream during peat and soil stripping. Assessed as a negative, significant and medium term impact. The potential of a peat slide associated with site works is assessed as a negative, very significant, unlikely and long term effect. There is no potential increase in flood risk associated with the construction phase as the development does not involve removal of aggregate below the water table or the pumping of groundwater to the surface water network.
Operation	EIAR section 7.5.2 addresses operational effects on water. The following points are noted, in addition to the above construction effects which will be ongoing: • Surface water runoff at the new excavation area will be directed into the pit void, reducing runoff to the Glashacoomnafanaida Stream. Assessed as a negative, not significant and long term impact. This will also reduce the risk of sediment laden runoff to the stream. • Perched groundwater overlying low permeability layers encountered during excavation will be directed to the deep groundwater table, likely further reducing runoff to the stream. Assessed as a negative, imperceptible and long term impact. • The proposed depth of excavation is 22.4m AOD, which is >1m above the maximum monitored winter groundwater level. The base of the stream is measured as c. 28m AOD. The stream is not hydraulically connected with groundwater at the site due to the presence of an iron pan. No impacts on the stream are therefore anticipated.

	• The existing quarry and factory facility have an estimated P.E. of 6 and are served by a WWTP. EIAR Appendix 7.5 provides a Site Characterisation Report.
Decommissioning	As above, not specifically addressed in this chapter of the EIAR.
Cumulative	There are several sand and gravel pits in the catchment of the Glashacoomnafanaida Stream including Riordan's Pit, the adjacent quarries not owned by the applicant (not currently operational) and an existing sandpit and associated works at Munigaphuca c. 1.5m to the west. There is also an EPA licenced landfill site adjacent to Muingaphuca and an end of life vehicle facility adjacent to the site. EIAR section 7.5.2 identifies the main cumulative risk as potential hydrocarbon contamination associated with the end of life vehicle facility.
Mitigation Measures	EIAR section 7.6 and Table 5 set out proposed mitigation measures to prevent impacts on water. The following are noted: • Management of peat and topsoil stripping at the site and control and storage of hazardous material as set out above. • Berm and silt fence between the excavation area and the stream as above and 17m buffer zone between the extraction area and the stream. • Surface water management during overburden stripping and at the overall site including road drainage, sediment traps, hydrocarbon interceptors, management and recycling of water used during processing via settlement ponds. • No excavation within 1m of the water table. • Some proposed modifications to the water management at the southern pond at the Rangue quarry including changing the location of the abstraction point, increased surface area from 0.6 ha to 0.83 ha, construction of berms to slow movement of water and encourage settlement of fines as per the design provided in EIAR Appendix 7.13. It is proposed to retain the licenced discharge to the stream at 3240 cu.m./day. • The existing system of settlement ponds on the eastern side of the Rangue site is to be decommissioned and the area regraded to slope away from the Glashacoomnafanaida Stream. • Upgradient interceptor to drain all runoff from upgradient peat to discharge to the Glashacoomnafanaida Stream while maintaining existing drainage in the peatlands.

	• Installation of sediment traps in existing drains at the site, to slow surface water flow and to allow for settlement of any suspended load prior to discharge off the site. • The existing septic tank at the Rangue site is to be decommissioned and replaced by a new WWTS to improve the quality of effluent discharging to the ground.
Residual	The dilution available in the stream and estuarine environment will reduce the impact of any pollution on the downstream designated sites. Assessed as an imperceptible, neutral, unlikely short/long term residual impact. Reduced baseflow to and reduced runoff to the Glashacoomnafanaida Stream are offset by a small increase in percolation to groundwater and in baseflow to surface water downgradient of the site and pumped discharge under licence from the Rangue quarry. Assessed as an imperceptible, neutral, likely and permanent residual impact. Residual impacts on groundwater are assessed as imperceptible, negative, unlikely and short term.
Conclusion	See section 7.8 of the planning assessment above, which gives detailed consideration to drainage and water impacts. I note the proposals to continue or improve existing water management measures at the Rangue lands, including the licensed discharge to the Glashacoomnafanaida Stream. I am satisfied that the proposed continuation of use of the existing processing facility will not result in any new impacts on surface water above those of the development already permitted at this site. I note the proposed water management measures and other mitigation measures to be implemented at the new extraction area. I have considered all of the written submissions made in relation to Water, including in particular the submission of Inland Fisheries Ireland, which recommends conditions. The planning authority did not raise any objections, subject to conditions being imposed. I am satisfied that the identified impacts would be avoided, managed and mitigated by the measures which form part of proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of Water, in particular at the Glashscoomnafanaida Stream.

8.4.6. Air Quality and Odour

Air Quality and Odour Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to Air Quality and Odour in the planning authority reports and the submissions on file: • Adverse impacts on residential amenities and potentially adverse health impacts on local residents, also potential biodiversity impacts due to dust deposition from the development. • Historic exceedance of dust emissions limits by the applicant at the existing processing facility and previous extraction area.
Context	EIAR Chapter 9 addresses Air Quality and Odour. It is based on a baseline study of dust deposition rates near the boundary of the proposed new extraction area at Knocknaboola carried out in the period 2019-2021, also information available from historic air quality monitoring at the site and environs.
Baseline	Ambient concentrations of air pollutants are very low in the area and are typical of levels recorded at rural locations elsewhere in Ireland. EIAR section 9.5 presents the results of dust monitoring carried out at three locations along the L4021 in the period 2019-2021: (i) the site entrance to the L4021; (ii) the L4021/ L7504 junction and (iii) the southwestern boundary of the Rangue factory site, as well as within the factory site. The results indicate monthly average dustfall rates of 83-317 mg/m^2/day with highest levels reported close to the boundary of Riordan's Pit (no longer in use). The average deposition rate at the L4021/ L7504 junction, closest to the nearest dwelling, is 83-281 mg/m^2/day, which is less than the average 350 mg/m^2/day limit value recommended in the Quarries and Ancillary Activities Guidelines and as derived from German TA Luft legislation. Lower dust deposition rates were recorded at other locations, ref. EIAR Table 9.3. Additional dust deposition monitoring was carried out at the above locations in the periods March to August 2021 and April to June 2022, ref. EIAR Table 9.4. The results indicate monthly average rates of up to 431 mg/m^2/day at the factory site entrance from the L4021 and up to 467 mg/m^2/day at the northwest boundary of the Riordan's Pit site. Lower rates were recorded at the Knocknaboola lands, consistent with the current land use at that location.
Potential Effects	

Do Nothing	The do nothing scenario, based on no new extraction area, states that there will be some limited dust deposition associated with exposed areas of peat at the existing site.
Construction and Operation	The principal atmospheric emissions from the extraction site will be fugitive dust and PM_{10} emissions from trucks and plant equipment. Potential dust emissions are associated with excavation, screening and processing of material, stockpiles and truck movements on unpaved haul roads, also exposed sand faces around the site. Emissions can vary depending on wind and weather conditions including precipitation. Potential air quality impacts are considered at houses within 500m of the Rangue factory site, with particular attention to the cluster of houses along the L4021, c. 100-200m from the new extraction area. Impacts are assessed based on the Atmospheric Dispersion Modelling System – Roads (AMDS-R), which includes impacts associated with dust sources from roads and plant activity as well as other sources of fugitive dust within the quarry, also using climatological data from the Valentia meteorological station. Impacts associated with both the existing processing operation and the proposed new extraction area are assessed based on a 'worst case scenario' during peak daily production and associated vehicular movements, including the new haul route and underpass. The modelling does not include any reduction in fugitive emissions as a result of rainfall or spraying of surfaces. The results are presented in EIAR section 9.8 as a 'future emissions scenario' and may be compared to predicted dust deposition rates for the continued operation of the Rangue factory only, described in the EIAR as the 'existing emissions scenario'. The detailed results of the ADMS are set out in EIAR Appendix 4. The predicted maximum monthly dust deposition rates at the Rangue factory site 'future emissions scenario' are predicted as 500-750 $mg/m^2/day$ at 25m from the haul route edge, decreasing to <100 $mg/m^2/day$ beyond 100m from the road. The predicted rate at the nearest house on the L4021 is <10 $mg/m^2/day$. Predicted cumulative dust deposition levels including the factory operation and extraction close to the northwestern site boundary indicate maximum dust deposition levels of 25-30 $mg/m^2/day$ at the houses nearest to the site boundary. The predicted daily and annual average particulate matter PM_{10} concentrations are below 10 $\mu g/m^3$ or <20% of the daily National Air Quality Standards (NAQS) for particulates at the western site boundary and < 5 $\mu g/m^3$ at a distance of 200m. The predicted daily PM_{10} concentration at the nearest house along the L4021 is 4 $\mu g/m^3$ and below 2 $\mu g/m^3$ at the houses

	to the southwest. The predicted cumulative total PM_{10} emissions including an annual background PM_{10} concentration of 12 µg/m^3 from the factory site and emissions from the extraction area results in a daily concentration of 16 µg/m^3 at the nearest house or 26% of the daily NAQS, with lower figures at other houses close to the site boundary.
Decommissioning	The EIAR does not identify any dust or other air quality impacts associated with the decommissioning phase.
Cumulative	No significant cumulative impacts on air quality are identified in associated with any other developments in the area. I note in this regard that there are no other active quarries in the immediate vicinity of the development, or any other activity likely to generate dust, and that dust impacts are generally localised in nature.
Mitigation Measures	Dust controls applied during the removal of overburden, extraction and aggregate processing can reduce dust emissions by over 80%. EIAR section 9.10 proposes dust mitigation measures for removal of overburden and excavation including spray of machinery and haul routes during dry weather, adequate maintenance of machinery, limited truck speeds and drop height, road sweeping and other dust management measures during extraction and processing activities.
Residual Impacts	Residual impacts are assessed as imperceptible to slight depending on the location of extraction activity within the overall site. No significant residual air quality or dust impacts are predicted at nearby houses.
Conclusion	See section 7.7 of the planning assessment above, which addresses dust and air emissions. I have considered all of the written submissions made in relation to air quality. The planning authority are generally satisfied in this regard, subject to conditions. The established nature of the existing processing facility is noted, together with existing mitigation measures. I am satisfied that the identified impacts would be avoided, managed and mitigated by the measures which form part of proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of air quality.

8.4.7. Climate

Climate Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to Climate in the planning authority reports and the submissions on file: • Consistency with various national, European and international climate policies, objectives and legislation.
Context	EIAR Chapter 13 addresses Climate based on available data from the meteorological station at Valentia.
Baseline	The general climate in the area is characterised by the passage of Atlantic low pressure weather systems and associated frontal rain belts during the winter period with frequent strong winds. These systems are interspersed with drier conditions during the summer months. The number of 'wet days' (rainfall ≥ 1mm) is c. 55% per annum with 70% of days with ≥0.2 mm of rainfall. The monthly rainfall total during the winter months October to March accounts for 62% of the annual total. Maximum hourly average air temperatures range from 15.5 ˚C in January to 31.0 ˚C in July during the period 2015-2020. There are no significant topographical features that would create microclimate changes in the area. The rate of extraction and amount of vehicular movements at the Rangue quarry are small compared to large quarry sites elsewhere in Ireland, ref. EIA sections on transport impacts,
Potential Effects	
Do Nothing	No significant climate impacts are identified in associated with the 'do nothing' scenario.
Construction	The peat removal at the site can result in release of stored CO2 and related greenhouse gases such as methane into the atmosphere. CO2 is generated from anaerobic decomposition and formation of peat within the anoxic layer of the peat bed. The total area where peat is to be removed is c. 16.75 ha. The capacity for this small area to act as a sink for atmospheric CO2 is limited as the peat probes carried out at the site did not find any significant anoxic peat layer. The climate impact of peat removal at the site is therefore assessed as negligible/ imperceptible.
Operation	Emissions of CO_2 from the proposed extraction and aggregate production will be imperceptible as a % of the national total over the lifetime of the development.

	The change in topography will not significantly change the existing microclimate.
Decommissioning	Stripped soil and subsoil at the site will be stored and reused for site rehabilitation after extraction.
Cumulative	No significant cumulative climate impacts are identified in the EIAR. This is accepted given that the development will not have any significant climate impacts.
Mitigation Measures	The proposed Environmental Management System (EMS) contains measures to reduce the carbon footprint for the site including efficient usage and maintenance of vehicles.
Residual Impacts	No significant residual impacts on climate are identified.
Conclusion	I note third party concerns that the development is inconsistent with various national, European and international policies, objectives and legislation in relation to climate change. These matters are generally addressed at the County Development Plan, which is subject to AA and SEA. I have considered all of the written submissions made in relation to climate and the relevant contents of the file including the EIAR. I am satisfied that the potential for impacts on climate can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on climate.

8.4.8. Material Assets

Material Assets Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to material assets in the planning authority reports and the submissions on file: • Connections to and impacts on local infrastructure. • Loss of the use of the Knocknaboola lands as an amenity.
Context	EIAR Chapter 13 addresses material assets and provides an overview of the materials and amenity resources in the vicinity. The site is served by local roads L4021 and L7504. The Rangue factory is currently connected to electricity and telecommunications. The development is to connect to the national electricity grid and to telecommunications infrastructure. The site is not close to any tourist locations other than the N70 Ring of Kerry route, part

	of the Wild Atlantic Way. Waste materials are currently stockpiled at the site for future use in land rehabilitation works.
Baseline	The site is c. 2.5km southwest of Killorglin. The land use in the vicinity is primarily agricultural with some on-off houses and farmyards.
Potential Effects	
Do Nothing	No significant impacts on material assets are identified in associated with the 'do nothing' scenario.
Construction	The development will not require any new or increased use of public utility infrastructure. Potential visual impacts on tourism are considered in the context of landscape impacts. Potential impacts on transport infrastructure are considered in relation to traffic impacts. Both the construction and operation stages will result in direct impacts from the removal of overburden, sand and gravel at the site.
Operation	
Decommissioning	It is not proposed to reinstate utilities and services after quarry activities have finished.
Cumulative	No significant cumulative impacts on material assets are identified, noting that there are no other significant land uses, such as active quarries or other developments, in the immediate vicinity of the site.
Mitigation Measures	Relevant mitigation measures in relation to transport and water infrastructure, visual impacts and waste/ spoil management are set out in the relevant technical chapters of the EIAR, as discussed elsewhere in this report.
Residual Impacts	No significant residual impacts on material assets are identified.
Conclusion	I have considered all of the written submissions made in relation to material assets and the relevant contents of the file including the EIAR. I am satisfied that the potential for impacts on material assets can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on material assets.

8.4.9. Cultural Heritage

Cultural Heritage Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to archaeology and cultural heritage in the planning authority reports and the submissions on file:

	• Report of KCC County Archaeologist dated 31st January 2022. No objection to the development.
Context	EIAR Chapter 10 and Appendix 7 address Archaeology and Cultural Heritage based on a desktop study of available resources as well as a test excavation of 50 trenches at the location of the proposed extraction area in May 2021. The report also notes the findings of archaeological monitoring carried out at the Rangue site in 2004, 2005 and 2008.
Baseline	There are no recorded monuments or protected structures at or in the immediate vicinity of the development site, or any structures listed in the National Inventory of Architectural Heritage. The nearest recorded monument is the Kilcoolaght East Ogham Stones, located c. 5 km to the southeast. The monitoring carried out at Rangue in 2004, 2005 and 2008 did not find any features of archaeological significance. The test excavations carried out at the site in May 2021 did not identify any archaeological finds, features or deposits. Test trenching carried out at another site in the Rangue townland in 2016 recorded a burnt spread or fulacht fiadh (SMR KE056-058), 0.56 km to the northeast of the site. This is considered too far distant to be directly or indirectly effected by the development. The Kerry Record of Protected Structures indicates 32 no. properties within Killorglin, which are over 3km from the development site and will not be impacted. EIAR section 10.3 concludes that the overall archaeological potential of the development site is low.
Potential Effects	
Do Nothing	No negative impact on cultural heritage.
Construction	No direct or indirect impacts are predicted.
Operation	No direct or indirect impacts are predicted.
Decommissioning	No direct or indirect impacts are predicted.
Cumulative	Nu cumulative impacts are predicted as no cultural heritage has been identified at the development site or in the vicinity.
Mitigation Measures	The EIAR does not recommend any mitigation measures as the overall archaeological potential of the site is assessed as low.
Residual Impacts	No significant residual impacts are identified.

Conclusion	I have considered all of the written submissions made in relation to cultural heritage and the relevant contents of the file including the EIAR. I note in particular the report of KCC County Archaeologist, which states no objection to the development. I am satisfied that the potential for significant adverse impacts on cultural heritage can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on cultural heritage.

8.4.10. Landscape

Landscape Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to Landscape in the planning authority reports and the submissions on file: • Adverse visual impacts on local residential properties and in the wider area, including at the N70 Ring of Kerry route, at Caragh Lake viewing point and at other amenity areas.
Context	EIAR Chapter 14 addresses Landscape. It is based on a site visit carried out in June 2021, which viewed the site from various viewpoints in a wider study area comprising areas west of the site near Caragh village and Caragh Lake and the area north of the site at Rangue, linking the N70 and lands along the adjoining local roads. This is supplemented by additional photomontages submitted to KCC as further information on 12th September 2022.
Baseline	The site is in an area characterised as a Rural General area in the development plan. There are Visually Sensitive areas at the coastline to the north and towards the Macgillycuddys Reeks mountainous area to the south. There are designated views and prospects at the N70 Ring of Kerry / Wild Atlantic Way route to the north and on both sites of Caragh Lake to the west of the site. Higher ground to the southwest of the site rises to a point known as 'Caragh Lake Mountain', which has a viewing point at its apex. The blanket bog present at and in the immediate vicinity of the site is disturbed by peat cutting. It is a typical part of the wider landscape as a tract of bog. There is some existing tree and shrub growth at the site, particularly along the stream and at site boundaries. The site frontages to the L4021 are lined with trees and vegetation. There are several dwellings in the vicinity of the site, mainly to the west along the L4021 but also one dwelling on the

	northern side of the L4021, adjacent to the existing entrance to the Rangue quarry.
Potential Effects	
Do Nothing	No significant landscape impacts are identified in association with the 'do nothing' scenario.
Construction	The EIAR identifies seven no. sensitive visual receptors in the area as follows, at roads adjacent to the site including the N70 Ring of Kerry / Wild Atlantic Way route and from the Caragh Lake Mountain viewing point. The site is not visible from the N70 due to dense vegetation along the relevant stretch of road and potential visual impacts from this location are not considered in the EIAR. Visibility of the site is generally localised and confined to nearby roads. Potential construction impacts at each viewing point (VP) are assessed as follows: • VP 1 Hilltop at Caragh Lake Mountain The site is visible from this location, in a view away from Caragh Lake. The development will partially intrude on this view. Visual impacts here are assessed as significant due to high visual sensitivity and a moderate magnitude of change. • VP 2 L4021 to the west of the site There are several residential properties along the L4021 to the west of the site. The development will not be visible from the road at this location due to vegetative screening. Visual impact assessed as not significant. The development will be visible from the rear of individual residential properties. Views from these locations will reduce over time with screening from berms and vegetation. • VP 3 Junction of L4021 and L7504 There is mature vegetation on both sides of the road at this location. The view will change as vegetation at the new extraction area is removed, however most of the vegetation at the road frontage will be retained and will provide screening. Visual impacts are assessed as slight and adverse, reducing to not significant and neutral over time with regeneration of vegetation. • VP4 L4021 to the east of the existing entrance to the Rangue quarry

	There are currently hedgerows along the L4021 to the east of the site. There is one dwelling adjacent to the existing entrance to the Rangue quarry. Some vegetation will be removed at this location to facilitate the temporary entrance to the new extraction area. Impact is assessed as moderate-significant and adverse, reducing to slight adverse over time as vegetation regenerates when the temporary entrance is no longer in use. • VP5 Local (bog) road at Knocknaboola east of the site The site is visible from this location and the new extraction area will change the view. Visual impacts are assessed as slight adverse in the short term and slight neutral in the long term as berms are formed and vegetated. • VP6 Local (bog) road at Knocknaboola east of the site The new extraction area will be visible from this location, where hedgerows are not present, and it will change the view. Visual impacts are assessed as moderate to significant in the short term, reducing to moderate adverse in the longer term as vegetation and berms are established. • VP7 local road at Coomnafanaida southeast of the site The new extraction area will be visible from this location, where hedgerows are not present, and it will change the view. Visual impacts are assessed as slight adverse, reducing to not significant and neutral over time.
Operation	Landscape and visual impacts during the longer term operation of the new excavation area will be less than at the construction stage, as berms will be installed and planted to reduce visibility.
Decommissioning	EIAR section 14.5.5 assesses decommissioning such that buildings, equipment and roads will be removed /dismantled, all hazardous materials will be appropriately handled and a Landscape Restoration Plan will be implemented.
Cumulative	EIAR section 14.9 considers cumulative visual and landscape impacts in the context of other extraction activities in the area, noting the existing quarry to the west of the site at Caragh Lake. The existing excavated area and processing facility at Rangue, the proposed new extraction area and the other quarry will all be sequentially visible from the Caragh Lake Mountain viewing point. Impacts are assessed as slight-moderate adverse in views of

	the wider landscape from this vantage point. There are no potential cumulative impacts at the other vantage points assessed.
Mitigation Measures	The proposed mitigation measures for visual / landscape impacts may be summarised as follows: • Retention of existing vegetation at roadside boundaries and at the Glashacoomnafanaida Stream. • Dense screen planting along the site boundary to the south of houses on the L4021. • Construction of a 3m high berms along the boundary of the excavated area, to be planted with native species. • Peat removed from the site will be stored for reuse in the site restoration. • Damaged / disturbed areas will be restored and landscaped after completion of excavation. A Landscape Restoration Plan is submitted as EIAR Appendix 14.
Residual Impacts	The presence of berms and vegetation will reduce visibility from areas close to the site but not from more distant, elevated views, e.g. Caragh Lake mountain. Residual landscape impacts are assessed as significant and adverse at local level and sight adverse in the wider landscape. Visual impacts from elevated sites will improve after restoration.
Conclusion	See section 7.10 of the planning assessment above, which gives detailed consideration to landscape and visual impacts. I accept that the applicant has provided limited assessment of views from adjacent residential properties, however, I consider that the visual impact assessment otherwise provides a reasonable representation of likely views of the development from the wider area, including at the N70 and Caragh Lake viewing point. The EIAR assessment of landscape impacts is therefore considered adequate overall. I have considered all of the written submissions made in relation to landscape and the relevant contents of the file including the EIAR. I am satisfied that the potential for landscape impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative landscape impacts.

8.4.11. Noise and Vibration

Noise and Vibration Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to noise and vibration in the planning authority reports and the submissions on file: • Third parties submit that noise and vibration from the development would have adverse impacts on residential amenities in the area particularly at nearby properties.
Context	EIAR Chapter 8 addresses Noise and Vibration. It is based on noise measurements at the development site and vicinity in 2019 and 2021, as well as historic noise monitoring at the site during the period 2003-2021.
Baseline	There are 24 no. dwellings within 500m of the proposed extraction area. These are identified as the relevant Noise Sensitive Receptors (NSRs) for the purposes of noise monitoring and consideration of potential noise impacts. EIAR Chapter 8 generally applies a 55 dB $L_{Aeq\ 1h}$ noise limit at NSLs for audible tonal and impulsive components, as set out in the Quarries and Ancillary Activities Guidelines. Noise surveys have been carried out during working hours at 8 no. locations around the existing extraction area at Rangue since 2003 (ref. EIAR Figure 8.5), with monitoring temporarily halted in 2010 as the site was not operational during the recession. The findings of same are summarised in EIAR section 8.4 and Table 8.8 as follows: • The existing operation is audible at location N1 northeast of the Rangue factory site, with $L_{Aeq\ T}$ levels of 34-50 dB in recent years and higher levels in earlier years. • N2, southeast of the Rangue site, $L_{Aeq\ T}$ levels have varied and have been <46 dB in recent years. • N3 opposite the Range site entrance from the L4021, higher noise levels but not > 55dB. • N4 and N5, houses to the southwest of the Rangue site. Levels of 30-40 dB including noise from the Riordan's pit. • The pit was not generally audible at N6 further to the southeast. The results of additional noise monitoring carried out in support of the EIAR are presented in Table 8.9, with details of noise sources during monitoring including traffic noise, extraction and processing activity at the Riordan's Pit, which was then in operation. Noise levels recorded were below the 55 dB limit at all locations.

	The estimated residual noise levels (excluding the factory and extraction operations are presented in Table 8.10 and are in the order of 29-32 dB. The detailed results indicate that the existing local noise environment is dominated by road traffic, however noise emissions from the existing processing operation were audible at the nearest dwellings.
Potential Effects	
Do Nothing	The Do Nothing scenario involves a cessation of extraction at the worked out areas north of the L4021. Noise emissions at the existing factory would continue to some extent within the scope of that permission (note now expired). There would be no noise emissions at the proposed extraction area. Existing baseline noise such as traffic noise would continue.
Construction and Operation	The construction stage of the development involves the removal of overburden at Stage 1 of the proposed new extraction area, also the construction of the temporary access, a new haul road and the underpass at the L4021. The EIAR also considers noise impacts associated with the ongoing operation of the factory and extraction area. The development will not result in any increase in traffic noise as there will be no increase in vehicular movements from the previous extraction and processing operations. The removal of overburden and extraction at the new site at Knocknaboola will be carried out at five stages from east to west / northwest, with bench heights between 6.5m-13.5m. Works at the extraction area include use of a mobile screening plant at stages 2-5 with no screening during stage 1. There is an 80m buffer with perimeter berms between the west and southwest sides of the extraction area and nearby residential properties. The proposed new extraction area is to replace Riordan's Pit and there will be no other concurrent extraction activity within the overall landholding. Predicted cumulative noise levels at the nearest dwelling are 60-64 dB $L_{Aeq\ 1h}$ during the construction stage. The EIAR refers to British Standard BS 5228 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1 Noise (2014), which sets threshold values based on ambient $L_{Aeq\ T}$ levels. A 65 dB limit is applied on this basis. EIAR section 8.5.1 presents the results of 'worst case scenario' construction noise modelling, based on detailed construction noise sources including vehicular movements. Predicted construction noise levels are 60-64 dB at the nearest dwelling, prior to any construction of berms at the new extraction area. Cumulative noise modelling for levels at the nearest dwelling, when construction noise is combined with historic noise levels associated with the existing operation at

	this location result in a predicted noise levels of 61-64 dB $L_{Aeq\ 1hr}$ at this location and will not exceed the 65 dB limit. Predicted operational noise levels will lessen when berms are constructed and during the operation of the new extraction area at stages 2-5. EIAR Section 8.5.2 models predicted cumulative operational noise levels based on detailed noise sources (combined noise levels from the existing processing operation and the proposed new extraction area, including screening and vehicular movements). The highest levels will arise at the closest dwelling to the northeast of the extraction area, adjacent to the main site access roadway, with predilected $L_{Aeq\ 1h}$ levels of 47-49 dB. The EIAR notes that these levels will be lower than previous noise levels at this location associated with the permitted extraction and processing operation and vehicular traffic. Predicted noise levels at the other nearby NSRs are generally between 30 and 43 dB. All are less than the 55 dB $L_{Aeq\ 1h}$ limit at noise sensitive locations for audible tonal and impulsive components, as set out in the Quarries and Ancillary Activities Guidelines. The EIAR also considers predicted noise levels in relation to background noise levels, with regard to guidance provided in the Quarries and Ancillary Activities Guidelines, which state that complaints can be expected where extraction noise results in levels 5-10 dB above background $L_{AF90\ T}$ levels. As presented in EIAR Tables 8.15 – 8.20. Increases > 5dB occur in the following instances: • Increase in noise levels of up to 7 dB at the cluster of dwellings to the northwest of the extraction area, towards the end of stages 4 and 5. • At an isolated dwelling on a minor road to the east of the site, the increase will reach 7 dB during stage 2 and 6 dB during stages 3, 4 and 5. • The increase will reach 6dB during stage 5 at several dwellings to the south. The EIAR notes that the identified increases arise due to the relatively low background $L_{AF90\ T}$ levels used. However, these background noise levels used also do not include noise from passing road traffic. A second assessment, which takes traffic noise into account and compares predicted cumulative $L_{Aeq\ 1h}$ levels (from the existing and proposed operations) with residual $L_{Aeq\ 1h}$ levels. This analysis finds that many locations have 0 dB increases. Increases that are predicted to occur do not exceed 4 dB in most instances. However, increases at the isolated dwelling to the east will reach 7 dB during stage 2 and 6 dB during stages 3-5. Predicted $L_{Aeq\ 1h}$ levels at this

	dwelling are 39-40 dB at their highest. The predicted cumulative noise levels are less than the 55 dB LAeq 1h limit at all times. Both the construction and operation stages of the development are highly unlikely to give rise to ground borne vibration as the development involves extraction of sand and gravel without blasting. Vibration is therefore scoped out of the assessment.
Decommissioning	The EIAR does not identify any noise or vibration impacts associated with the decommissioning phase.
Cumulative	As set out above, the EIAR assesses cumulative noise impacts associated with the existing processing operation and the proposed new extraction area. The EIAR does not identify any potential cumulative noise impacts associated with any other noise source in the vicinity.
Mitigation Measures	The proposed mitigation measures for noise impacts may be summarised as follows: • Construction management measures including liaison with local residents and limited construction hours. • Erection of berms around the new extraction area. • Adequate maintenance of site haul roads. • Site management measures including type and maintenance of machinery. • Maintenance of a noise monitoring programme to ensure compliance with noise limits set out in conditions of permission.
Residual Impacts	EIAR section 8.8 addresses residual impacts. Noise levels throughout the operation will be less than the identified 55 dB criterion, including cumulative noise levels. Residual impacts are assessed as imperceptible to not significant at most receptors, increasing to slight negative at the isolated dwelling to the east (moderate negative towards the end of stage 2) and slight negative at the nearest dwellings to the northeast.
Conclusion	See section 7.6 of the planning assessment above, which gives detailed consideration to noise and vibration impacts. To conclude, I have considered all of the written submissions made in relation to noise and vibration and the relevant contents of the file including the EIAR. I am satisfied that the potential for significant adverse noise and vibration impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures

	and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative noise and vibration impacts.

8.4.12. Traffic

Traffic Assessment of Likely Significant Effects	
Issues Raised	The following main issues are raised in relation to traffic in the planning authority reports and the submissions on file: • Third parties submit that the development will generate additional HGV traffic in the area, with potential conflict with local traffic and vulnerable road users, also conflict with tourist traffic. • Concerns that the proposed temporary access is unnecessary and will remain in place longer than necessary.
Context	EIAR Chapter 12 addresses Traffic. It is based on traffic counts carried out over a 12 hour period at the junctions listed below on Tuesday April 5th 2022, also RSA collision data,
Baseline	The traffic counts and analysis indicate that all junctions assessed are currently operating within capacity.
Potential Effects	
Do Nothing	The 'Do Nothing' scenario is presented as a 'without development' scenario in the traffic analysis. All junctions continue to operate within capacity.
Construction and Operation	The EIAR considers potential traffic impacts at the following road junctions: • Junction 1 L7504 / L11733 junction to the northeast of the site • Junction 2 L7504 / M70 junction north of the site • Junction 3 L7504 / L4021 junction adjacent to the site • Junction 4 L4021/ L7505 junction northeast of the site at Killorglin The predicted traffic impacts are assessed on the basis that the L4021 underpass will be in place after the first year of development. There is an assessment for the opening year of 2022 with and the design year of 2023 with the temporary access in operation for a maximum of 12 months. The subsequent traffic impacts are projected for 2028 after five years in operation and 2038 after 15 years, both on the basis that the underpass will be in operation.

	No additional traffic is anticipated in future years over what is currently experienced. It is projected that 15 loads per day will be generated from the Knocknaboola lands, equating to 30 no. vehicle movements at the temporary access. The traffic is added to background flows to model for each junction. The modelling results indicate that all junctions are operating well within capacity with and without the development. All junctions are assessed as 'free flow' including traffic from the development. The overall traffic impacts are assessed as 'slight negative' in EIAR section 12.5.3.
Decommissioning	EIAR section 14.5.5 assesses decommissioning such that buildings, equipment and roads will be removed /dismantled, all hazardous materials will be appropriately handled and a Landscape Restoration Plan will be implemented. No significant impacts are predicted.
Cumulative	EIAR section 12.6.3 considers cumulative traffic impacts. Industry standard rates have been applied to background traffic to consider cumulative impacts for the 5 and 15 year horizons. No significant cumulative impacts are identified.
Mitigation Measures	The proposed mitigation measures for traffic impacts may be summarised as follows: • HGVs carrying material from the new excavated area from the temporary L4021 entrance will use the existing 'non HGV' entrance to the Rangue site from the L4021, rather than the usual L7504 access, in order to avoid passing adjacent residential properties. • Workers at the site will usually access during hours before the identified AM peak of 8.15-09.15. • HGV arrivals will be staggered throughout the day. • The completion of the underpass will remove HGV movements from the surrounding road network reducing impacts on the wider roads network.
Residual Impacts	EIAR section 12.7 sets out residual impacts which are assessed as slight negative .
Conclusion	See section 7.11 of the planning assessment above, which gives detailed consideration to roads and traffic impacts. I have considered all of the written submissions made in relation to traffic and the relevant contents of the file including the EIAR. I am satisfied that the potential for significant adverse impacts on traffic can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore

	satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on traffic.

8.4.13. Interactions

Cumulative effects and residual impacts are examined within each chapter and as discussed above. I consider that the EIAR presents a comprehensive consideration of the relevant developments within the wider area where there is potential for cumulative impacts with the proposed development. In addition, EIAR Chapter 16 presents a summary of interactions. I have considered the cumulative and interactive effects of the proposed development and whether these might as a whole affect the environment, even though the effects may be acceptable on an individual basis. I am generally satisfied that effects arising can be avoided, managed and mitigated by the measures which form part of the proposed development, mitigation measures, and suitable conditions. There is, therefore, nothing to prevent the granting of permission on the grounds of cumulative impacts or interactions.

8.5. Reasoned Conclusion on the Significant Effects

8.5.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant, the technical reports on file by the planning authority, submissions by appellants, observers and prescribed bodies 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, and will be mitigated as follows:

Population and Human Health:

Potential impacts on population and human health associated with noise and dust emissions from the development, which will be mitigated by environmental management measures, as set out in the relevant EIAR chapters 8 and 9 respectively. Positive impacts on population and human health associated with the economic and social benefit of employment created as a result of the development.

Biodiversity:

Biodiversity impacts relating to loss of habitats at the new excavation area including areas of wet grassland, wet heath, cutover bog and bog woodland, which are rated

as locally important and c. 3.2 ha of lowland blanket bog rated as nationally important. Also disturbance / displacement of species due to noise and lighting associated with the development and with potential impacts on water quality at the Glashacoomnafanaida Stream. These impacts will be mitigated by environmental management measures including control of noise and light emissions and control of surface water runoff, along with ongoing monitoring of various parameters including noise and dust deposition, as set out in the EIAR and the proposed Environmental Management System. The excavated area will ultimately be restored to create new habitats using peat and soil stored at the site, with biodiversity enhancement measures including bat, bird and insect nesting boxes. There is also a positive biodiversity impact associated with the elimination of invasive species currently present at the development site.

Land, Soil, Geology and Hydrogeology:

Impacts on land, soils, geology and hydrogeology as a result of the removal of c. 16.75 ha of peat and soils overburden and the permanent removal of an estimated 1,630,400 cu.m. of sand and aggregates at the development site. These impacts will be mitigated by the storage of peat and soils at the site, for eventual use in site restoration. No excavation will take place below the water table. The development is likely to result in a small reduction in baseflow to the Glashacoomnafanaida Stream, which will be offset by a small increase in baseflow to surface water downgradient of the site due to increased percolation to groundwater at the excavated area. Abstraction of groundwater at the Rangue lands and discharge to the Glashacoomnafanaida Stream will continue under licence. Potential contamination of groundwater due to increased groundwater vulnerability at the new extraction area will be mitigated by environmental management measures, as set out in the EIAR and proposed Environmental Management System.

Water:

Potential impacts on water quality at the Glashacoomnafanaida Stream, with consequent impacts on aquatic habitats and species, due to silt laden runoff or to contamination by hydrocarbons or other spillages. These impacts will be mitigated by the continued recycling of wastewater at the factory via settlement ponds, also measures to control silt at the overall site including silt traps on drains; planted

berms around the new excavated area and particularly at the eastern site boundary; a silt fence at the eastern site boundary and a 17m buffer between the excavated area and the stream; correct storage of fuel and other materials, along with other environmental management measures, as set out in the EIAR and proposed Environmental Management System. Positive impacts on water associated with the replacement of existing wastewater treatment at the factory with a new upgraded wastewater treatment system.

Air Quality:

Potential adverse impacts on air quality in the vicinity of the site associated with dust deposition as a result of excavation and movement of aggregates at the overall site, also processing of aggregates at the factory. These impacts are to be mitigated by environmental management measures as set out in the EIAR and proposed Environmental Management System including storage of peat and soil removed from the excavated area in planted berms; spray of machinery and haul routes during dry weather; adequate maintenance of machinery; limited truck speeds and drop height; road sweeping and other dust management measures during extraction and processing activities. Ongoing dust emissions are to be monitored at the site.

Landscape:

Potential adverse impacts on the landscape due to the creation of the new excavation area and associated roads infrastructure, which will be visible from adjacent houses and in the wider landscape. These will be mitigated by the retention of existing vegetation at roadside boundaries, the creation of planted berms around the excavated area and the planting of a woodland buffer at the eastern site boundary. The excavated area will ultimately be restored to create new habitats. No impacts on any designated views or prospects are anticipated.

Noise and Vibration:

Potential noise impacts at the factory and excavation area will be managed by mitigation measures as set out in the EIAR and proposed Environmental Management System including limited hours of operation; erection of berms around the extraction area to act as acoustic barriers; adequate maintenance of site haul roads; site management measures including type and maintenance of machinery and the ongoing maintenance of a noise monitoring programme to ensure

compliance with noise limits set out in conditions of permission. The development excludes screening and processing of aggregates at the Knocknaboola site.

Traffic:

The development will generate limited additional HGV movements on local roads. Local junctions will continue to operate within capacity. Impacts will be mitigated by the construction of an underpass at the L4021 to connect the new extraction area to the factory, also by limited access of HGVs to the factory site using the entrance from the L7504 only. Other traffic mitigation measures include use of prescribed haul routes, regular maintenance of haulage vehicles and limited hours of operation.

8.5.2. The submitted EIAR has been considered with regard to the guidance provided in the EPA documents 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (draft August 2017) and 'Advice Notes for Preparing Environmental Impact Statements' (draft September 2015). The assessments provided in the individual EIAR chapters are considered satisfactory. The likely significant environmental effects arising as a consequence of the proposed development have therefore been satisfactorily identified, described and assessed. They would not require or justify refusing permission for the proposed development or requiring substantial amendments to it.

9.0 Appropriate Assessment

9.1. AA Introduction

9.1.1. This Appropriate Assessment is based on the Report in Support of Appropriate Assessment and Natura Impact Statement (NIS) dated December 2021 submitted with the application on 19th January 2022, as well as the second Report in Support of Appropriate Assessment and NIS dated August 2022, as submitted to KCC on 12th September 2022. The assessment is also based on my site inspection of 5th July 2024 and on the other documentation on file including the EIAR, the proposed Site Restoration Plan, the submitted CEMP, the technical reports on file from KCC and submissions and observations. This information including the information contained within the submitted reports is considered sufficient to allow me undertake an AA of the proposed development.

9.1.2. I note the AA Screening Report dated August 2020 submitted with the application to KCC on 19th January 2022, which relates to a different development / project, namely a drainage channel to the east of the Glashacoomnafanaida Stream. I have read this document for reference purposes.

9.1.3. I am satisfied that adequate information is provided in respect of the baseline conditions, potential impacts are clearly identified, and sound scientific information and knowledge was used. The applicant's Report in Support of AA and NIS are based on data collected at detailed site surveys as set out in section 4.7 of the report, including habitat surveys carried out on 27th September 2020, 11th April, 8th May, 22nd June, 1st November 2021, 10th May and 28th July 2022. Section 1.3 of the report details the extensive experience and credentials of its contributors. I note that the report was prepared by several competent and experienced Ecologists, in line with best practice guidance. The site is described adequately and potential impacts arising are also described in detail. Having regard to the information before me, I am satisfied that the best scientific knowledge has been used in this instance. I am satisfied that the development has been considered in light of the requirements of Sections 177U and 177V of the Planning and Development Act 2000 as amended. I consider that the Board can be confident that the information and assessment before them is complete, precise and definitive for the purpose of AA.

9.2. **Description of the Project**

9.2.1. I refer to the detailed description of the development as set out in section 2.0 above and to the description of the development site and its surrounds as set out in section 1.0 above.

9.2.2. I note that the applicant's Report in Support of Appropriate Assessment / Natura Impact Statement (NIS) refers to the development including primary screening and crushing at the proposed new extraction area. This element of the development is omitted from the revised proposals submitted to KCC on 12th September 2022. It is also omitted as a condition of the permission issued by KCC under reg. ref. 22/33. However, it is taken into consideration in the following assessment under the precautionary principle and as included in the applicant's NIS.

9.3. **AA Stage 1**

9.3.1. I have considered the proposed development in light of the requirements of S177U of the Planning and Development Act 2000.

9.3.2. Potential Impact Mechanisms

I do not consider that the development is likely to generate any direct impacts which uncontrolled might represent a risk to the achievement of the conservation objectives of European Sites, given that it is not within, immediately adjacent to or necessary for the management of any European Site.

The following elements of the development are considered to represent a potential risk to European sites, with regard to the characteristics of the development, the source-pathway-receptor relationship to European sites and to the Qualifying Interests (QIs) and conservation objectives of relevant designated sites:

- Silt laden surface water runoff from aggregate washing and processing or from removal of overburden or from stockpiled materials and/ or products at the development site to the Glashacoomnafanida Stream and consequent impacts on water quality and designated habitats and species at hydrologically connected European sites. Also impacts on water quality due to potential contaminated run off from hydrocarbon spillages or other pollutants at the development.
- The development could result in additional percolation to groundwater or in contamination of groundwater with effects on the Glashacoomnafanaida Stream and associated impacts on aquatic habitats and species listed as QIs of European sites.
- Noise, vibration or light disturbance or water quality impacts from the development could result in ex-situ impacts on mobile species listed as QIs of relevant European sites.
- The proposed new excavation area could result in ex-situ impacts on mobile species listed as QIs of relevant European sites due to loss or change of commuting or foraging habitat.
- Excavation and vehicular movements at the development could result in the spread of invasive species known to be present at the development site, with

consequent impacts on habitats and species listed as Qis of relevant designated sites.

9.3.3. European Sites at Risk

The following European Sites and qualifying features are considered to be potentially at risk with regard to the potential impact mechanisms as set out above. The submitted Report in Support of AA lists all European sites within 15 km of the development site, along with their QIs and conservation objectives and the Board is referred to this for reference purposes. The following designated sites have been selected based on careful consideration of potential impact mechanisms using the source-pathway-receptor model, along with the characteristics of the development, the development site and the European sites, including the qualifying features and conservation objectives of same and relevant supporting documents.

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

Effect mechanism	Impact pathway/Zone of influence	European Site(s)	Qualifying interest features at risk
Hydrological connection	Glashacoomnafanaida Stream	Castlemaine Harbour SAC (000343)	Surface water runoff and siltation resulting in potential impacts on aquatic species and habitats listed as QIs for the SAC. Potential impacts associated with the spready of invasive species known to be present at the development site, to hydrologically connected habitats listed as Qis of the SAC.
Hydrological connection	Glashacoomnafanaida Stream	Castlemaine Harbour SPA (004029)	Surface water runoff and siltation resulting in potential impacts on aquatic species and habitat listed as QIs for the SPA. Potential disturbance or displacement impacts on QI species of the SPA.
Habitat disturbance	Impacts on ex situ habitats of QIs	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365)	Potential disturbance / displacement impacts on the QI species Otter due to noise from the development. No hydrological or hydrogeological pathway between the development site and the SAC. However, there is potential for ex situ impacts on mobile aquatic species listed as conservation objectives of the SAC as a result of impacts on water quality at Castlemaine Harbour.

With regard to other designated sites in the wider area, the applicant's Stage I AA screening comments that there is no likely potential impact on the Lough Nganavan and Lough Nambrackdarrig SAC (000370) or on the Slieve Mish Mountains SAC (002185) due to the intervening distances and/or lack of hydrological connections. The habitats at the development site do not provide critical foraging habitat for qualifying species of the Iveragh Peninsula SPA (004154), Dingle Peninsula SPA (004153) or Killarney National Park SPA (004038) and, given their distance from the development site, no potential impacts on same have been identified. While it is noted that Greenland White-fronted Goose (a Q.I. of the Killarney National Park SPA) favour bog habitats such as those at the location of the proposed new extraction area, the development site is significantly outside the core range for these species (assessed as 5-8 km based on Scottish Natural Heritage advice), noting that the Killarney National Park SPA is 14.3 km southwest of the development site. These conclusions are accepted with regard to the relevant conservation objectives of those European sites. Hen Harrier were recorded overflying the site on two occasions (as detailed in the submitted EIAR and EIA section above). No nesting Hen Harrier were recorded at the development site. The closest Hen Harrier SPA is the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161), approximately 28 km northeast of the development site. Breeding Hen Harriers have been recorded feeding over 11 km from the nest in Ireland and up to 9 km from nests in Scotland. Typical foraging ranges are considered to be much smaller. Therefore, the SPA is considered to be outside the zone of influence of the development.

9.3.4. Likely Significant Effects on European Sites

It is considered that there are the following potential significant effects 'alone' on the QIs of the relevant identified European sites.

Table 2: Could the project undermine the conservation objectives 'alone'			
European Site and qualifying feature	**Conservation objective (summary)**		**Could the conservation objectives be undermined (Y/N)?**
Castlemaine Harbour SAC (000343)			
Conservation objectives to maintain or restore the favourable conservation condition of the following qualifying Annex I habitats and Annex II species as defined by specific attributes and targets:			
Q.I.	**Maintain / Restore**		
1095 Sea lamprey Petromyzon marinus	Maintain	The Glashacoomnafanaida Stream ultimately discharges to Castlemaine Harbour c. 5.2 km downstream of the development site. Surface water runoff from site stripping / removal of overburden or from aggregate extraction or from processing activities or from stored materials could potentially impact on water quality in the stream and subsequently impact aquatic habitats in Castlemaine Harbour. Also potential impacts on aquatic habitats from inadvertent spillages of hydrocarbons or other contaminants, with consequent impacts on flora and fauna. Reduction in water quality could potentially lead to mortality / morbidity effects and reduction in prey availability. Y The invasive species Rhododendron was recorded at the proposed new extraction area and Giant Rhubarb was recorded scattered within the existing worked out area. Hydrologically connected SAC qualifying species and habitats could be impacted by the spread of invasive species from the development site. Y Noise from the operation of the development could result in disturbance / displacement of Otter due to noise and light impacts, with potential impacts on reproductive success if severe. Elevated silt levels can impact Atlantic Salmon and Lamprey species in particular and significant impacts on fish stocks can impact on piscivorous species including Otter due to reduction of prey availability. Y
1099 River lamprey Lampetra fluviatilis	Maintain	
1106 Atlantic salmon (Salmo salar) (only in fresh water)	Maintain	
1355 Otter Lutra lutra	Restore	
1130 Estuaries	Maintain	
1140 Mudflats and sandflats not covered by seawater at low tide	Maintain	
1310 Salicornia and other annuals colonizing mud and sand	Maintain	
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Maintain	
1410 Mediterranean salt meadows (Juncetalia maritimi)	Maintain	
1210 Annual vegetation of drift lines	Maintain	These habitats / species are located in an area >8km from the development site. Given the distance involved, dilution available and their largely terrestrial nature, no impacts will occur. N
1220 Perennial vegetation of stony banks	Maintain	
2110 Embryonic shifting dunes	Maintain	
2120 Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	Maintain	
2130 * Fixed coastal dunes with herbaceous vegetation ("grey dunes")	Restore	

2170 Dunes with Salix repens ssp. argentea (Salix arenariae)	Maintain	
2190 Humid dune slacks	Maintain	
1395 Petalwort Petalophyllum ralfsii	Maintain	
91E0 * Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion,Alnion incanae, Salicion albae)	Restore	The closest example of this habitat is located >3.5 km away and upgradient of the development site. There is no hydrological pathway. No impacts will occur. N
Castlemaine Harbour SPA (004029)		
Conservation objectives to maintain the favourable conservation condition of the following habitat and Annex I species as defined by specific attributes and targets:		
Q.I.	**Maintain/ Restore**	
A046 Light-bellied Brent Goose Branta bernicla hrota wintering	Maintain	The SPA is 3.8 km north of the development site and hydrologically connected. Habitats within the development site may provide ex situ foraging habitat for bird species listed as QIs of the SPA. However, given the distance from the SPA and the availability of large areas of similar habitat in the surrounding landscape, no direct impacts from loss of ex situ foraging habitat will occur. N No breeding or roosting habitat for species listed as QIs of the SPA will be affected. No suitable habitat for wading birds, which are SCI species for the SPA, was recorded within the development site. N Ponds within the existing extraction area at Rangue are used by Mallard. These will be maintained as part of the development. N Potential disturbance /displacement impacts on bird species from noise and lighting during construction and operation. Y Potential impacts on surface water quality as a result of the development could affect hydrologically connected habitats of these QI species. Y
A050 Wigeon Anas penelope wintering	Maintain	
A053 Mallard Anas platyrhynchos wintering	Maintain	
A054 Pintail Anas acuta wintering	Maintain	
A062 Scaup Aythya marila wintering	Maintain	
A065 Common Scoter Melanitta nigra wintering non-breeding	Maintain	
A130 Oystercatcher Haematopus ostralegus wintering	Maintain	
A137 Ringed Plover Charadrius hiaticula wintering	Maintain	
A144 Sanderling Calidris alba wintering	Maintain	
A157 Bar-tailed Godwit Limosa lapponica wintering	Maintain	
A162 Redshank Tringa totanus wintering	Maintain	
A164 Greenshank Tringa nebularia wintering	Maintain	
A169 Turnstone Arenaria interpres wintering	Maintain	
A346 Chough Pyrrhocorax pyrrhocorax non-breeding	Maintain	
A999 Wetlands & Waterbirds	Maintain	
A001 Red-throated Diver Gavia stellata wintering	Maintain	Potential significant impacts on fish stocks from adverse impacts on water quality could impact these piscivorous bird species due to a reduction in prey availability. Y
A017 Cormorant (Phalacrocorax carbo) wintering	Maintain	
Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365)		
Conservation objectives to maintain or restore the favourable conservation condition of the following qualifying Annex I habitats and Annex II species as defined by specific attributes and targets:		
Q.I.	**Maintain / Restore**	
Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]	Restore	The SAC is 2.3 km southwest of the development site. There is no hydrological or hydrogeological pathway between the development site and the

Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130]	Restore	SAC. Therefore no risk of impacts on these QI habitats due to changes to water quality or the spread of invasive species. N
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	Maintain	
Northern Atlantic wet heaths with Erica tetralix [4010]	Restore	
European dry heaths [4030]	Restore	
Alpine and Boreal heaths [4060]	Restore	
Juniperus communis formations on heaths or calcareous grasslands [5130]	Maintain	
Calaminarian grasslands of the Violetalia calaminariae [6130]	Maintain	
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]	Restore	
Blanket bogs (* if active bog) [7130]	Restore	
Depressions on peat substrates of the Rhynchosporion [7150]	Restore	
Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	Restore	
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	Restore	
Taxus baccata woods of the British Isles [91J0]	Restore	
Geomalacus maculosus (Kerry Slug) [1024]	Maintain	This species was not recorded at the development site. An assessment of habitats at the development site indicates that the area is not of value for the Kerry Slug due to a lack of rocky outcrops that would provide feeding areas. N
Euphydryas aurinia (Marsh Fritillary) [1065]	Restore	This species was not recorded at the development site. Devil's Bit Scabious Succisa Pretensis, which is the main food source for the species, was recorded at ungrazed wet grassland within the development site. There are potential impacts associated with loss of foraging habitat at the development site. However, there is no evidence to indicate that this location is of significant value for the species. Therefore, no impact is predicted to occur from loss of ex situ foraging habitat. N
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	Restore	No hydrological connection therefore no impact on these QI species. N
Najas flexilis (Slender Naiad) [1833]	Maintain	
Petromyzon marinus (Sea Lamprey) [1095]	Maintain	The Glashacoomnafanaida Stream ultimately discharges to Castlemaine Harbour c. 5.2 km

Lampetra fluviatilis (River Lamprey) [1099]	Maintain	downstream of the development site. Surface water runoff from site stripping / removal of overburden or from aggregate extraction or from processing activities or from stored materials could potentially impact on water quality in the stream and subsequently impact aquatic habitats in Castlemaine Harbour. Also potential impacts on aquatic habitats from inadvertent spillages of hydrocarbons or other contaminants, with consequent impacts on flora and fauna. Reduction in water quality could potentially lead to mortality / morbidity effects and reduction in prey availability. Y Noise and light from the development could result in disturbance / displacement of Otter, with potential impacts on reproductive success if severe. Y
Salmo salar (Salmon) [1106]	Maintain	
Lutra lutra (Otter) [1355]	Maintain	
Lampetra planeri (Brook Lamprey) [1096]	Maintain	This species is confined to freshwater habitats and there is no pathway for impacts. N
Alosa fallax killarnensis (Killarney Shad) [5046]	Restore	This species is unique to Lough Leane, c. 10 km from the development site, no hydrological connection. Potential impacts are therefore screened out. N
Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303]	Maintain	This species was not recorded at the development site during bat surveys. The site is considered to have low potential for bat roosts and no significant roosting habitat was recorded. There are potential impacts associated with the presence of foraging and commuting habitat at the development site. Y
Trichomanes speciosum (Killarney Fern) [1421]	Maintain	This species has specific habitat requirements for shaded, humid habitats as found in dripping caves, cliffs, crevices and gullies by waterfalls, crevices in woodland, and occasionally on the floor of damp woodland. These habitats would not be affected by the development due to lack of hydrological connection. No potential impacts on these species. N

9.3.5. AA Stage 1 Conclusion

I conclude that the proposed development would have a likely significant effect 'alone' on the following qualifying interests of the following European sites / QIs:

- Castlemaine Harbour SAC (000343), certain aquatic habitats and species listed as QIs of the SAC as detailed above.
- Castlemaine Harbour SPA (004029), certain species listed as QIs of the SPA as detailed above and the related QI habitat Wetland and Waterbirds.
- Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365), QI species that use the site for foraging, as listed above. Potential

ex situ impacts on certain QI species due to impacts on water quality, as detailed above. Potential disturbance/ displacement impacts on the mobile QI species Otter. Potential impacts on the foraging habitat of the QI species Lesser Horseshoe Bat.

from effects associated with:

- Changes in water quality at the Glashacoomnafanaida Stream
- Disturbance / displacement and/ or loss of foraging or commuting habitat
- Spread of invasive species known to be present at the development site

It is therefore determined that Appropriate Assessment (stage 2) under Section 177V of the Planning and Development Act 2000 is required on the basis of the effects of the project 'alone'.

This conclusion is based on:

- The submitted Report in Support of Appropriate Assessment including a Natura Impact Statement (NIS) and impacts predicted in same.
- Other documentation on file including the submitted EIAR, technical reports, and third party appeals / submissions.
- The site inspection.
- Hydrological connections between the development site and designated sites.
- The zone of influence of the development with regard to intervening distances to designated sites and known foraging ranges of QI species, and the presence or otherwise of meaningful pathways to European sites.
- Standard pollution controls that would be employed regardless of proximity to a European site and effectiveness of same

No measures intended to avoid or reduce harmful effects on European sites were taken into account in reaching this conclusion.

I therefore concur with the conclusion of the submitted Report in Support of Appropriate Assessment, that the likelihood that the project could have a significant effect on these European sites in view of their Conservation Objectives cannot be ruled out in the absence of further analysis or the application of mitigation measures. As such the project should be subject to a Stage 2 Appropriate Assessment.

9.3.6. Stage 1 Screening Statement

The proposed development has been 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 could result in significant effects on European Sites Castlemaine Harbour SAC; Castlemaine Harbour SPA and Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC in view of those site's Conservation Objectives, and Appropriate Assessment is therefore required.

9.4. Stage 2 Appropriate Assessment

9.4.1. Stage 2 Introduction

The following Stage 2 AA considers the potential impacts of the development on the integrity of the above identified relevant European sites, both alone and in combination with other projects or plans, and whether these impacts are likely to be significant. As set out above, potential impact pathways on qualifying interests relate to (i) potential ex-situ impacts on qualifying species from noise and disturbance; (ii) potential impacts on water quality and aquatic ecology and related effects on habitats and species listed as QIs for European sites hydrologically connected to the development site or ex-situ impacts on mobile aquatic species listed as QIs of the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC; (iii) potential impacts on habitats listed as QIs of the relevant European Sites associated with the spread of invasive species and (iv) potential cumulative / in combination impacts on QIs / conservation objectives of the relevant European sites. These potential impacts may be considered with regard to each relevant designated site as follows. The following assessment is based on information provided in the submitted NIS in relation to the relevant designated sites, including the detailed conservation objectives, attributes and targets, as well as information provided in the EIAR and other documentation on file and the site inspection.

9.4.2. Castlemaine Harbour SAC (000343)

Q.I.	Assessment
1095 Sea lamprey Petromyzon marinus	Potential impacts on aquatic species listed as QIs of the SAC associated with silt in surface water run off to the Glashacoomnafanaida Stream, also peat slippage during site works. Suspended solids can reduce water visibility making it difficult for species to find prey. Siltation can also result in impacts on aquatic plant communities. The proposed mitigation
1099 River lamprey Lampetra fluviatilis	

1106 Atlantic salmon (Salmo salar) (only in fresh water) 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi)	measures will prevent spillage of hydrocarbons or other contaminants during construction and operation at the development site. The development includes various measures to control surface water runoff and to prevent silt from entering the Glashacoomnafanaida Stream including recycling water and use of settlement lagoons at the concrete facility; continued management of abstracted groundwater at the existing worked out area at Rangue; careful removal and storage of overburden at the extraction area; creation of vegetated soil berms at the extraction and the provision of a 15m buffer and silt fence between the extraction area and the stream; no new excavation >1m above the groundwater table. Refer to the EIAR section above for detailed consideration of all of these measures. Refer to the above assessment of peatland impacts and the issue of potential peat slippage. There is no significant potential for peat slippage at the site with regard to topography and ground conditions. No significant consequent impacts on water quality in the stream are predicted. The development proposes to replace an existing septic tank at the concrete processing facility with a new WWTS, refer to above assessment of same, including consideration of the site characterisation assessment. Given the limited scale of the discharge and the proposed tertiary treatment of wastewater, no significant impact on groundwater or surface water is predicted and no consequent impacts on designated sites. No impacts on baseflows at the Glashacoomnafanaida Stream are predicted, refer to above assessment of water impacts and to the EIAR assessment of hydrological / hydrogeological impacts. The applicant has proposed detailed measures during construction and operation to eliminate invasive species at the development site and to ensure that they do no spread further. These measures will ensure that the spread of invasive species does not affect the integrity of hydrologically connected designated sites.
1355 Lutra lutra (Otter)	Potential disturbance impacts on Otter and conservation objectives to restore the favourable conservation condition of the species in Castlemaine Harbour SAC, as defined by specific attributes and targets relating to the distribution; extent of terrestrial, marine and freshwater habitats; number of couching sites and holts; fish biomass available and maintenance of commuting routes. The development site is not within the 250m Otter buffer zones mapped for the SAC. It is probable that Otters occur within the lower sections of the Glashacoomnafanaida Stream, however the stretch of the stream adjoining the development site dries up periodically and therefore does not support the fish stocks on which Otter feed. No Otter holts or signs of Otter were noted during the site survey. Otters are generally nocturnal and are not considered to be sensitive to noise or disturbance during daylight hours when the development would be active. Noise levels during construction / operation will be within prescribed limits and both will take place during daytime hours. Refer to the assessment of potential noise impacts in the EIAR and in the above planning assessment. In addition, the species is known to be able to habituate to human activities. No significant impacts on Otter are therefore predicted.

9.4.3. Castlemaine Harbour SPA

The applicant's Report in Support of AA / NIS identifies the following potential impacts on the QIs of the SPA:

Q.I.	Assessment
A046 Light-bellied Brent Goose Branta bernicla hrota wintering	Lands in the vicinity of the development site could provide ex situ foraging habitat for Bar-tailed Godwit, Mallard and Chough. Birds that forage in the vicinity of the site are already habituated to noise form existing quarry operations. Therefore, no ex situ impacts are expected to occur, taking into account proposed mitigation measures to limit noise impacts. The construction and operation of the development will take place during daylight hours, therefore no displacement or disturbance impacts on bird species due to light pollution are predicted. Note above discussion of impacts on water quality in relation to potential impacts on the piscivorous species Red-throated Diver Gavia and Cormorant.
A050 Wigeon Anas penelope wintering	
A053 Mallard Anas platyrhynchos wintering	
A054 Pintail Anas acuta wintering	
A062 Scaup Aythya marila wintering	
A065 Common Scoter Melanitta nigra wintering non-breeding	
A130 Oystercatcher Haematopus ostralegus wintering	
A137 Ringed Plover Charadrius hiaticula wintering	
A144 Sanderling Calidris alba wintering	
A157 Bar-tailed Godwit Limosa lapponica wintering	
A162 Redshank Tringa totanus wintering	
A164 Greenshank Tringa nebularia wintering	
A169 Turnstone Arenaria interpres wintering	
A346 Chough Pyrrhocorax pyrrhocorax non-breeding	
A999 Wetlands & Waterbirds	

A001 Red-throated Diver Gavia stellata wintering	
A017 Cormorant (Phalacrocorax carbo) wintering	

9.4.4. Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC

Q.I.	**Assessment**
Petromyzon marinus (Sea Lamprey) [1095]	Refer to above consideration of potential impacts on water quality at the Glashacoomnafanaida Stream.
Lampetra fluviatilis (River Lamprey) [1099]	
Salmo salar (Salmon) [1106]	
Lutra lutra (Otter) [1355]	Otter is known to occur within Caragh Lake. Refer to the above consideration of potential impacts on Otter within the Castlemaine Harbour SAC.
Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303]	The conservation objective target in relation to Lesser Horseshoe Bat foraging habitat is no significant decline in potential foraging habitat within 2.5 km of potential bat roosts. The development site is outside the 2.5 km buffer zone for Lesser Horseshoe Bat roosts within the SAC. The closest known Lesser Horseshoe Bat roost is located 1.1 km from the development site, however this is a small colony and would not meet the criteria for a qualifying Lesser Horseshoe Bat Roost. There will be no disturbance impacts on this roost due to the intervening distance. There is no potential for disruption of commuting and foraging routes at the development site due to light disturbance as the development will take place during daylight hours. Although the loss of habitat at the proposed extraction area could impact on potential feeding habitat for the species, there is no evidence to indicate that this location is of significant value for the species. Therefore, no impact is predicted to occur from loss of ex situ foraging habitat.

9.4.5. Cumulative / In Combination

Table 24 of the applicant's Report in Support of AA identifies plans and projects that could result in cumulative impacts on the relevant designated sites, including the River Basin Management Plan, the Inland Fisheries Ireland Corporate Plan, Irish Water Capital Investment plans, NPWS Conservation Management Plans and WWTP discharges at Killarney and Killorglin. Potential impacts on the relevant European sites relate to general impacts on biodiversity and on water quality. No significant potential for adverse impacts on the integrity of any European sites is identified.

The site is located within a Rural General area as per the current Kerry County Development Plan 2022-2028. I note development plan objectives to maximise the economic potential and development of natural resources in a sustainable manner, ref. objectives KCDP 9-64, KCDP 9-65 and KCDP 9-67. The development plan has been subject to Appropriate Assessment, ref Appendix 5 of the plan, which includes a Natura Impact Report and consideration of in-combination effects. The development was considered by the planning authority under the previous 2015 development plan, which was also subject to AA, ref Volume 4 of same, and was granted permission by the planning authority. No significant potential for adverse impacts on the integrity of European sites is identified.

There are two other quarries located within 3 km of the development site, the nearest being 1.5 km to the west at Glounagillagh and the other 1.7 km to the east at Ownagarry. No significant cumulative effects are identified with regard to the existing licenced discharge from the development site and to the intervening distances, noting also that there are no hydrological connections between the development site and the other quarries. While there are historic quarries in the immediate vicinity of the development site, these are now disused and, in the case of Riordan's Pit, subject to site restoration. No significant potential for in-combination or cumulative impacts is identified. There are no other significant developments in the vicinity of the site beyond individual residential dwellings I am satisfied on this basis that there is no potential for in combination noise or water quality impacts or consequent impacts on the integrity of relevant European sites.

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 sites.

9.4.6. Mitigation Measures

The proposed mitigation measures set out in the applicant's Report in Support of AA / NIS may be summarised as follows (refer also to the proposed detailed mitigation measure details set out above in relation to EIA):

- Construction best practice measures as per the submitted proposed Environmental Management System
- Quarry restoration plan

- Construction of a soil berm around the entire new extraction area. The soil berm along the southwestern boundary will be constructed to retain the upgradient wetlands. An upgradient interceptor drain will allow runoff from the upgradient peat to discharge to the Glashacoomnafanaida Stream. Existing drainage will be maintained above the proposed underpass tunnel. Silt traps will be constructed within the drainage channel.
- 17m buffer zone between the extraction area and the stream with a silt fence to prevent silt laden runoff to the Glashacoomnafanaida Stream.
- No excavation of aggregate within 1m of water table.
- Management of peat and soil stripped from the site in storage areas for reuse.
- Measures to prevent / control spillages of hydrocarbons or other contaminants at the operational factory and extraction area.
- Surface water management measures and recycling of wash water in settlement lagoons.
- Noise reduction measures
- Measures to eliminate invasive species known to be present at the development site.

9.4.7. Conclusions on Site Integrity

I have considered the mitigation measures identified in the applicant's Report in Support of AA / NIS as well as the detailed mitigation measures proposed in the EIAR. Taking into consideration the information presented, which I consider the best scientific information available, I am satisfied that the measures detailed will be effective and reliable in avoiding and reducing any effects to a non-significant level. The timing of the application of measures has been considered and will be applied as detailed. The integration of all these measures including the proposed Environmental Management System and the ecological supervision of the project will ensure that they will be delivered as designed and achieve their objectives which is to ensure no adverse effects on the site integrity of the suite of European Sites as detailed below.

9.4.8. Response to Comments on AA in Third Party Submissions

I note that the third party appeals and other submissions on file raise many general environmental issues. These are addressed elsewhere in this report, particularly in section 7.12 on Ecology and in the above EIA. The submissions also note that the development site is hydrologically connected to several designated sites. I am satisfied that this issue is comprehensively addressed in the submitted Report in Support of AA and NIS, as discussed above. It is also submitted that the NIS does not take into account cumulative impacts of the development, e.g. through analysis of cumulative impacts of peat extraction at sites within the zone of influence. However, I am satisfied that, as discussed elsewhere in this report, potential cumulative impacts on designated sites are adequately considered with regard to the conservation objectives of the relevant designated sites and to the specific source-pathway-receptor impact mechanisms identified.

9.5. **AA Stage 2 Conclusion / Determination**

9.5.1. The AA Screening Report and other documentation on file (including the EIAR) states that:

- The proposed development lies outside the boundaries of the designated sites identified above and therefore there will be no reduction in habitat or loss of species nor will there be any fragmentation, disruption, disturbance or change to any element of any designated site. There will be no direct/indirect/cumulative impacts.
- The development has been designed to include mitigation measures to prevent any adverse impacts on water quality at the Glashacoomnafanaida Stream or consequent impacts on designated sites, hydrologically connected or otherwise.
- There is no potential for cumulative effects of habitat loss or fragmentation to occur. There are no pathways for the project to act in-combination with other plans or projects.
- Pollution control/best practice construction practices have been outlined.
- Neither the planning authority nor any prescribed body have not raised concerns in relation to this matter. The water management measures recommended by

Inland Fisheries Ireland are included in the mitigation measures proposed in the EIAR.

9.5.2. The proposed development has been considered in light of the assessment requirements of Sections 177U and 177V of the Planning and Development Act 2000 as amended. Having carried out screening for Appropriate Assessment of the proposed development, it was concluded that it would be likely to have a significant effect on Castlemaine Harbour SAC (000343), Castlemaine Harbour SPA (004029) and Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365). 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. Following an Appropriate Assessment, it has been determined that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the above named European sites, or any other European site, in view of the sites' Conservation Objectives.

9.5.3. This conclusion is based on a complete assessment of all aspects of the development including potential impacts on surface water quality and consequent impacts on aquatic species and habitats; potential disturbance or displacement impacts due to noise and light impacts at the development site; potential ex-situ impacts due to change or loss of habitats at the development site and potential impacts associated with the spread of invasive species known to be present at the development site. There is no reasonable doubt as to the absence of adverse effects. The development will, through the design and application of mitigation measures as detailed and conditioned ensure the lasting preservation of the essential components and characteristics of European Sites. The mitigation measures have been assessed as effective and fully implementable. Therefore, the AA has demonstrated beyond reasonable doubt that there will be no adverse effects on the integrity of any European Site.

10.0 **Recommendation**

10.1. Having regard to the foregoing I recommend that permission for the proposed development be granted for the following reasons and considerations subject to conditions.

11.0 **Reasons and Considerations (Draft Order)**

In coming to its decision, the Board had regard to:

a) the policies set out in the Kerry County Development Plan relating to the extractive industry,

b) the provisions of the Guidelines for Planning Authorities on Quarries and Ancillary Activities issued by the Department of the Environment, Heritage and Local Government in 2004,

c) the pattern of development in the area,

d) the range of mitigation measures set out in the documentation received, including the Environmental Impact Assessment Report, the Natura Impact Statement and Further Information,

e) the planning history of the site,

f) the submissions made in connection with the planning application and appeal.

Environmental Impact Assessment:

The Board completed an environmental impact assessment of the proposed development taking account of:

a) the nature, scale, location and extent of the proposed development,

b) the Environmental Impact Assessment Report and associated documentation submitted in support of the planning application, including the further information material,

c) the submissions received during the course of the application, and

d) the Inspector's Report.

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the Applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the Environmental Impact Assessment Report and associated documentation submitted by the Applicant and submissions made in the course of the planning application. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

- Population and Human Health:

  Potential impacts on population and human health associated with noise and dust emissions from the development, which will be mitigated by environmental management measures, as set out in the relevant Environmental Impact Assessment Report chapters 8 and 9 respectively. Positive impacts on population and human health associated with the economic and social benefit of employment created as a result of the development.

- Biodiversity:

  Biodiversity impacts relating to loss of habitats at the new excavation area including areas of wet grassland, wet heath, cutover bog and bog woodland, which are rated as locally important and circa 3.2 ha of lowland blanket bog rated as nationally important. Also disturbance / displacement of species due to noise and lighting associated with the development and with potential impacts on water quality at the Glashacoomnafanaida Stream. These impacts will be mitigated by environmental management measures including control of noise and light emissions and control of surface water runoff, along with ongoing monitoring of various parameters including noise and dust deposition, as set out in the Environmental Impact Assessment Report and the proposed Environmental Management System. The excavated area will ultimately be restored to create new habitats using peat and soil stored at the site, with biodiversity enhancement measures including bat, bird and insect nesting boxes. There is also a positive

biodiversity impact associated with the elimination of invasive species currently present at the development site.

- Land, Soil, Geology and Hydrogeology:

  Impacts on land, soils, geology and hydrogeology as a result of the removal of c. 16.75 ha of peat and soils overburden and the permanent removal of an estimated 1,630,400 cubic metres. of sand and aggregates at the development site. These impacts will be mitigated by the storage of peat and soils at the site, for eventual use in site restoration. No excavation will take place below the water table. The development is likely to result in a small reduction in baseflow to the Glashacoomnafanaida Stream, which will be offset by a small increase in baseflow to surface water downgradient of the site due to increased percolation to groundwater at the excavated area. Abstraction of groundwater at the Rangue lands and discharge to the Glashacoomnafanaida Stream will continue under licence. Potential contamination of groundwater due to increased groundwater vulnerability at the new extraction area will be mitigated by environmental management measures, as set out in the Environmental Impact Assessment Report and proposed Environmental Management System.

- Water:

  Potential impacts on water quality at the Glashacoomnafanaida Stream, with consequent impacts on aquatic habitats and species, due to silt laden runoff or to contamination by hydrocarbons or other spillages. These impacts will be mitigated by the continued recycling of wastewater at the factory via settlement ponds, also measures to control silt at the overall site including silt traps on drains; planted berms around the new excavated area and particularly at the eastern site boundary; a silt fence at the eastern site boundary and a 17m buffer between the excavated area and the stream; correct storage of fuel and other materials, along with other environmental management measures, as set out in the Environmental Impact Assessment Report and proposed Environmental Management System. Positive impacts on water associated with the replacement of existing wastewater treatment at the factory with a new upgraded wastewater treatment system.

- Air Quality:

Potential adverse impacts on air quality in the vicinity of the site associated with dust deposition as a result of excavation and movement of aggregates at the overall site, also processing of aggregates at the factory. These impacts are to be mitigated by environmental management measures as set out in the Environmental Impact Assessment Report and proposed Environmental Management System including storage of peat and soil removed from the excavated area in planted berms; spray of machinery and haul routes during dry weather; adequate maintenance of machinery; limited truck speeds and drop height; road sweeping and other dust management measures during extraction and processing activities. Ongoing dust emissions are to be monitored at the site.

- Landscape:

  Potential adverse impacts on the landscape due to the creation of the new excavation area and associated roads infrastructure, which will be visible from adjacent houses and in the wider landscape. These will be mitigated by the retention of existing vegetation at roadside boundaries, the creation of planted berms around the excavated area and the planting of a woodland buffer at the eastern site boundary. The excavated area will ultimately be restored to create new habitats. No impacts on any designated views or prospects are anticipated.

- Noise and Vibration:

  Potential noise impacts at the factory and excavation area will be managed by mitigation measures as set out in the Environmental Impact Assessment Report and proposed Environmental Management System including limited hours of operation; erection of berms around the extraction area to act as acoustic barriers; adequate maintenance of site haul roads; site management measures including type and maintenance of machinery and the ongoing maintenance of a noise monitoring programme to ensure compliance with noise limits set out in conditions of permission. The development excludes screening and processing of aggregates at the Knocknaboola site.

- Traffic:

  The development will generate limited additional HGV movements on local roads. Local junctions will continue to operate within capacity. Impacts will be mitigated by the construction of an underpass at the L4021 to connect the new extraction

area to the factory, also by limited access of HGVs to the factory site using the entrance from the L7504 only. Other traffic mitigation measures include use of prescribed haul routes, regular maintenance of haulage vehicles and limited hours of operation.

Appropriate Assessment: Stage 1:

The Board considered the Natura Impact Statement and all the other relevant submissions and carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites. The Board agreed with and adopted the screening assessment carried out and conclusions reached in the Inspector's report that the Castlemaine Harbour SAC (000343), Castlemaine Harbour SPA (004029) and Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365) are the only European Sites in respect of which the proposed development has the potential to have a significant effect.

Appropriate Assessment: Stage 2:

The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the aforementioned European Site in view of the site's Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment. In completing the Appropriate Assessment, the Board considered, in particular, the following: i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects, ii. the mitigation measures which are included as part of the current proposal, and iii. the Conservation Objectives for the European Sites. In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect

of the potential effects of the proposed development on the aforementioned European Sites, having regard to the site's Conservation Objectives. In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the site's Conservation Objectives.

Proper Planning and Sustainable Development:

Having regard to nature and extent of the development, it is considered that, subject to compliance with the conditions set out below, the proposed development is considered to be in accordance with the provisions of the Kerry County Development Plan 2022-2028, would not seriously injure the visual or residential amenities of the area, would not be prejudicial to public health and would be acceptable in terms of traffic safety and convenience of road users. The proposed development, would, therefore, be in accordance with the proper planning and sustainable development of the area.

12.0 **Conditions**

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application on the 19th day of January 2022, as amended by the further plans and particulars received by the planning authority on 12th September 2022, 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.	(a) All mitigation and monitoring commitments identified in the Environmental Impact Assessment Report, Site Restoration Plan and other particulars submitted with the application and as amended in the Further Information submitted on the 12th day of September 2022 shall be implemented in full as part of the proposed development, except as may otherwise be required in order to comply with the following conditions. They shall be compiled into a single Schedule of Monitoring and Mitigation Measures and submitted to the planning authority, within six months of the date of this Order. (b) Before January 15th of each calendar year, the applicant shall submit a summary report of all monitoring carried out in the previous twelve months. This report shall evaluate the operation of the facilities available on site in light of the results achieved in the previous year. All monthly and annual shall be certified as accurate and representative by the applicants. **Reason:** In the interest of clarity and protection of the environment.
3.	The duration of permission shall be for a period of 20 years from the date of this Order. The site shall be fully restored within two years of this date unless a fresh grant of planning permission has been made for continued operation. **Reason:** In the interests of clarity and the proper planning and sustainable development of the area.
4.	No extraction shall take place below the level of the water table. **Reason:** To protect groundwater in the area.
5.	No screening or processing of aggregates shall take place at the Knocknaboola site. All screening and processing shall be carried out at the Rangue processing facility only. **Reason:** In the interests if the amenities of the area and the protection of the environment.
6.	Extraction and removal of overburden works at the Knocknaboola site shall not commence under the proposed underpass at the L4021 is completed

	and operational. The construction of the underpass shall include the diversion of an existing watermain at this location, in accordance with the requirements of Irish Water / Uisce Éireann. **Reason:** In the interests of residential amenities and in order to reduce HGV movements on the local road network.
7.	The proposed wastewater treatment system to serve the factory and ancillary facilities at the Rangue lands shall be amended to cater for the proposed 38 no. employees at the facility. Revised proposals for same shall be submitted to the planning authority for agreement in writing prior to installation. **Reason:** In the interests of public health.
8.	The quarry shall be fully restored in accordance with the provisions contained in the Environmental Impact Assessment Report and the Site Restoration Plan submitted with the planning application within twenty-four months of the cessation of quarrying operations. The applicants shall ascertain from the planning authority and submit exact details relating to the Site Restoration Plan for their written agreement, within 6 months of the date of this Order to include: (a) existing and proposed finished ground levels and details relating to the finished gradients of the quarry face, (b) landscaping and tree planting proposals, (c) details of fencing, (d) proposals for an aftercare programme, and (e) a timescale for implementation, including proposals for phasing of the restoration works. Restoration of the site shall be carried out in accordance with this plan. **Reason:** To ensure the rehabilitation of the site in the interests of visual amenity.
9.	The quarry and all activities occurring therein, shall only operate between 0800 hours and 1700 hours, Monday to Friday and between 0900 hours

	and 1400 hours on Saturdays. No activity shall take place outside of these hours or on Sundays or public holidays. **Reason:** In order to protect the residential amenities of property in the vicinity.
10.	The development shall be operated and managed in accordance with an Environmental Management System, which shall be submitted by the developer to, and agreed in writing with, the planning authority within three months of the date of this order. This shall include, inter alia, the following: (a) Proposals for the suppression of on-site noise. (b) Proposals for the on-going monitoring of sound emissions at dwellings in the vicinity. (c) Proposals for the suppression of dust on site and on the access road. (d) Proposals for the bunding of fuel and lubrication storage areas and details of emergency action in the event of accidental spillage. (e) Details of safety measures for the land above the quarry, to include warning signs and stockproof fencing. (f) Management of all landscaping (g) Monitoring of ground and surface water quality, levels and discharges, noise and air emissions. (h) Details of site manager, contact numbers (including out of hours) and public information signs at the entrance to the facility. **Reason:** In order to safeguard local amenities.
11.	The noise levels generated during the operation of the quarry shall not exceed 55dBA (30 minutes LAR) when measured at the nearest noise sensitive receptor between 0800 hours and 1800 hours, Monday to Friday and between 0800 hours and 1400 hours on Saturdays, excluding public and bank holidays. Noise levels shall not exceed 45dBA (15 minute Leq) at any other time. When measuring specific noise, the time shall be any one period during which the sound emission for the quarry is at its maximum level.

	Reason: In order to protect the residential amenities of property in the vicinity.
12.	All sound measurement shall be carried out in accordance with ISO Recommendation 1996:2007: Acoustics-Description and Measurement of Environmental Noise Levels as amended. **Reason:** In the interests of clarity.
13.	(a) 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). Details of a monitoring programme for dust shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Details to be submitted shall include monitoring locations, commencement date and the frequency of monitoring results, and details of all dust suppression measures. (b) A monthly survey and monitoring programme of dust and particulate emissions shall be undertaken to provide for compliance with these limits. Details of this programme, including the location of dust monitoring stations, and details of dust suppression measures to be carried out within the site, shall be submitted to, and agreed in writing with, the planning authority prior to commencement of any quarrying works on the site. This programme shall include an annual review of all dust monitoring data, to be undertaken by a suitably qualified person acceptable to the planning authority. The results of the reviews shall be submitted to the planning authority within two weeks of completion. The developer shall carry out any amendments to the programme required by the planning authority following this annual review. **Reason:** To control dust emissions arising from the development and in the interest of the amenity of the area.
14.	(a) The developer shall monitor and record groundwater, surface water flow, noise and dust deposition levels at monitoring and recording stations, the location of which shall be agreed in writing with the planning authority prior to commencement of development. Monitoring results shall be

	submitted to the planning authority at monthly intervals for groundwater, surface water and noise. (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 five copies of an environmental audit. Independent environmental auditors approved of 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 (if present) of the quantity of material leaving the site. This quantity shall be specified in tonnes. (ii) An annual topographical survey carried out by an independent qualified surveyor approved in writing by the planning authority. This survey shall show all areas excavated and restored. On the basis of this, a full materials balance shall be provided to the planning authority. (iii) A record of groundwater levels measured at monthly intervals. (iv) 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.
15.	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.
16.	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.

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.

Sarah Moran
Senior Planning Inspector

17th July 2024

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