An Bord Pleanála

Inspector's Report

ABP-313516-22

Development	Recommencement of quarry operations within previously permitted quarry extraction area and all associated site works. An Environment Impact Assessment Report and Natura Impact Statement were lodged with the planning application.
Location	Aghamore Near, Aghamore Far and Carrownamaddoo townlands, Co. Sligo.
Planning Authority	Sligo County Council
Planning Authority Reg. Ref.	21236
Applicant(s)	Lagan Materials Ltd.
Type of Application	Permission.
Planning Authority Decision	To refuse.
Type of Appeal	First Party
Appellant(s)	Lagan Materials Ltd.
Observer(s)	• Patrick Benson

- Noel & Christina Merrick
- Pat & Mary Corcoran
- David Kivlehan
- Damien J Brennan
- Michael O'Hart
- Joseph Scanlon
- Brendan & Darragh McDonagh
- Sandie McCanny
- Ryan O'Donnell & Aedamar Frawley
- Adrian McLoughlin
- Cllr Thomas Healy
- Mary Murphy
- Michael Bell
- Rev. Jim Murray
- Turlough & Jackie Burns
- Austin & Suzanne Healy
- Joseph Henry
- Patricia Gardiner
- Gary McGinty for Carrowroe & District Regeneration Association
- Irish Water.

Date of Site Inspection	9th November 2022
Inspector	Deirdre MacGabhann

Contents

1.0 Site Location and Description

1.1. The 22.5ha appeal site lies c.4km to the south of Sligo town in the townlands of Aghamore, Aghamore Far and Carrownamaddoo, County Sligo. The village of Carrowroe is c.1.3km to the north west and Lough Gill is c.600m to the north east of the site.

1.2. The appeal site extends to the north and south of a county road (L-3603) that runs east west between the R287 and the R284. The speed limit on the county road is 80kph. The junction of the L-3603 and R287, Dromahair Road, is c.400m to the east of the appeal site and the junction of the local road with the R284, Leitrim village road, is c. 1.5km to the south west of the site. The R287 and R284 come together and join the N4 at Carrowroe.

1.3. The appeal site can be divided into two areas:

- On the northern side of the county road, L-3603, is a limestone quarry. Access to the extraction area is by a gated internal quarry road from the county road (photographs 2-4). Extraction has taken place over three benches. At the time of site inspection the quarry was not in operation and the quarry floor was partially flooded. A pump was in operation extracting water from a sump to the south west of the void.
- On the southern/eastern side of the county road is a processing and manufacturing area. Only part of a larger area are included in the appeal site. This includes the main access to the site from the public road (c.150m north of the quarry entrance – photographs 15-17), a weighbridge and associated offices, small stockpiles of materials and garage/workshop. A redundant fuel storage area lies within the eastern boundary of the appeal site. To the east of the appeal site is an asphalt plant and to the south of the site an disused concrete block yard and concrete batching plant. Neither were in use at the time of site inspection. A haul road connects the processing area to the quarry entrance, via the public road (photograph 1, 13 and 14).

1.3.1. Aghamore stream (WFD Garavogue _010) runs through the site on the eastern side of the L-3603 and discharges into Lough Gill to the north east of the site. At the time

of inspection two discharges were evident into the stream as it passes through the appeal site (Photograph 19)[1].

1.4. Lands surrounding the site are primarily agricultural, with and one off housing along the public roads. Nearest residential dwellings lie c.100m to the south of the entrance to the quarry and c.50m to the southwest of the extraction. To the east of the site is a commercial area and within this a Day Care Centre operated by the Alzheimer's Society, c.75m to the north east of the processing area.

1.5. Approximately 200m north of the site is St. John's GAA and Soccer Club with associated pitches. Access to the GAA grounds is from the R287 Dromahair Road. Tobernalt Holy Well lies c.1km to the north of the quarry. It lies on a county road to the west of Lough Gill at Aghamore Near.

1.6. Lough Gill is a public water supply for the area via Irish Water's Foxes Den WTP, located south of Sligo Town.

2.0 **Proposed Development**

2.1. The proposed development, as revised by way of significant further information (submitted and readvertised in February 2022) comprises the following within an overall site area of c.22.5ha:

- The recommencement of quarry operations within the previously permitted extraction area (c.10.9ha) for the extraction of c.1.8m tonnes of limestone rock. An annual rate of extraction of between 150,000 and 300,000 tonnes is proposed.
- Deepening of the previously permitted quarry by 2 no. benches (from current level of c.-21m OD to -50m OD).

[1] This would be consistent with EIAR which refers to two discharge lines running from the quarry sump pumps to the stream (section 7.62 EIAR).

- Provision of a settlement lagoon (c.2,830sqm), positioned to the south of the access road to the quarry void, and a wheelwash to the north east of the settlement lagoon, on the internal access road.
- Recommencement of aggregate processing (crushing and screening) within the existing processing area located to the east of the local road that bisects the site (processing area has a ground elevation of c.15mOD).
- Provision of wheelwash, double stacked portacabin office, wastewater treatment system and hardstanding with hydrocarbon interceptor, at the entrance to the processing area.
- Additional stockproof / trespass proof fencing at the perimeter of the site (Drawing no. 3).

2.2. Planning permission is sought for a period of 10 years (section 2.21 EIAR).

2.3. Extraction of limestone will be by blasting techniques. Extracted material will be processed in the quarry void using mobile equipment and transported to the aggregate processing area for further processing using mobile plant prior to stockpiling and transport off site. As the quarry and processing area are located on opposite sides of the road, material from the quarry will be transported by dump trucks to the processing area via an existing access that forms a crossroads with the county road. A second separate access to the processing area lies to the north of the crossroads and is used mainly by HGV traffic delivering processed material to market and for staff accessing the site.

2.4. It is stated in the Planning Report that the previous owner carried out concrete production on site and that the applicant does not intend to undertake this at the site.

2.5. All surface and storm water runoff and all groundwater inflows from the quarry area will be directed to the proposed settlement pond, prior to discharge to Aghamore Stream (see response to FI, #14). All stormwater and groundwater flows pumped from the quarry void will be discharged in compliance with the requirements of the updated discharge licence, Sligo County Council DL(W)151 (24th January 2020) and the emission limits specified. The discharge point is indicated in Figure 2.1 and a reno mattress will be provided at this point to prevent scouring. There will be no point discharges from the processing area and rainfall across the site will percolate

to underlying soils. A berm will be constructed across the open perimeter of the processing area, where runoff from a collection sump overflows to Aghamore Stream, to mitigate the potential for cumulative impacts from the obsolete concrete production plant. Ponded runoff in the collection sump will be pumped to a soakaway nearby and allowed to infiltrate to ground.

2.6. The c.2,830sqm lagoon will have a water depth of 1.5m and a minimum freeboard of 0.5m (Drawing 7). The Construction Environmental Management Plan (Appendix 2.2) outlines how potential adverse impacts will be managed during construction.

2.7. A new wastewater treatment plant will be situated to the west of the proposed portacabin. A supply well is proposed in the processing area for water supply, to be used for the wheel wash, dust suppression and non-potable uses in the office, canteen and toilet. Potable water will be provided to the site by water cooler dispenser system.

2.8. The effects of dust, noise and blasting will be mitigated by defined measures and monitoring of water, noise, dust and blasting will take place in accordance with the Environmental Management Plan and site specific environmental monitoring plan (pages 2-11 to 2-16, EIAR and Appendix C, FI, Site Specific Environmental Monitoring Plan).

2.9. Upon completion, the quarry area to the western side of the public road will be restored to natural habitat after uses (natural recolonisation of area above water and lake). The processing area on the eastern side of the public road will be allowed to regenerate naturally (see Figure 2-2). During operation and post operation landscaping will include hedgerow and woodland gapping up with native species where appropriate, and aftercare management to encourage dense, well structured hedgerows and woodland throughout. Cliff faces in the quarry that are used by breeding raptors will be allowed to remain undisturbed at all times during the breeding season and following restoration of the site.

2.10. The planning application includes plans and drawings and the following documents:

- Planning Report.
- Site Characterisation Report.

- Appropriate Assessment Screening and Natura Impact Assessment Report (February 2922).
- Environmental Impact Assessment Report (EIAR).
- EIAR Portal Confirmation (ID no. 2021118).
- Certificate of Incorporation.
- Discharge Licence Transfer Application.
- Site Specific Environmental Monitoring Plan.
- AA Screening Report for Asphalt Plant.
- Discharge Licence (DL(W)151).
- Bat Survey Report.
- Otter Survey Report.

3.0 Planning Authority Decision

3.1. Decision

3.1.1. On the 12th April 2022, the PA decided to refuse permission for the development on two grounds (in summary):

1. PA not satisfied that the proposed development would not adversely affect the integrity of Lough Gill SAC in view of the site's conservation objectives. PA referred to the unsatisfactory information in relation to the impact of reduced groundwater resulting from dewatering and the potential for contamination of the site as a result of the development. PA therefore precluded from granting permission.
2. Having regard to the nature, scale and extent of the development, including inadequacy of detail to mitigate against effects of the proposed development on the environment, notably water quality, the development would be prejudicial to public water supplies sourced form Lough Gill and to public health.

3.2. **Planning Authority Reports**

3.2.1. Planning Reports

- *4th August 2021*
    - Refers to the history of the site, relevant national, regional and local planning policies, natural heritage designations in proximity to the site, submissions from prescribed bodies and third parties and technical reports.
    - It carries out an AA of the proposed development and concludes that in the absence of FI a determination in respect of AA cannot be made. It identifies a requirement for FI in respect of bat and otter surveys, up to date breeding information on Raven and Peregrine Falcon, compliance with the EC (Birds and Natural Habitats) Regulations 2011 and maintenance of settlement ponds.
    - The report's EIA also recommends FI in order to come to a reasoned conclusion in respect of environmental effects, the protection of water quality, bat and otter surveys, impact of asphalt plant on air quality, waste management, environmental monitoring, no. of blasts per annum, signage, sightlines and interactions.
    - The report's Planning Assessment considers the merits of the development under the headings of compliance with Development Plan Policy, principle and residential amenity. It considers that the development is in accordance with the policies of the Sligo and Environs Plan 2010-2016 and that the principle of development has been established under PA ref. 02/271 (deepening of quarry from its approved base of PA ref. 96/172). The report recommends further information to determine the likelihood/significance of effects on residential amenity.
- *11th April 2022*
    - Considers the applicant's response to FI, subsequent observations, technical reports and reports by prescribed bodies. It concludes that on the basis of the information submitted, the PA remains concerns

regarding the potential for adverse effects on the integrity of Lough Gill SAC and on surface and ground water. The report recommends refusing permission for the development on these grounds.

3.2.2. Other Technical Reports

- Area Engineer (27th July 2021) – Recommends further information in respect of signage, sightlines, road upgrading and surface water flows at road entrance.
- Environment Section (28th July 2021) – Recommends further information in respect of compliance with existing discharge licence to waters issued to quarry (D1(W) 151), name of applicant on licence, details of proposed wastewater treatment system, desludging and decommissioning of existing septic tank, oil interceptor to serve settlement lagoons and for fuel storage area, site specific Environmental Monitoring Plan/Environmental Protection Plan, proposals in respect of asphalt plant on site and compliance with Air Pollution Act 1987, site specific waste management plan for operational phase of development and maximum number of blasts to be carried out per annum.
- Environment Section (5th April 2022) – Subsequent to FI, no objections and recommends conditions to be attached to a grant of permission.

3.3. **Prescribed Bodies**

- IFI (16th July 2021) - Lough Gill is a popular salmon and trout fishery and provides pike and course fish for angling. The salmonid species found in the lake use the inflowing streams as spawning and nursery habitat and these streams must be protected. The site is hydrologically linked to the Lough Gill SAC which is designated for the protection of Atlantic salmon, white clawed crayfish and lamprey species. The ecological status of the Aghamore stream and Lough Gill has declined from good and moderate poor in the last decade, in breach of the Water Framework Directive. IFI concerned that this decline will impact on the long-term viability of the fishery. Lough Gill and Aghamore Stream identified in the RBMP as being at risk of not recovering to good ecological status. The catchment requires robust protection and planning

permission should not be granted unless it can ensure that the wastewater discharge from the development, groundwater abstraction or surface water discharge from the site will not have a negative impact on groundwater, the Aghamore stream or Lough Gill.

Recommends further information or conditions in respect of location of documents in the EIAR, arrangements for no discharge to Aghamore stream during flood conditions (including turbidity sensor on discharge and shut valve when excessive turbidity detected), detailed design of reno mattress, impact of abstraction well on groundwater, compliance with trade effluent licence (DL(W)139[2]), capacity and management of hydrocarbon interceptor for surface water, spill kits, Environmental Management Plan and Emergency Response Plan for site, implementation of mitigation measures, installation and maintenance of waste water treatment system and measures to prevent the spread of invasive species.

- Department of Housing, Local Government & Heritage (21st July 2021) –
    - Nature conservation – Impacts should be clearly linked to qualifying interests. Concerned that AA rules out barrier effects to the movement of SCI species. Precautionary approach should be applied to screening. Information on maintenance of settlement pond required. NIS does not identify a potential source pathway to White-clawed crayfish, a QI for Lough Gill SAC, and potential risk of introduction of Crayfish plague via pumping equipment. Inadequate survey carried out for otters along Aghamore stream. More information required on Peregrine Falcon and links to SPA (including ringing studies at development site and at Sligo/Leitrim Uplands SPA). Mitigation measures should include no blasting in breeding season when Peregrine Falcon occupy the nest. Inadequate information on effects of dewatering on Lough Gill SAC and Ballysadare SAC and SPA. Inadequate information on water balance tests. All mitigation measures should be clearly presented in NIS and included in Construction Environmental Management Plan. On basis of current

[2] Replaced by DL(W)150.

lacunae in NIS not possible to exclude negative implications of project on conservation objectives of European sites.

Subsequent to FI (25th February 2022) – Updated breeding bird survey and mitigation measures should be submitted to PA and NPWS for record. Blasting to be carried out outside of breeding season. Consultation of ringing studies not addressed. Application could include compensatory habitat as per 'Biodiversity Net Gain Good Practice Principles for Development – A Practical Guide, CIEEM'. Environmental Management Plan should also address invasive species. Collective effects of multiple development and proposed development need to be assessed for wider biodiversity in the area.

- Archaeology – Recommends archaeological monitoring condition in any grant of permission.

- Department of Environment, Climate and Communications (Geological Survey, Ireland) (14th July 2021) – Recommend use of online data in assessing planning applications and for EIAR.

- EHS (20th July 2021)

  - General. Planning application should address development as a new application and not just reference back to reasons for refusal under PA ref. 18/345. Recognise environmental controls have evolved to a higher standards over the lifetime of the facility prior to ceasing, but consider issues raised in third party observations (in respect of previous impacts on population and human health) are a material consideration in making an assessment of the proposed development. EIAR should have considered actual impacts on population and human health and not relied on, to the extent it does, predictive methodology. Compliance with previous conditions should be assessed by PA and reported as part of the decision on the planning application, in particular complaints, action taken, monitoring of emission limits and compliance with emission limits.

  - Noise. No report of any public consultation. Noise impact assessment incorrectly refers to emission limits and not to change in noise

environment in assessing impact, in particular when change in the noise environment is likely to be most significant (7am to 9am). No baseline survey of noise at this time. Without specific information any consent given should restrict hours of operation to 9am, in the interest of protecting public health. Lack of clarity with regard to predicted HGV movements (average or maximum daily movements). Increase in HGV traffic, and noise arising, requires assessment given proximity of NSL. Conclusions in respect of blasting is based on monitoring of two parameters only and no review of complaints or feedback from community. EIAR also fails to carry out wider consultation in respect of noise and vibration effects.

- Air. No report of public consultation. Dust deposition monitoring is not assessed against the conditioned ELV, which would show a high level of non-compliance with the condition. No attempt to identify the changes to be made to ensure compliance with future conditions. Pattern of exceedances indicates that mitigation measures were not effective under PA ref. 02/271, with the risk of health effects and nuisance. The historic levels of dust generated from the site would be of a significant concern to the EHS with regard to the protection of human health.
- Water. Agree with concerns raised by IFI. EHS satisfied that if mitigation measures in respect of protection of surface and groundwater, including those in CEMP, are implemented in full, there will be adequate protection of public health with regard to ground and surface water.
- CEMP. CEMP needs to be site specific.

- An Taisce (21st July 2021) – Compliance with the conditions of the previous permission for quarrying on the subject site should be addressed. Applicant needs to fully address the reasons for refusal under PA ref. 18/345 and ABP-305821. NIS is that submitted under PA ref. 18/345 and should be updated as required. Assessment of potential impacts on Lough Gill is insufficient (unsubstantiated conclusions). No legal difference between 'designed in

mitigation' and mitigation. No cumulative assessment. Impacts on Cummeen Strand SPA, Cummeen Strand/Drumcliff Bay SAC and Ballysadare Bay SPA and SAC need to be ruled out.

Approval can only be granted for plans and projects when it has been established beyond all reasonable scientific doubt that the subject proposal will not adversely impact on European sites (no lacunae) (case law cited). NIS submitted has not fulfilled this requirement.

Aghamore stream is classified as 'poor' water quality status (WFD). Assessment of impact of development on stream's ability to meet WFD requirements is needed. Lough Gill is 'moderate' status, also insufficient to meet WFD requirements. Any water quality deterioration in the stream or lake as a result of the proposal would be untenable.

- Irish Water (26th July 2021) – No objections.
- Irish Water (9th August 2021) – Lough Gill is a critical drinking water supply to Sligo and surrounding areas. There can be no impact on this water supply from the development. Site is hydrologically connected to Lough Gill via Aghamore stream. Critical that any and all surface and groundwater sources in proximity to the development be protected from any source of pollution arising from development. Past discharges from the site to Aghamore stream exceeded emission limit values for BOD, total ammonia and orthophosphates. Deepening of quarry may affect Lough Gill. Request copy of all modelling to support estimate that influence on water table extends to 268m from quarry face. Groundwater flow may vary locally as bedrock is karstified. Recommend further information in respect of modelling of effects of drawdown, passage of all discharge waters through settlement lagoon, monitoring of mitigation measures (for protection of surface and groundwater), management plan in event of sedimentation runoff during construction of settlement lagoon, management plan for accidental spills, details of ground and surface water monitoring.

  Subsequent to FI (7th April 2022) – Concerned that discharges from the development will lead to degradation of existing water source (Aghamore stream flows into Lough Gill). Settlement lagoons may be compromised

during storm events, leading to contamination of Aghamore stream and Lough Gill. Not satisfied with the proposed monitoring regime or emergency response plan to mitigate spillage and overflow from settlement lagoons during storm and rainfall events. No review of Trade Effluent Discharge Licence underway for site. In absence of this IW would expect at a minimum current discharge license requirements to be retained. Concerns re 10 year permission, risks to Lough Gill and significant growth expected as Regional Growth Centre status (population served by Foxes Den WTP and Lough Gill). Ongoing risk of impact on Aghamore stream and Lough Gill from dewatering.

3.4. Third Party Observations

3.4.1. There are 107 observations on file in respect of the planning application made by third parties and a further 22 subsequent to the submission of FI. Concerns are raised in respect of:

- Need for development.
- Precedent set by ABP-305821.
- Procedural issues (description of development, compliance with regulations for AA and EIA)
- Impact on residential amenity and property values (legacy of past effects of quarrying).
- Hours of work.
- Impact on landscape and scenic area.
- Noise and blasting.
- Increase in HGV traffic on inadequate local roads.
- Impact on groundwater and related waterbodies.
- Increased risk of flooding and consequences with development.
- Risk of pollution of Aghamore Stream and Lough Gill SAC and associated ecology.
- Impact on biodiversity (including Raven and Peregrine Falcon).
- Self-regulation in respect of mitigation measures.
- Health and safety issues (transport of explosives, stability of faces, flyrock).
- Air pollution from asphalt plant.

- Light pollution.
- Changing context with climate changes.
- Cumulative assessment is inadequate.
- Ability to restore site to nature conservation (deep void).
- Impact on utilities (ESB substation and broadband aerial at Cuilbeg has not been taken into account).
- Inadequate response to FI.
- Legal entity responsible for discharge licence.

4.0 **Planning History**

4.1. It is stated by the applicant that the site has been in existence since the 1950s. The planning history of the site is set out in Section 2.4 of the Planning Report. It includes the following:

- PA ref. 96/172 – Planning permission granted for extension of an existing quarry over an area of 14.7ha and for the retention of an unauthorised quarry over an area of 0.6ha.
- PA ref. 00/63 – Permission granted for a material alteration to previously approved plans (PA ref. 96/172), consisting of a change in the phase of the approved extraction.
- PA ref. 02/271 – Permission granted for deepening of the quarry by 30m from its base approved under PA ref. 96/172, in two 15m lifts over an area of 10.9ha and all other associated works including restoration works to the final quarry. The PA extended the duration of the permission in April 2013 until the 14th September 2018.
- PA ref. 18/345 (ABP-305821) - Permission refused for continued operation and deepening of quarry extraction area and construction of a settlement lagoon. Reasons were:
    - *i. On the basis of the information provided with the planning application and the appeal, including the Natura impact statement, the Board is not satisfied that the proposed development either individually, or in combination with other plans or projects would not*

adversely affect the integrity of Lough Gill Special Area of Conservation (Site Code: 001976), Cummeen Strand Special Protection Area (Site Code: 004035), Cummeen Strand/Drumcliff Bay (Sligo Bay) Special Area of Conservation (Site Code: 000627), Ballysadare Bay Special Protection Area (Site Code: 004129) and Ballysadare Bay Special Area of Conservation (Site Code: 000622), in view of the conservation objectives of these sites. The Board noted, in particular, the absence of information in relation to the impact of reduced groundwater resulting from dewatering arising from the proposed development and to the cumulative impacts of the proposed development and the adjacent associated processing area. In such circumstances, the Board is precluded from granting permission.

ii. *Notwithstanding local planning policy supporting quarrying on the site, having regard to the nature, scale and extent of the proposed development, and the inadequacy of information to comprehensively identify and demonstrate the cumulative impacts on the environment of the proposed development and the adjacent associated processing area, in particular in relation to water quality and biodiversity, it is considered that, in the absence of such adequate information, the proposed development could be detrimental to receiving freshwater habitats and could be prejudicial to public water supplies sourced from Lough Gill and could lead to loss or disturbance of habitat and/or species in the adjacent associated processing area. It has not, therefore, been demonstrated that the proposed development would not be prejudicial to public health and be contrary to the proper planning and sustainable development of the area.*

4.1.1. The following planning applications have been determined in the area of the site:

- PA ref. 18/49 – Planning permission granted for the filling of lands with construction and demolition waste (site area 1.0ha, volume 24,950 tonnes) on land to the south west of Lough Nameenbrack, c.500m to the south of the appeal site (quarry).

- PA ref. 21/475 (referred to in the EIAR and AA as 21/575) – Planning permission refused for the filling of 1.0ha of lands with 100,000 tonnes of construction and demolition waste at Carrownamaddoo (immediately the east of the above site).

5.0 Policy Context

5.1. National Guidelines

- Quarries and Ancillary Activities – Guidelines for Planning Authorities (2004). Refer to the essential role played by the extractive industry in the economic and social development of the State and recognise that minerals can only be worked where they occur. Set out guidelines for best practice and mitigation measures in respect of environmental effects.
- EPA Guidelines on Environmental Management in the Extractive Industry (2006). Set out guidelines for environmental management of quarries.
- National Planning Framework, 2018. Under National Policy Objective 2b identifies Sligo as having a regional role driving the economy of the north west, to be supported in the relevant Regional Spatial and Economic Strategy. National Policy Objective 23 supports the development of the rural economy by supporting sustainable and economically efficient industries including extractive industries.
- Regional Spatial and Economic Strategy for the Northern and Western Regional Assembly (2020). Regional Policy Objectives support the strategic growth of Sligo town and critical infrastructure in line with the NPF. Section 3.7(c) of the RSES which sets outs details on the planned growth of the town, including target levels for population growth and supporting infrastructure.

5.2. Sligo County Development Plan 2017 – 2023 (SCDP)

5.2.1. The current SCDP sets out policies for quarrying in section 4.3.4. The Plan recognises that the aggregates and concrete products industry contribute to the development of the County by the creation of employment and provision of essential

building materials. Policies protect all known unworked deposits and seek to ensure that the industry operates in a manner that minimises the potential adverse impacts on the environment and local communities (policies P-MEQ-1 to 4).

5.2.2. The site is situated in a 'Normal Rural Landscape' and to the west of a designated Scenic route (see Landscape Characterisation Map).

5.2.3. The Sligo and Environs Development Plan 2010-2016 has been incorporated into the current SCDP. The zoning map for the Plan identifies the appeal site as falling largely within lands zoned 'NR – natural/mineral resource reservation'. The objective of this zoning is to '*Protect all known unworked mineral deposits from development that might limit their scope for extraction. Within the NR zone, only extraction and associated activities will be permitted'*. In section 6.8, the importance of mineral extraction industry is stated and policy objective O-NR-1 specifically protects the natural resource reservation and existing quarrying operations at Aghamore and Carrownamaddoo, by ensuring that any developments in the vicinity do not have a negative impact on the existing or future potential quarrying operations.

5.2.4. A small part of the appeal site and surrounding lands are zoned 'BUF – buffer zone'. The objective for these lands is to '*Contain and consolidate the city, while safeguarding land for its future expansion and the provision of strategic infrastructure*.'

5.2.5. Other polices of the Plan afford protection to sites of natural heritage interest, Europeans sites, landscape character and scenic views, public rights of way, water and air quality (including noise environment).

5.3. Natural Heritage Designations

5.3.1. The appeal site lies c.450m to the west of Lough Gill proposed Natural Heritage Area and Special Area of Conservation (shared site code 001976). Other national and European sites lie in the wider area (see attachments and EIA and AA sections of this report).

5.4. EIA Screening

5.4.1. The application for the proposed development includes an Environmental Impact Assessment Report (EIAR). It is submitted on the basis that the proposed development comprises the quarrying of limestone from an overall extraction area of c.10.9ha and warrants EIA as it exceeds the 5ha threshold set out in paragraph 2 of Part 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended).

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. First party grounds of appeal are:

- Policy context – The existing quarry has been considered in the policies, plans and programmes prepared for the region (Sligo CDP, Sligo & Environs Development Plan, SEA of Sligo CDP) and the continued development of a quarry at the location is specifically supported in the CDP. The site is an existing established quarry (c.1950s), with proven high quality limestone resource, established infrastructure and appropriately zoned. The only alternative to the site is a greenfield site.
- Response to refusal of previous application – Additional information has been provided in each chapter of the EIAR to respond to the previous reasons for refusal.
- Pre-planning consultations/EIAR scoping – In preparing the EIAR a pre-planning consultation document was issued to NGOs and stakeholders in September 2020 (see page 7/8 of appeal) and pre-planning meetings held with officials of Sligo CC. Irish Water concerns comprehensively addressed by Dr. Pamela Bartley, hydrogeological consultant.
- Merits of Development – Development will provide for extraction of high quality aggregate material from a proven resource and will assist in ensuring a secure supply of construction aggregates in the region, in line with planned growth (RSES for the Northern and Western Regional Assembly).

- Response to refusal reason no. 1:
    - Extensive environmental assessments have been completed by appropriately qualified experts.
    - The AA relies on a substantial body of scientific work to establish the hydrology and hydrogeology of the area, again completed by appropriately qualified experts.
    - PA have not relied on similar experts.
    - Proposed development is progressed to Stage 2 AA due to the risk of impacts on European sites, in the absence of mitigation.
    - Under ABP-305821, Inspector was satisfied that the applicant had addressed impacts of increased flows to Aghamore stream and Lough Gill, but not on the Carrowgobbadagh sub-catchment. Geology of the site is dominated by shallow epikarst. Deeper bedrock is so competent (resistant to inflow) it rejects groundwater recharge. Therefore the concern regarding 'reduced groundwater resulting from dewatering' has no technical basis in terms of the established of the hydrogeological characteristics of the area. The likelihood of the quarry intercepting deep karst features in the future proposed depths from -21m OD to -50m OD is highly unlikely. Geological and geophysical evaluations indicate solid limestone to a depth of -60m OD. Water balance model indicates that low potential for impact of abstractions on groundwater bodies.
    - Any potential for contamination of discharge waters is addressed in mitigation measures i.e. the 31 conditions issues in 2020 by Sligo CC in DL(W)151.
    - The risk posed to Lough Gill SAC and PWSS is deemed negligible. Potential effects or interactions with the PWWS abstractions of Sligo and North Leitrim have been robustly examined.
    - A site specific Environmental Management Plan (EMP) has been prepared for the site (Appendix C, FI response). It is based on an Environmental Management System (EMS) as detailed in the EPAs,

Environmental Management Guidelines for Environmental management in the Extractive Industry, 2006.

- Provision of water management systems as proposed are standard practice in similar developments for many decades and have been operated successfully by the applicant elsewhere.

- Response to reason for refusal no. 2:
    - Reason is factually incorrect. DL(W)151 establishes a management and operation system that will ensure discharge to the receiving waters and compliance with the Surface Water Regulations, Groundwater Regulations and Birds and Habitats Regulations.
    - The same management and operations will occur in the processing area. Mitigation measures will be in place for hydrocarbon management.
    - Risk posed to Lough Gill SAC and PWSS is deemed negligible (same reasons as above). A EMP has been prepared for the site and is based on an EMS. A Construction Environmental Management Plan (CEMP) sets out management measures during construction phase of the settlement lagoon. The proposed water management measures have been standard practice in similar quarries for decades.
    - Sligo CC Environment Section has no objection to the development.
    - Conclusions in Planning Report, 5th August 2021, are inconsistent with the conclusions of the Planning Report dated 11th April 2022 (impact on surface and groundwater). Irish Water submission of 7th April 2022 impacted on conclusions in Planning Report.
    - Details presented in the EIAR, Chapter 7, Appendix 7-2 address the concerns raised by Irish Water and are based on detailed consultations with Irish Water. Detailed arguments set out in appeal address each matter raised by IW, cross referenced to where addressed in EIAR. This includes reference to evidence which demonstrates the absence of effects on Aghamore Stream with the proposed discharge, the hydrogeological model for the region which demonstrates that the

'deep flows' are above the 0m OD level, the absence of any effects of historic quarrying on water levels in Lough Gill, the absence of effect on the public water supply with flow out of Lough Gill into the quarry or with flow into Lough Gill from the quarry, control measures to ensure that the settlement lagoon is not compromised under storm conditions (sump on quarry floor designed to pump forward at design flow rate for the settlement lagoons, worst case scenario if lagoon fails, drainage is towards void not river) and confirmation that the 2020 Discharge Licence provides for the deepening of the quarry and that no review is required.

- Based on the detailed assessments and best available information submitted with the application, the applicant considers that the reasons for refusal are not fair, reasonable or justified.

6.2. Planning Authority Response

6.2.1. The PA respond to the appeal on the 7th June 2022. They refer to the Board to the Planner's report and other reports prepared in connection with the planning application and note the comments made in section 2.3 in relation to Irish Water's submission of 7th April 2022. They state that it is considered that the issues raised would be best addressed by Irish Water as the prescribed body with responsibility relating to these matters.

6.3. Observations

6.3.1. There are 19 observations on the appeal. These raise the following concerns:

- Consultation. Pre-application discussions are not binding and exclude third parties.
- Need. No evidence of need for the development. Applicant has fully functioning quarry and block facility at Corownagh/Ballisodare.
- Policy Context. Decision by PA accords with policies of the CDP (see pages 10 – 12 of observation by CADRA) and European law. SEDP local plan is considerably outdated and does not consider current national and regional

policies. Zoning for NR does not guarantee the planning permission will be granted.

- Description of development. Quarry has expanded laterally well beyond original permission and should be treated as an initial application, not a renewal. Not all of applicant's land included in planning application (old concrete area, asphalt plant and significant areas of land adjoining previous quarry face). The quarry ceased operation in 2014 and permission expired for the quarry in 2018. Material consideration in the context of the appeal. The appellant is seeking permission for the continued use when there is no existing use.
- Incremental development and project splitting. Risk of creeping development with large concrete block storage area on the adjacent site at Aghamore. Asphalt plant is wrongly excluded from development and has misled the public stating that it is exempted development. Plant was installed in 2019 when planning permission had expired. Appellants cannot avail of an exemption under class 21, schedule 2, Part 1 P&D Regulations. Class 21 predicated on existing lawful industrial activity. Asphalt plant was the subject of recent enforcement action and represents unauthorised development. Exclusion of asphalt plant amounts to project splitting and resulted in failure to assess cumulative effects. No indication of future intentions for overall quarry should permission be granted e.g. lateral extension of quarry.
- Precedent. Reasons for refusal under PA ref. 18/345 and ABP-305821 not adequately addressed. The Board should consider the totality of the development and not confine its assessment to the two reasons for refusal.
- Residential amenity. Impact on residential amenity and human health (blasting, noise, dust, use of local roads). Increase in residential development in the area and increase in young families. Proximity of new house (PA ref. 17296) to quarry. Devaluation of properties. Adverse effects on residents of Alzheimer Society centre.
- Ecology. Impact on the environment from operation e.g. blasting, noise, dust etc. on wildlife in quarry, including Peregrine Falcon, and in surrounding area. (Video of Peregrine Falcon taken in quarry (J:\Section

Folders\Processing\313516\Obs of Michael Bell received on 4.6.22)). Impact on water quality of Lough Gill SAC.

- Amenity of the area. Impact on amenity of the area (existing development is an eyesore), Tobernalt Holywell, recreational activities on Lough Gill. Scenic setting of the quarry and unsuitable site for a quarry.
- Public water supply and Lough Gill SAC. Lough Gill identified as 'At risk' in the draft River Basin Management Plan for Ireland 2022-2027 and 3rd Cycle draft Sligo Bay & Drowes Catchment Report, 2021. Lough Gill is prioritised for further action in draft RBMP. The plan notes that mines and quarries are impacting on 45 waterbodies and the sole factor in 6 waterbodies. Impact on public water supply (risk to health) with discharge to Aghamore Stream. Publication of draft National Water Protection Plan since planning application made. No consideration of effects of draining current void. EIAR does not take account of other unauthorised works carried out in the area of Aghamore Stream and Lough Nameenbrack and potential for cumulative effects. Toxicity of water from processing area percolating to ground. Dried up well in the vicinity which has been there for generations (Aghamore Near). Impact on karst aquifer. Risk of loss of water to Holy well. Appellant relies on outdated Lough Gill Management Plan to argue that groundwater inflow to Lough Gill is from the north. Discharge licence is irrelevant in context of planning appeal, not subject to same rigorous analysis. Appellant is in breach of conditions of licence (page 6/7 of observation by CADRA). Position of Irish Water is reasonable and prudent. Proximity of quarry's dewatering operations to a potential groundwater flowpath, the possible risk of impact on Lough Gill SAC cannot be ignored (refers to report by Sior, stated to be attached to CADRA observation but which is not on file).
- Commercial development. Impact on garden centre beside lake. Impact on adjoining farmland (drawdown of water).
- Blasting. Impact on property (damage from vibration/blasting) and turloughs. Likelihood of significant blasts to free deep limestone/denser rock. No vibrational monitoring of houses. No assessment of blasting at depth on water levels of the turlough in Cuilbeg.

- Health and safety. Proximity to St. Johns GAA and Soccer grounds and safety of children. Instability of quarry benches. Transport and storage of explosives through a residential area. Breaches of quarrying regulations by applicant's parent company (Wales, safety breaches, fly rock projection).
- Climate change. Development will increase carbon emissions and contravene Climate Action and Low Carbon Development (Amendment) Act 2021. Increase in carbon emissions from HGV traffic and aggregates for road building programme.
- Traffic. Impact of large volume of HGV traffic on unsuitable narrow roads, including at Carrowroe (existing highly dangerous junction at St. Enda's NS, location of other community facilities). Lack of clarity regarding vehicles included in HGV estimate. Risk that Cairns Hill road becomes a rat run for HGVs with planned Garavogue East Bridge (to commence 2023). Impact on access routes to tourist destinations (Holy Well, Lough Gill, Dooney Rock and Slish Wood). Appellant has underestimated the volume of traffic to be generated by the development.
- Operational hours. Lack of clarity regarding operational hours and site works outside of these hours.
- Conflict with European Law. Under PA ref. 02/227 (*sic*, but should be 02/271) permission was granted for the extension of the operation of the quarry for a period 5 years (to 14th September 2018). The decision was contrary to European law as neither EIA or an NIS was requested despite likely environmental effects.
- Adequacy of EIAR and NIS. EIAR and NIS are seriously deficient.
    - Alternatives. No proper consideration of alternatives
    - Cumulative effects. No proper consideration of cumulative effects (asphalt plant and concrete processing area). NIS should have referred to proposed development and existing activities.
    - Do nothing. Baseline scenario is inadequate.

- Survey work. Experts are employed by applicant. Third parties at a disadvantage (enter property, carry out investigations). Appellant's survey work carried out when quarry was dormant.
- Population. No indication of number to be employed indirectly. No significant economic benefit to area.
- Biodiversity. Zones of influence for biodiversity and water are arbitrary. Inadequate assessment of current state of the quarry in relation to fauna and flora. No baseline study. Inadequate measures for the protection of Peregrine Falcon (onset and completion of breeding can vary).
- Land, soil, geology. No assessment of historical contamination. Results of hydrogeological assessments do not rule out the possibility of negative effects.
- Water. No impacts identified with restoration of quarry, no cumulative assessment of phasing, insufficient justification for absence of effects on Ballysadare Bay. Large volume of water entering the quarry. Inconsistent with zone of groundwater/surface water infiltration. Further deepening of the quarry will exacerbate this. On cessation water level will rise to c.4m OD, same level as Lough Gill suggesting hydrological/hydrogeological link.
- Climate. Assessment of greenhouse gas emissions is inadequate.
- Mitigation. Mitigation measures are unacceptable.

- Submissions. Absence of objections by Environment Section is not material (no objections raised in respect of previous development which was refused). DAU and HSE raise concerns in respect of development.

6.4. Further Responses

6.4.1. On the 26th July 2022, Irish Water respond to the appeal. They make the following comments:

- The applicant has been in ongoing consultation with IW regarding the protection of Lough Gill drinking water sources at Foxes Den Water Treatment Plant in the context of the subject development.
- Summarises the initial response to the subject application (August 2021) and response to applicant's FI (April 2022).
- IW adopts a Water Safety Plan approach to providing safe, secure and sustainable supply of water, defined as '*the use of a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer'.*
- The subject application has been assessed under the IW Drinking Water Safety Plan. Of the 174 hazards considered, 4 no. have been identified related to the subject application, with potential for direct and indirect effects:
    - Direct – quarry activity causing contamination.
    - Indirect – Oil spill energy the supply, reduced sufficiency of supply due to competing water users/abstraction/drought conditions, run off from construction/development activities upstream of intake causing contamination.
- EIAR has investigated potential impacts associated with these hazards and demonstrated minimal risks to water bodies in the zone of influence of the project, and where necessary development mitigations (Environmental Management Plan) and controls (Discharge Licence).
- In addition to EIAR and on further review of planning application documents and FI submitted and on-going consultation IW is satisfied that the subject development provides adequate protection of the drinking water source, subject to conditions set out in the response.
- IW satisfied with conditions attached to Discharge License, DL (W) 151, issued January 2020.
- IW remain concerned surrounding the process of communication between the application and IW post development, specifically the timely notification should alarms and prohibits on the monitoring break down at the quarry.

- Recommend conditions, including that the development does not impact on any IW drinking water source, works to be carried out to comply with IW standards, development of an ongoing Drinking Water Monitoring & Emergency Response Plan for construction and operation, prior notification of site works and details of discharge monitoring regime/on site monitoring and provision of monitoring information to IW.

7.0 **Assessment**

7.1. The first party appeal addresses the reasons for refusal, i.e. impact on Lough Gill SAC and impact on public water supply. In addition, third parties have raised concerns on a number of matters. In their decision refuse permission under ABP305821, many of these were considered by the Board. However, as further information has been provided by the applicant, in particular in respect of the processing area (that was absent from the previous development) and the potential for cumulative effects, all of the matters raised by third parties are considered in this report.

7.2. Having regard to the foregoing and having examined the application details and all other documentation on file, including all of the submissions received in relation to the appeal, and inspected the site, and having regard to relevant policies and guidance, I consider that the main issues in this appeal are as follows:

Planning Assessment

- Policy context and need.
- Description of the development, incremental development and project splitting.
- Precedent.

Environmental Impact Assessment

- Potential for effects on groundwater and surface water, including public water supply (Lough Gill).
- Amenity of the area.
- Commercial development.

- Blasting.
- Health and safety.
- Climate change.
- Traffic.
- Air pollution.
- Operational hours.
- Impacts on ecology/biodiversity.
- Restoration.
- Adequacy of EIAR.
- Cumulative effects.

Appropriate Assessment

- Potential for effects on conservation objectives of Lough Gill SAC.
- Adequacy of NIS.
- Cumulative effects.

7.3. These issues are examined in the Planning Assessment, EIA and AA sections of this report below. In addition, I comment briefly on the following issues below:

- Consultation. Parties to the planning application and appeal refer to the lack of public consultation, the non-binding nature of pre-application discussions and the exclusion of third parties from these. The EPA's '*Guidelines on the information to be contained in EIA Reports*' (May 2022), refers to public consultation and states that good practice in preparing EIARs involves clear and focused consultation with various parties at key stages in the assessment process. However, in section 2.6 it states that it is not obligatory to carry out pre-application consultation during the preparation of an EIAR, and that the '*core objective of public consultation is to ensure that the public is made as fully aware as possible of the likely environmental impacts of projects prior to a decision being made by the CA'*. I am satisfied that in this instance, the statutory notices in respect of the proposed development and the details on the proposed development and availability of the EIAR and Non-Technical

Summary on the PAs website and EPA's EIA Portal, have ensured that the public has been made fully aware as possible of the likely environmental effects of the development prior to decision making. Further, the matters raised by the public are fully considered in this report.

- Consistency with European law – Parties to the appeal refer to compliance with European law in respect of the extension of the permission granted under PA ref. 02/271 (to deepen the quarry). This matter also lies outside the scope of this appeal as it refers to a previous planning application which has now expired.
- Alleged breaches of quarrying regulations elsewhere – Parties to the appeal refer to breaches of quarrying regulations in Wales by the parent group. This matters lies outside this jurisdiction and the scope of the appeal.
- Self-regulation – Parties to the appeal raise concerns regarding self-regulation by the applicant. Concerns are also raised by Irish Water with respect to communication between the applicant and IW post development regarding timely notification of alarms and issues identified during monitoring. This matter is a significant one and influences all aspects of the development where adherence to emission limits, stated behaviours and practices will ultimately determine the environmental effects of the development. The PA is responsible for oversight of the implementation of any conditions of the permission and I would recommend, if the Board are minded to grant permission for the development, that conditions require specific agreement in respect of monitoring as detailed in this report.
- Legal entity for Discharge licence – On the 24th January 2020, a Discharge Licence was issued by Sligo County Council to Lagan Bitumen for the discharge of effluent to Aghamore Stream from Aghamore Quarry (Appendix G of FI). In response to the request for FI the applicant states that on the 23rd August 2019 Lagan Bitumen changed their name to Lagan Materials Ltd (the applicant) (Appendix A, FI) and an application has been made to transfer the licence to Sligo County Council on 1st December 2021 (Appendix B, FI). I am satisfied, therefore, that the Discharge Licence issued is the responsibility of the applicant.

7.4. Planning Assessment

Policy Context and Need

7.4.1. Parties to the appeal argue that the PAs decision is consistent with policies of the SCDP 2017-2023 which protect the environment and the local community from adverse effects of quarrying (pages 10-12 of CADRE observation), the SEDP 2010-2016 is out of date and does not consider current national and regional policies and that zoning for NR (natural/mineral resource reservation) does not guarantee planning permission. Parties to the appeal also state that there is no need for the development and refer to other sites owned by the applicant at Ballisodare.

7.4.2. National planning policies set out in the National Planning Framework (NPF, 2018) identify Sligo Town as a regional growth centre and the RSES for the Northern and Western Regional Assembly (2020) provides details on how the growth of the settlement will be achieved and its regional role attained. National policies in the NPF also support the development of the rural economy, including the extractive industry, subject to environmental safeguards.

7.4.3. Policies of the current SCDP 2017-2023 recognise the importance of mineral extraction to the local economy and protect all known unworked deposits (Policy P-MEQ-1). The Sligo and Environs Development Plan 2010-2016 was originally adopted in 2009 is incorporated into the current SCDP, to be revised as part of the next review of the County Development Plan. The zoning map for the Plan identifies the appeal site as falling within lands zoned 'NR – natural/mineral resource reservation', with the objective to protect unworked mineral deposits and policy objective O-NR-1 specifically protects the natural resource reservation and existing quarrying operations at Aghamore and Carrownamaddoo, by ensuring that any developments in the vicinity do not have a negative impact on the existing or future potential quarrying operations.

7.4.4. Whilst I recognise that the Sligo and Environs Plan is outdated, the PA have not considered that any amendments to the Plan are merited by way of any formal variation of the Plan. Further, the most recent national and regional policy context for Sligo maintains a growth strategy for the town in the interest balanced regional development. Notably both national and regional policy documents have been

brought forward within the wider policy context of climate change and transforming to a low carbon economy.

7.4.5. Having regard to the policies of the County Development Plan, which recognise the important role that mineral extraction plays in the County, and to the significant role played by Sligo Town as a regional growth centre, as set out in the National Planning Framework, 2018 and developed in the Regional Spatial and Economic Strategy, 2020, I am satisfied that there is a current policy context for growth in the Sligo region and associated with this a likely demand for aggregates. I consider therefore that the applicant is therefore entitled to bring forward the application for proposed development and for it to be considered on its merits.

Description of Development, Incremental Development and Project Splitting

7.4.6. Parties to the appeal argue that the appellant is seeking continued use of the site when there is no existing use. It is also argued that the quarry has expanded laterally beyond its original permission and should be treated as an initial application, not renewal. Concerns are raised regarding the exclusion of the asphalt plant, concrete block making plant and other lands within the applicant's ownership and the risk of both incremental development and project splitting. The planning status of the asphalt plant is also questioned by parties to the appeal.

7.4.7. Statutory notices in respect of the proposed development describe it as the '*recommencement of quarry operations within the previously permitted extraction area..deepening of previously permitted quarry area…recommencement of aggregate processing… provision of settlement lagoon…'.*

7.4.8. The existing quarry on the site ceased operation in 2014. I am satisfied therefore that the description of the development accurately refers to the recommencement of operations and not to the continued use of the quarry or aggregate processing.

7.4.9. I note that the application site relates to the quarry extraction area, as previously submitted under PA ref. 02/271 (for which permission expired on 14th September 2018), and the processing area located on the eastern side of the site. It excludes wider land in the ownership of the applicant, including an asphalt plant to the north/east of the processing area and block making plant to the south of the site.

7.4.10. In principle, there is no impediment to the proposed development being confined to quarrying and processing on the site, subject to adequate assessment of cumulative effects with existing, permitted and planned development. In this instance, the applicant states clearly that there is no intention to carry out concrete production at the site and that consequently it has not formed part of the cumulative impact assessment (page 3, Planning Report). It is also stated that the asphalt plant is present at the site, is in occasional use and has been included in the assessment of cumulative effects. Any future development of lands adjoining the site would also be subject to cumulative impact assessment, with then existing, permitted or planned development.

7.4.11. The planning status of the asphalt plant, which is situated outside the boundary of the appeal site, is outside the scope of this appeal (subject to its inclusion in cumulative impact assessments) and a matter to be addressed by the PA. Notwithstanding this, I note that (a) the asphalt plant has been included in the assessment of cumulative effects and (b) in response to the request for FI the applicant states that the asphalt plant on-site was installed as a replacement for the previous plant which existed on the site, as such it is stated to be exempted development under Class 21, Part 1, Schedule 2 of the P&D Regulations 2001 (as amended). It is also stated on page 7 of the response, that the exempted development status of the plant was confirmed in writing by the PA by letter dated 11th October 2021 (no copy of correspondence on file).

Precedent

7.4.12. Parties to the appeal refer to the previous decision by the Board to refuse permission under ABP-305821 (PA ref. 18345) and state that the reasons for refusal have not been adequately addressed. I address the reasons for refusal in the EIA and AA sections of this report and for the reasons stated I am satisfied that the Board's previous reasons for refusal have been adequately addressed.

7.5. Environmental Impact Assessment

Introduction

7.5.1. I have carried out an examination of the information presented by the applicant, including the EIAR, and the submissions made during the course of the planning application and appeal. A summary of the results of the submissions made by the planning authority, prescribed bodies, appellants and observers has been set out in Section 3 and 6 of this report. The main issues raised specific to EIA can be summarised as:

- Inadequate assessment of baseline, do nothing scenario, alternatives and cumulative effects (including that survey work carried out when quarry not in operation).
- Population and human health – Impacts on residential amenity (quiet environment, noise, dust, vibration, HGVs, public water supply), Alzheimer's Day care Centre, garden centre, amenity of the area, use of sporting and community facilities and tourist attractions, safety with proximity to GAA grounds, lack of clarity regarding operating hours, previous environmental effects of quarrying, transport of explosive through residential area, stability of rock faces, risk of flyrock, light pollution, damage to properties from blasting, no indication of employees, no significant economic benefit to area.
- Biodiversity – Impact on biodiversity of site/area, zone of influence arbitrary, impact on Peregrine Falcon.
- Land, soil, geology – Size of blasts for deep limestone reserve, stability of quarry benches, no assessment of historical contamination.
- Water - Impact on public water supply (hydrology/hydrogeology and water quality), impact on karst aquifer, effects of blasting at depth, water pollution, indirect effects on recreational activities (Lough Gill), risk of accidental spills, effect of drawdown on agricultural lands, flood risk and climate change, impact on turloughs and Holywell, cumulative effects with other development, no assessment of impact with

restoration of quarry, no cumulative assessment of phasing, insufficient justification for absence of effects on Ballysadare Bay.

- Air – Licensing of asphalt plant.
- Climate – Inconsistent with climate change agenda, no assessment of effects of climate change, inadequate assessment of greenhouse gas emissions.
- Material assets – Increase in traffic on inadequate roads (HGVs) including at Carrowroe, impact on road condition, other road users and tourism, inadequate sightlines, risk of rat run on minor roads, volume of traffic to be generated underestimated, no account of effect on ESB substation and broadband aerial at Cuilbeg.
- Landscape – Impact on scenic area (current site and proposed development).
- Mitigation measures – Reliance on self-regulation, previous failures to comply.

7.5.2. These issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation.

7.5.3. The EIAR is updated from the EIAR submitted with ABP-305821 (PA ref. 18/345), to address the reasons for refusal set out by the Board in the previous determination (see section 1.8, EIAR). This includes additional survey work and inclusion of the processing area on the eastern side of the local road. Pre-submission consultations were held with prescribed bodies and the PA (see section 1.35).

7.5.4. Notwithstanding its structure, I am satisfied that the information contained in the EIAR and supplementary information provided by the developer, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with article 94 of the Planning and Development Regulations 2000, as amended. Further, I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality. Qualifications of experts are set out in individual chapters of the EIAR.

Alternatives and Do-Nothing

7.5.5. Chapter 3 of the EIAR deals with alternatives, including do-nothing. It considers alternative sources of aggregates, alternative locations, alternative designs/layouts and processes.

7.5.6. The EIAR refers to the longstanding nature of extraction from the site, proven limestone reserves and policy context which zones most of the site NR, natural/mineral resource reservation and to construction related projects in the Sligo region. The EIAR considers that in the absence of the proposed development, the existing site would be restored to natural habitats as per previously permitted proposals. It refers to the future potential for aggregates from recycled/secondary and marine sources but the limited scope for these in the short term to meet overall demand for aggregates.

7.5.7. Alternative sites considered are further development into lands that do not currently have the benefit of an established quarry (lateral extension) or development of a new greenfield site. The disbenefits of these (no alternative quarry location, lead in times) are considered against the benefits of recommencing works at the site (less pressure on other quarries, no need for extraction from a greenfield site and potentially reduced haulage times). The EIAR acknowledges that minerals can only be worked where they exist and where environmental effects can be managed to an acceptable level. With the proximity of the site to Sligo town it is stated that HGV movements and associated greenhouse gas emissions will be minimised.

7.5.8. Under alternative designs/layouts, the EIAR considers that the deepening of the quarry (as opposed to lateral extension) will better minimise potential environmental effects (noise, dust, visual). The location of the aggregate processing area is relocated away from Aghamore Stream (25m buffer) to prevent surface water runoff. Alternative processes are not considered by virtue of the nature of the proposed development (extraction/processing).

Assessment

7.5.9. The Planning and Development Regulations, 2001, as amended, requires the EIAR to provide a description of the reasonable alternatives studied which are relevant to the proposed development and it specific characteristics and an indication of the mains reasons for the option chosen, taking into account the effects of the development on the environment. Having regard to these requirements, the specific

nature of the development which proposes the recommencement of quarrying on a site which has a proven reserve and is identified in the County Development Plan as a mineral reserve, I consider that the alternatives considered by the applicant are reasonable and sufficient in terms of detail, given the likely environmental effects of lateral extension or a greenfield site) and have been appropriately considered taking account of the effects of the proposed development on the environment.

Risk of major accidents and disasters

7.5.10. The appeal site is not located in an environment that is subject to risk of natural disaster e.g. earthquake. The vulnerability of the project to risks of major accidents is considered in the relevant sections of the EIAR and here under specific environmental topic. The main risks arise from climate change (flooding), accidental spillages or discharges of polluted water (risk to public water supply).

Population and Human Health

7.5.11. Chapter 4 of the EIAR deals with impacts on population and human health. It addresses human health in the context of relevant environmental topics addressed in the EIAR, as per EPA guidelines. No difficulties were encountered in the assessment of impacts.

Baseline

7.5.12. The EIAR describes the context for the development, including its location to the south of Sligo town in a rural area, straddling the public road, surrounded to the west by agricultural land and to the east and south east by industrial uses. Residential development lies along the public roads, with roads to the north east and north west displaying a pattern of ribbon development. There is more dispersed residential development along the local road to the south and north of the site. A sports ground, St. Johns Football Club, lies to the north west of the application area and Lough Gill c.365m to the north east. The EIAR refers to environmental designations and recorded monuments in the area (see Biodiversity and Cultural Heritage, below). Information on population in the electoral division of Ballintogher West and Calry, in which the site is situated, indicate low levels of growth and decline in population respectively. The closest residential dwelling lies c.105m south of the access road to the quarry. There are no residences within 150m of the quarry void and no schools, churches or shops in the vicinity (Figure 4.1).

Impact Assessment

7.5.13. The predicted impact of the proposed development on population and human health is based on the applicant's assessment of individual environmental parameters which are discussed elsewhere in the report.

7.5.14. Employment. Operational stage impacts are considered to arise from the employment of up to 6 people directly on site and indirectly, by way of hauliers, sub-contractors etc. and by contributing to the local and regional economy with continued supply of aggregates. A medium term, positive impact is predicted. Post operation, short term employment would be provided in relation to after care.

7.5.15. Human Health. Key pathways in relation to human health are identified as air, noise, water and soil. Construction/operational impacts, with the potential to generate noise, vibration, dust and effects on soil and water, are considered to range from negligible to acceptable, having regard to the impact assessments carried out and the proposed mitigation measures. Post operation, following restoration, with mitigation, the potential for significant effects is predicted to be negligible.

7.5.16. Amenity. In relation to noise, vibration, dust, water, landscape and traffic during construction and operation, the EIAR predicts negligible effects with the implementation of mitigation measures. Post operation, with the cessation of activities, removal of equipment and restoration of the quarry, the appearance of the application site will have altered with the effects of restoration beneficial compared to current baseline. The potential for post operational residual effects is also considered to be low.

7.5.17. Unplanned events. The vulnerability of the proposed development to unplanned events, such as accidents, floods, landslides etc. is considered to be low given the relatively simple nature of the development works, the established nature of techniques, regulations and procedures to be followed, material to be handled on site and relatively rural location of works. Effects of the following potential unplanned events are mitigated by:

- Instability following extraction of rock – Adherence to HAS Safe Quarry Guidelines to the Safety Health and Welfare at Work (Quarries) Regulations 2008, unlikely effects beyond the site boundary and proposed final restoration of the quarry to natural habitat and water body.

- Pollution for accidental spills and uncontrolled discharges – Appropriate monitoring and mitigation measures to prevent/manage fuel/chemical spills, to monitor and control water quality and measures to control the volume of water discharged from the site.
- Traffic and transport – Local road network can accommodate flows, mitigation measures to include improved sightlines and provision of warning signs, risk of accident resulting in spillage no greater than for other developments, low potential for significant effects on population and human health in the event of spillage.

7.5.18. Cumulative impacts. No permitted or planned events in the area with potential for cumulative impacts on the environment. Filling of lands under PA ref. 18/49 is short term in duration (5 years), and located at sufficient distance from the site (c.450m) to give rise to cumulative effects. Cumulative effects of development on traffic (effects on amenity) with asphalt plant considered in EIAR (see Traffic below). Assessment concludes that the relevant junction links will have sufficient capacity to cater for the development.

7.5.19. Do nothing. Quarry would be restored and impacts in relation to noise, air, dust, water, vibration and traffic would cease.

Mitigation Measures

7.5.20. Measures to be adopted during construction and operation, to mitigate effects on population and human health are identified in Table 4-5. These refer to measures in respect of soil, water, dust, noise, vibration, traffic and landscape.

Residual Impacts

7.5.21. No significant residual impacts are identified for the operational or post-operational stages of the development, subject to implementation of mitigation measures. Environmental monitoring is proposed in respect of water, noise, air and vibration (section 4.74).

Assessment

7.5.22. Having regard to the details set out in the EIAR and the nature of the development, in terms of economic effects, I am satisfied that the development will make a

positive contribution to the local economy by the provision of direct and indirect employment and the availability of aggregates to the region.

7.5.23. Effects on human health are confined to the environmental topics addressed in the EIAR i.e. noise, dust, particulate matter, water quality. Having regard to my assessment of the likely effect of the development on these parameters, set out below, I am satisfied that subject to the strict implementation of proposed mitigation measures, **significant direct, indirect and cumulative effects on human health with not arise as a consequence of the development**.

7.5.24. With regard to impacts on amenity, the appeal site is largely removed from centres of population and effects from operation e.g. by way of noise, dust, particulate matter and vibration will be confined to the immediate area of the site. However, HGV traffic movements will significantly increase on the local road that provides access to the site with a likely significant reduction in amenity for other road users, and properties alongside the road. Whilst the applicant has demonstrated that cumulative traffic movements can be accommodated within the road network (capacity of road and junctions), the increase in HGV traffic is likely to result in a **significant adverse direct effect on amenity** and will add cumulatively to existing traffic movements on the minor road. Increases in HGV traffic will persist to a lesser extent on the Regional roads that connect the site to the N4, with detrimental effects on the amenity of these roads and the residential population that live alongside these roads. Given the absence of significant effects on other environmental parameters, considered below, I do not consider that the effects of HGV traffic alone, are sufficient to refuse permission for the development. However, I consider that traffic movements should be closely monitored to ensure that actual levels are confined to maximum levels used for the impact assessment. Further, if the Board are minded to grant permission for the development, I would recommend that a development contribution is levied with the potential for appropriate traffic management measures to be implemented to the regional roads affected by the development. Conditions should also require regular cleaning and maintenance of the public road in the interest of visual amenity and traffic safety. Other concerns raised by observers are considered below:

- Alzheimer's Daycare Centre and garden centre beside Lough Gill – Having regard to the distance of the Day Care Centre from the quarry and the appeal

site from Lough Gill, the absence of significant noise, dust or vibration outside the boundary of the site and with the strict implementation of mitigation and monitoring measures, I am satisfied that no significant direct, indirect or cumulative effects will arise on the amenity of the Alzheimer's Day care centre or garden centre.

- Context of the history and effects of quarrying on the site – Whilst I acknowledge the parties concerns regarding the past performance of the quarry at the subject site, the proposed development is brought forward by a different operator and should be adjudicated upon on its merits. Notwithstanding this, the absence of significant environmental effects is predicated on the strict implementation of mitigation measures. Should the Board decide to grant permission for the development, I would recommend a condition which requires a close and transparent monitoring regime.
- Increase in residential development in the area (including a new house in proximity to the appeal site, under PA ref. 17296) and the increase in young families – The applicant's EIAR and this assessment has taken account of the residential population in the vicinity of the appeal site, including the dwelling granted permission and constructed under PA ref. 17296, located c.150m to the south west of the quarry void (Figure 4.1). The applicant proposes adhering to standard emission limits for vibration which prevent damage to dwellings. If the Board grant permission for the development, I would recommend monitoring at closest residential dwellings of all blast events, to ensure compliance with emission limits and prevents damage to dwellings.
- Proximity of the site to St. Johns GAA and Soccer grounds (safety of children) – The GAA grounds lie c.100m north of the appeal site. The applicant proposes 9 foot high post and wire fencing along the northern and western boundary of the quarry site, south of the GAA grounds and post and wire stock proof fencing elsewhere (Drawing No. 3). I consider this is a reasonable response to address safety issues posed by the proximity of the quarry to the GAA grounds.
- Potential instability of quarry benches – Addressed under Land and Soils below.

- Transport and storage of explosives through a residential area. Section 2.28 deals with blasting. It is stated that non-explosive materials are transported to the site on specially designed pump trucks. Materials are blended on-site and pumped directly to blast holes. I am satisfied therefore that no impact on public safety will arise as a consequence of materials being transported to the site.
- Working hours - Working hours are stated to be 7am to 6pm, Monday to Friday and 8am to 2pm on Saturdays. It is stated that the quarry will not operate on Sundays or Bank Holidays, except in emergency situations. There is no clarity regarding work on the site outside of these hours e.g. with lorries arriving early for loading. However, in the interest of residential amenity I would recommend that conditions clearly preclude all operations (extraction, processing and loading/unloading) outside of stated working hours.

Biodiversity

7.5.25. The impact of the proposed development on biodiversity is addressed in Chapter 5 of the EIAR. It provides an Ecological Impact Assessment of the proposed development which describes baseline conditions, potential significant effects and necessary mitigation measures. The zone of influence of the project is considered to be 5km and this is not unreasonable having regard to the likely confined nature of most effects (e.g. noise, dust) and the limited potential for waterborne effects with dilution and dispersion.

Baseline

7.5.26. Baseline data includes desk survey and field work, including a walkover (August 2020), otter survey (August 2020), an additional bat survey (August 2020), breeding bird survey (May 2021) and aquatic survey of Aghamore stream (September and November 2020) subsequent to the Board's previous determination under ABP-305821 and changes to site boundary. The applicant also consulted the Irish Raptor Survey Group and Inland Fisheries Ireland. No significant limitations are identified from the desk study and field surveys.

7.5.27. National and European sites within 5km of the site are indicated in Figure 5-1. These include Lough Gill SAC c.365m north east of the access track to the processing area, into which Aghamore Stream discharges, and Cummeen Strand

SPA and Cummeen Strand/Drumcliff Bay SAC/pNHA, into which the Garavogue River, from Lough Gill, drains into. Approximately 3.3km to the south west of the site is Ballysadare Bay, also designated as a pNHA, SAC and SPA.

7.5.28. Habitats present on the appeal site are shown in Figure 5-2. These include active quarries and mines, recolonising bare ground, scrub, hedgerows and treelines, mixed broadleaved woodland and dry calcareous and neutral grassland and improved agricultural grassland. These habitats are well described in section 5.89 on of the EIAR. Due to an absence of effects on habitats, most are scoped out from further assessment. This approach is reasonable as adverse effects are unlikely as physical works do not extent into the habitats surrounding the working areas and impacts by way of dust are predicted to be substantially below the threshold for adverse effects (see Air below).

7.5.29. Faunal species are considered in section 9.115 on of the EIAR. Desk study results identify West European Hedgehog, Eurasian Badger, Red Squirrel and Soprano pipistrelle as occurring in the past 15 years in the 2km grid squares in which the appeal site is situated (NBDC database). Frogs were noted in the artificial pond at TN4 (see Figure 5-2) but effects on the species are scoped out due to the absence of suitable habitats within the site. Bird species recorded and/or observed in the site include Kestrels, Grey wagtail and Peregrine Falcon breeding within the site. Over-night bat detectors record 7 no. bat species within the site (at TN 6 and TN13, Figure 5-2), all protected under Annex IV of the EU Habitats Directive. However, the EIAR concludes that the site (quarry and processing area) provides negligible bat roosting potential due to the lack of suitable bat roost features but provides foraging habitat that is common and widespread throughout the region, i.e. hedgerows, field edges and tree line roads. Field survey identified habitat suitable for badger within the site but no signs of habitation in 2016, 2017 and 2020. Survey of Aghamore Stream found no evidence of their presence in the waters and presence of substantial culverts downstream of the site, narrow width and depth of stream and lack of food sources were considered not to support permanent otter presence. Pine marten was recorded during raptor and site surveys. The population of this species is increasing, with woodland and scrub habitats favoured. The EIAR considers that the species are unlikely to be significantly affected by the proposal (absence of effects on habitat). Aquatic survey of Aghamore Stream, September and November 2020,

upstream and downstream of the quarry discharge, classified the stream as having a Q value of 3-4, slightly polluted water with discharge from the quarry site having no deleterious effect on the water quality or macroinvertebrate fauna. Aghamore Stream is not identified as a salmonid river and the EU (Quality of Salmonid Waters) Regulations 1988. Downstream of the site, the presence of a number of culverts and pipes is considered to hinder salmonid movement with salmonid fish in Lough Gill unlikely to swim up the stream to spawn. A stand of Japanese Knotweed was identified in the south of the processing area and Contoneaster adjacent to the processing area (TN1, Figure 5.2). Invasive fauna species, recorded in the 1km^2 grid square in which the site is located, have not been recorded within the site. Table 5-2 summarises ecological features of the site which are deemed to be important, Eroding/upland rivers and Birds (both important at a townland scale) and bats and Pine marten (both important at a local scale).

Impact Assessment

7.5.30. The EIAR has regard to the design of the proposed development in its impact assessment which forms part of the planning application e.g. good practice environmental and pollution control measures and landscaping measures.

7.5.31. Do nothing. Restoration of quarry, in accordance with conditions of the previous permission, is considered to result in a moderate significant positive change in the ecological interest of the site.

7.5.32. Construction/Operation. Impacts on ecological features are predicted to be:

- Eroding/upland river (Aghamore Stream) – No adverse effects. No direct loss or fragmentation of stream or its riparian corridor. Proposed standoff in processing area (25m) will reduce noise and light. Surface water from processing area will percolate to ground through >10m sand/gravel deposit. Discharge waters from quarry will be discharged to stream via settlement lagoon and at a rate that is consistent with nature of Aghamore Stream as a spate stream, one which experiences a wide range of flow rates over the year. Constant discharge may benefit stream which dries up in summer. No impacts are predicted on downstream water quality.
- Birds – No change to existing quarry faces (with deepening of quarry), but quarrying including blasting may impact on breeding raptors through noise

and vibration disturbance and red list species observed to be breeding on the site, grey wagtails.

- Bats – No potential roosting habitat to be removed. Noise and light at night time may impact on foraging bats.
- Pine marten – No changes to existing environment of Pine marten proposed (north east of quarry void). Operational phase unlikely to give rise to any negative effects.

7.5.33. Cumulative effects. No cumulative effects predicted from other quarries within 5km of the appeal site as no hydrological connection (quarry 4km from site at Ballysadare). No other planned developments in vicinity of the appeal site in the last 5 years with the potential for cumulative effects (small scale developments, no pathways for cumulative effects). Permission granted for filling of lands with construction and demolition waste under PA ref. 18/49, on land c.450m to the south of the site (and south of Lough Nameenbrack) is considered to be small scale, short term (5 years) and sufficiently removed from the site for cumulative effects. No policies in CDP that are considered to give rise to local cumulative effects.

Mitigation

7.5.34. Water. Mitigation measures include construction stage CEMP, provision of settlement lagoon, controlled discharge to Aghamore stream (in accordance with Discharge Licence), installation of rock armour scour protection at discharge, appropriate management and storage of contaminants and provision of hydrocarbon interceptors and the provision of a berm across the open perimeter of the processing area (also see Water section of this report).

7.5.35. Birds. During operation cliff faces/rock ledges currently used by raptors to be retained. Construction of haul road in proximity to nesting ledge to be carried out once 2021 chicks have fledged and prior to 2022 breeding season. Toolbox talk on peregrine falcon to all new staff. Peregrine survey 3x year by ornithologist (section 5.179 EIAR) and preparation of Peregrine management plan if it is confirmed that birds are breeding on the site (including management of blasting). Breeding bird survey of site prior to commencement (to include grey wagtail), with specific mitigation measures if breeding on site.

7.5.36. Bats. Hours of work to be restricted and take place during daylight hours when bats are roosting. No impact on foraging bats. Sufficient lighting to be provided on site to ensure safe operations during winter, to include low level spot lighting directed towards the vehicle loading area and operational area. Landscape restoration plan will provide hedgerow and woodland planting and will benefit foraging and commuting bats.

7.5.37. Pine martin. Bolstering of hedgerows and woodland on site may result in slight positive impact on species.

Residual Impacts

7.5.38. With the implementation of mitigation measures, no adverse effects on Aghamore Stream, bird species, bat species and Pine martin are predicted. The year after restoration is completed, monitoring of the site during the bird breeding season is proposed, to check that raptors continue to use the site.

Assessment

7.5.39. Parties to the appeal raise concerns regarding the adequacy of the zones of influence of the project, the adequacy of the assessment of the current state of the quarry, absence of baseline study, concerns regarding the measures to project Peregrine Falcon and the applicant's ability to restore the site to nature conservation given the deep void to be created.

7.5.40. As stated above, having regard to the scale of the proposed development and pathways to related ecosystems, I am satisfied that 5km zone of influence for the biodiversity assessment is appropriate. A number of baseline studies have been carried out on the habitats, fauna and flora of the site and these are appropriate to provide baseline information for the assessment of the likely effects of the development. Measures to protect Peregrine Falcon are proposed, based on detailed survey work and these measures have been deemed to be acceptable by the PA and DHLG&H and are standard measures seen in quarries where Peregrine Falcon are present.

7.5.41. In the restoration of the site it is proposed to fill the quarry void with water, retain quarry faces and benches above water level and retain or restore areas around the quarry to grassland/wildflower meadows. This is in addition to additional hedgerow

and woodland planting to be carried out along site boundaries and natural regeneration of the area south of the processing area. Taking into account all of the proposed measures, I am satisfied that the development, subject to strict implementation of landscape and restoration plans, to have a long term positive impact on biodiversity locally.

7.5.42. I note the Department's comments in respect of the otter survey, insufficiently comprehensive in terms of dates and times (DHLG&H dated 21st July 2022) and refer to the Board to Appendix I of the RFI which refers to initial survey work in 2016 and follow up surveys in 2020 and 2021. The 2021 survey was carried out between 25th August to 23rd September 2021 and included trail cameras along the entire length of Aghamore Stream along the boundary of the site and an additional c.250m up and down stream of the site boundary for evidence of Otter presence. No evidence of otter was found in any of the survey work and the Otter Survey Report points to the presence of culverts downstream of the site, narrow and shallow nature of the stream providing an unsuitable environment for permanent otter presence. I am satisfied therefore that the proposed development is not likely to have a significant adverse effect on Otter. Other concerns raised by the Department, in their initial and subsequent submission (post FI) are considered in the AA section of this report or have been addressed in the planning application/appeal e.g. no blasting during Peregrine Falcon breeding season, bird breeding survey.

7.5.43. Having regard to the foregoing, in particular the findings of the survey work in respect of each of the species considered, their generally limited use of the site area to be affected by the development, and subject to the strict implementation of the proposed mitigation measures, I am satisfied that **the proposed development will not have a significant adverse direct, indirect or cumulative effect on biodiversity in the area.**

7.5.44. In their submission of the 25th February 2022, the Department refer to the high level national objectives of biodiversity net gain in the National Biodiversity Action Plan 2017-2021 and the recommendation that all proposed large projects address the wider biodiversity loss that would be associated with the development and offer areas of high biodiversity to be retained and preserved as well as separate compensatory habitat rehabilitation to achieve biodiversity net gain with all

developments. It refers to CIEMM's 'Biodiversity Net Gain, Good Practice Principles for Development – A practical guide'.

7.5.45. I have concluded, for the reasons stated, that the proposed development will not give rise to significant adverse effects on biodiversity over the course of its duration. However, given the size of the subject site, the nature of habitats within the wider landholding and the duration of the development, I consider that there is scope for the development to provide a net gain in biodiversity and that this is appropriate to balance aspects of the development which cannot be mitigated (e.g. increase in vehicle emissions). If the Board are minded to grant permission for the development I would recommend therefore a condition which requires that subject site to be actively managed for nature conservation during the period of operation, such that there is biodiversity net gain e.g. active management of dry calcareous grassland, management of mixed broadleaf woodland, additional native tree planting and appropriate planting behind the sightlines.

Land, Soil, Water, Air and Climate

Land and Soil

7.5.46. Chapter 6 of the EIAR deals with impacts on land, soils and geology. It has been prepared by a professional geologist and no specific limitations or difficulties were encountered in the preparation of the section of the Report.

Baseline

7.5.47. The report provides information on the regulatory background in respect of land, soils and geology, including relevant technical standards, and details of the receiving environment. Regional geology, in terms of soils, superficial deposit geology and bedrock geology, is show in Figures 6-1 to 6-3, with the site lying within the Dartry Limestone formation (regionally important aquifer) and the processing area comprising superficial deposits of made up ground or sand and gravels derived from carboniferous limestones. Locally soils and superficial deposits have been stripped from the footprint of the extraction area. Construction of the settlement lagoons will require a small additional area of soils/subsoils to be removed. Geophysical survey by Apex Geophysics (Appendix 7.6) indicate that bedrock under the existing quarry floor is composed of clean, thin to medium bedded limestone, with no evidence of weathered zones or structural (fault, fissure) or karst features (with the exception of

Area B which lies to north east of the proposed extraction area and is interpreted as an area of clay-infilled fissures that have no potential to be hydrologically active). No underlying Glencar Limestone was encountered in geophysical survey, or therefore potential karstic activity at the intersection of the two formations.

Impact assessment.

7.5.48. Having regard to the extraction of rock from within the existing void, absence of features of geological heritage in the area, limited additional land take and limited restoration to agricultural uses, small negative impact to small positive impacts on land/soil are predicted. No unplanned events are anticipated and adherence to HSA Safe Quarry - Guidelines to the Safety Health and Welfare at Work (Quarries) Regulations 2008 is stated to limit the potential for unplanned events in the form of instability of quarry faces. The 'do nothing' scenario would result in the natural recolonisation of the site and filling of the void with water to its natural level.

Mitigation.

7.5.49. Mitigation measures include no lateral extension and restoration following completion of works and appropriate soil handling in the construction of the settlement lagoon to provide soil stability and to preserve soil integrity.

Residual impacts.

7.5.50. No residual impacts on land, soils or geology are predicted.

<u>Assessment</u>

7.5.51. Parties to the appeal raise concerns regarding the stability of quarry benches and effects of drawdown on agricultural land (observation by McDonagh). Stability of faces is a matter which is considered in the EIAR and it, properly, refers to the requirement for the applicant to comply with another code, the HSA Safe Quarry - Guidelines to the Safety Health and Welfare at Work (Quarries) Regulations 2008. The McDonagh submission argues that soil sampling indicates that the parcel of land on the western side of the quarry void is affected by water drawdown. Soil results indicate low levels of phosphorus and potassium in the affected field, but not magnesium. Results from soils in other fields (removed from the void) also show low levels of potassium. It is not clear therefore if the results are a direct result of dewatering. Further, I am not persuaded on the basis of the information presented

that percolation through soils is likely to change with dewatering to such an extent that significant leaching occurs.

7.5.52. Having regard to the nature of the proposed development, which comprises extraction from the quarry at depth (no lateral extension) and use of an existing processing area (no additional land take), and to the geophysical survey which can find no evidence of structural faults or karst features in the Dartry Limestone formation that underlies the quarry void, and the proposals for restoration which include placing topsoil and overburden from the lagoon site to the north of the quarry for restoration to grassland, **I am satisfied that the proposed development will have no significant direct, indirect or cumulative impacts on land or soils**. Loss of geological reserve is very modest in context of overall size of reserve.

Water

7.5.53. Chapter 7 of the EIAR deals with the likely interaction of the quarry with the water environment. The assessment is based on previous survey work, consultations with statutory bodies and the PA (Appendix 7-1) and additional information gathered since the Board refused permission under ABP-305821. It includes:

- Phase I investigations (July 2017 to March 2021) with drilling of boreholes and rotary cored boreholes and installation of monitoring wells to the north, east and south of the quarry (MW1-9, MW10c and MW11 – Figure 7.1 and A7-4), the installation of flowmeters to monitor volumes of water discharged off site (Figure 7-2), survey of Aghamore stream channel and culverts, surface water sampling of the stream.
- Phase II investigations (August 2020 to March 2021) included the drilling of additional boreholes within the quarry along the access road and on the northern boundary (MW12, MW13, MW14, MW18, MW19), nine shallow boreholes and monitoring wells within the processing area (Figure 7-1 and borehole logs in A7-4), surface and groundwater sampling.
- Biological assessments of Aghamore stream between September and November 2020 (A7-5).
- Geophysical survey of the quarry floor and land to the north east to determine if any weathered or karst zones were present in the bedrock (A7-6).

7.5.54. Fieldwork, and assessment of likely effects, was carried out by chartered geologists and hydrogeologists, with experience of regional hydrogeology and karst features of the Sligo peninsula (section 7.18). The Water Chapter of the EIAR has also been peer reviewed.

7.5.55. Limitations are identified in section 7.22. These include absence of monitoring results of previous operations and difficulties in drilling monitoring wells in some locations. However, it is stated that the limitations have been overcome and that extended monitoring has now taken place for over three years.

Baseline Conditions

7.5.56. The appeal site lies in Sligo Bay & Drowse Surface Water Catchment, on the boundary of two sub-catchments, Carrowgobbadagh Sub-Catchment to the west and Bonet Sub-Catchment to the east (Figure 7.3 EIAR). Drainage in the Carrowgabbadagh Sub-catchment is to the west, towards the coast (Ballysadare Bay). Drainage within the Bonet Sub-catchment is towards Lough Gill. Within the Bonet sub-catchment, Aghamore Stream (WFD Garavogue_010), c.300m to the east of the quarry void, has Poor Status (2013-2018) and is At Risk of not achieving good ecological status by 2027 (the stream drains water from Lough Nameenbrack, c.450m to the south east of the quarry to Lough Gill). The stream is culverted at points downstream of the appeal site (Figure 7-28). Pressures on the water body are forestry, urban run-off (diffuse sources of pollution) and urban wastewater (combined sewer overloads).

7.5.57. Lough Gill is the most significant surface water body in the area of the site. It has Moderate Status (2013-2018) and is also At Risk due to urban waste water (agglomeration), waste water discharge (domestic), invasive species, quarries and forestry. It is identified as an Area of Action in the River Basin Management Plan 2018-2021 for better targeting of measures and supplementary measure to improve water quality. Lough Gill is designated as an SAC and as a Public Water Supply for Sligo and North Leitrim.

7.5.58. Lough Gill discharges into Garavogue Estuary approximately 7km downstream of the Lough. It is a Transitional Waterbody (WFD IE_WE_470_0100), with Moderate Status (2013-2018) and at Review risk The Estuary is designated as an SAC and SPA, Cummeen Strand/Drumcliffe Bay SAC and Cummeen Strand SPA.

7.5.59. To the west of the site surface water discharges ultimately to Ballysadare Estuary. This Transitional Waterbody (IE_WE_460_0300), lies c.3.3km to the south west of the appeal site and is hydraulically downgradient of the quarry. It has Moderate Status (2013-2018) and At Risk due to agriculture and urban wastewater pressures. The Estuary is also designated as an SAC and SPA, Ballysadare Bay SAC and SPA.

7.5.60. The appeal site straddles two groundwater bodies. The quarry void (existing and proposed) lies primarily in the Carrowmore West Groundwater Body (WFD IE_WE_G_0040), with the remainder of the site in the Carrowmore East GWB (WFD_WE_G_0042) (Figure 7-13, EIAR). Both waterbodies were identified as having Good Status (2013-2018), Carrowmore West, Not at Risk and Carrowmore East, At Risk in the 3rd cycle of the WFD (see attachments).

7.5.61. The appeal site lies above a Regionally Important Karstified Bedrock Aquifer, Dartry Limestone Fm, dominated by conduit flow (Rkc)(Figure 7-12). It is stated in the EIAR (section 7.130) that yields from boreholes in such aquifers tend to have a yield of >400m^3/day. Yield tests on the boreholes drilled (MW1-8) indicate yields of 3-49m^3/day, except MW3, which hit a significant groundwater flow (c.400m^3/day), at -24.5mOD, in a collapsing fracture zone (-33mOD) (Figure 7-1). Yields within the bedrock, below the epikast, tended to increase gradually with depth once below the water table, suggesting that permeability is not related to a single flow but a diffuse flow through fractures (Appendix 7-14). The permeabilities identified by packer tests at MW10c and MW11 (Appendix 7-15) also indicated diffuse fracture flow within depth and not suggestive of karst conduit groundwater flowpaths (NB The location of MW11 not shown on Fig 7-1).

7.5.62. Groundwater inflows into the quarry are delineated by calcium carbonate deposits on the quarry face (yellow-white staining – see photographs), with inflows diffuse through a network of bedding and joint planes, with more seepage in some areas than others. Shallow groundwater inflows to the quarry from the epikast zone (approx. top 5-10m of bedrock) are evident in 3 particular locations (Figure 7-14), north west corner (Plates 7-15 to 7-17, Appendix 7-8), north east corner (Plates 7-18 and 7-19) and south west corner (Plate 7-20). One groundwater inflow is present on the quarry floor at the base of a quarry wall, with the baseflow elongate arising from flow along the bedding planes rising into the quarry void (not considered to be connected to fault to the east of the quarry) (Plate-21, Appendix 7-8). It is stated that

drawdown water table level behind the quarry face occurs within the bottom 5-10m of the existing quarry floor. Temporary seepages are noted higher than this in the quarry faces as a result of rainwater infiltrating through the overburden in the areas adjacent to the quarry, flowing along bedding planes above the saturated zone into the quarry (i.e. recharge).

7.5.63. The water balance model (Appendix 7-16) indicates that for the period assessed (26th January to 9th April 2021) the largest input of water to the quarry was from direct rainfall/runoff (71%) with direct drainage via epikast accounting for 19% and deeper groundwater inflows for 10%.

7.5.64. Groundwater abstractions in the area of the site include Lough Gill, for public water supply. The areas is served by mains water supply and no active wells lie in the immediate area of the site (Figure 7-19 and section 6.147-7.153 EIAR).

7.5.65. Appendix 7-17 provides a record of groundwater levels in boreholes MW1 to MW25 with monitoring commencing for some boreholes on the 12th July 2017. Monitoring indicates variation in how wells react (typical of karst system), with rapid response in water levels to rainfall by all, reflecting significance of epikast. Monitoring also indicates, drawdown in the immediate area of the quarry and seasonal fluctuations in water levels. Groundwater levels in the processing area are shallow.

7.5.66. Groundwater flow direction is considered to be split, with the west of the site and quarry void draining west and the remainder of the site, to the east (Figure 7-21), with local deflections (Figure 7-22a and b).

7.5.67. Monitoring of groundwater (major ions, Figure 7-23) indicates groundwater that is in connectivity, water quality that is generally compliant with Groundwater Regulation Threshold values and elevations likely to be due to background levels.

Conceptual Model

7.5.68. The conceptual model of the site is shown in Figures 7-24a and 7-24b. Section 7.183 of the EIAR states:

> *'The existing quarry is below the water table and there is local drawdown draining groundwater into the quarry void. Outside the zone of influence of the quarry, groundwater to the west of the quarry discharges towards the*

southwest and the coast (Ballysadare Bay), groundwater to the east of the quarry discharges towards the northeast and Lough Gill.

During wet periods, a temporary saturated zone develops within the epikarst and this can drain laterally following the topographic gradient. During extended wet periods, the storage capacity of the epikast is temporarily exceeded leading to ephemeral springs or seepages further down-slope and flooding of surface depressions in the lowlands (groundwater flooding).

The Aghamore Stream all but dries up in prolonged dry weather, indicating it is above the water table in summer; flow monitoring during the winter suggest a level of baseflow to this stream, with most baseflow likely to come from the adjacent sand and gravel deposits underlying the processing area'.

7.5.69. Sensitive receptors are shown in Figure 7-25 and include:

- Lough Gill SAC and public water supply. Hydrological connection between the appeal site and Lough Gill via the discharge from the quarry, regulated by DL(W)151 and conditions of the license. Hydrological connection (groundwater) as groundwater from eastern part of site drains to Lough Gill (Figure 7-21).
- Cummeen Strand SPA and Cummeen Strand/Drumcliff Bay SAC. Indirect hydrological connection between the site and the European sites which are downstream of Lough Gill.
- Ballysadare Bay SAC. Direct hydrological connection to the SAC, as groundwater from western half of site discharges to Ballysadare Bay. However, given distance to Ballysadare Bay (c.3.3km), the size of the catchment to Ballysadare Bay and the very small groundwater abstraction from the quarry, the Ballysadare Bay SAC is not considered a potentially sensitive receptor.
- Groundwater bodies. Quantitative impact of abstracting small volumes of groundwater from the two groundwater bodies that the quarry straddles is considered to be negligible i.e. maximum licensed discharge is 1,277,500m^3/year, total rainfall recharge for underlying waterbodies is 59,950,000m^3/year. Volume of water discharging from the quarry accounts

for 6% of the recharge to Carrowmore West GWB and 4% to the Carrowmore East GWB, 2% of total recharge to regional aquifer (Appendix 7-2, Hydro-G report). WFD Guidance document, Guidance on the Assessment of the Impact of Water Abstractions GW5 (2004), indicates that where groundwater abstraction constitutes 2-10% of recharge to a river or large lake there is low potential for impact. There are no other large-scale abstractions from the groundwater body. Therefore, quarry abstraction is unlikely to affect either water balance of the two GWBs or surface water features associated with these.

Potential Impacts

7.5.70. Within the context of the Conceptual Model, the applicant considers and assesses potential impacts arising from activities associated with do nothing, construction/operation, post operation, unplanned events and cumulative impacts (summarised in Table 7-2). Main impacts are considered to arise from deepening of the quarry with effects of the quantity and quality of surface and groundwater with the risk of effects on Lough Gill as an ecological resource and source of public water supply. The EIAR refers to the Discharge Licence granted by Sligo County Council (DL(W) 151 and review licence DL(W) 152) which have accepted that the proposed discharge of 3,500m^3/day can be safely assimilated into Aghamore Stream with no potential for impact on Lough Gill. A copy of DL(W)151 is attached to Appendix C, FI response.

7.5.71. In summary predicted impacts are:

- Do nothing – Once water levels rise in void, site would re-establish its function in regional hydrogeological regime. Loss of augmented flow to Aghamore Stream (dry weather).
- Construction (installation of settlement lagoon, construction of berm in processing area, wastewater treatment system, portacabin and wheelwashes).
    - Direct – Potential for generating suspended sediment in rainfall runoff and potential for spills and leaks from fuel/oils. Surface water falling on processing area would percolate to ground, with suspended particles naturally removed. Suspended solids in runoff to quarry void would

settle out on quarry floor. Discharge Licence precludes impact on Aghamore stream. CEMP to manage potential adverse impacts on water environment. Without mitigation, potential for impact on Lough Gill from contamination is assessed as significant.

- Indirect – No indirect construction effects identified.

- Operation (extraction/deepening of quarry, processing).
  - Direct impacts
    - Increased drawdown – Iterative model of drawdown indicates 286m radius of influence with quarry at -50mOD (Figure 7-26). Calculations assume no large flow fractures present at depth. Estimated groundwater inflows for the current situation using the iterative method agree with field observations. Radius of influence does not extend to Aghamore Stream, so no impact predicted on base flow or on Lough Gill. No private groundwater well supplies in radius of influence. Increased drawdown will not affect groundwater flooding to north and north west as the areas are flooded by outflows from the epikarst only. Proposal to deepen quarry will not affect epikast flows. The quantitative impact of abstracting small volumes of groundwater from the two GWBs that the quarry straddles is considered negligible (see above). Without mitigation potential for significant effect on Aghamore Stream, Lough Gill and groundwater bodies are considered to be Imperceptible.
    - Discharge to surface water (processing area) - No point discharges from processing area with surface water to discharge through underlying sand and gravel to ground (with natural removal of suspended particles). Within processing area, standoff from Aghamore Stream of minimum 25m and retention of riparian and associated woodland.
    - Flooding – With increased discharge to Aghamore Stream there is increased flood risk in the stream. Survey of Aghamore Stream (reaches and culverts) identifies restricted size of culvert

at location no. 3 (culvert no. 4) and increased risk of flooding in extreme weather events (with quarry discharge exacerbating downstream flooding). Without mitigation, potential impact on the stream is considered to be Imperceptible (Medium importance of surface water receptor, magnitude of impact Imperceptible).

- Surface water quality (Aghamore Stream and Lough Gill) - Assimilative capacity of Aghamore Stream assessed in Appendix 7-23. None of the calculated concentrations downstream of the discharge exceed the relevant water quality standards and no negative impact on water quality in the stream is expected as a result of the discharge. The only exceedances of the Surface Water Environmental Quality Standards in recent monitoring downstream of the discharge point were single occurrences of slightly elevated mercury (Nov. 2018) and nickel (Jan 2019) and these are believed to be related to background levels and not any activity in the quarry (no source for these metals). Without mitigation, potential impact on Lough Gill is considered to be Imperceptible (based on Extremely High importance of receptor and Negligible magnitude of impact).
- Groundwater quality - Risk to groundwater from blasting is negligible as groundwater is drawn into the quarry and pumped out as discharge to surface water. Without mitigation, the potential for effect on surface water quality is assessed as Significant (based on importance of receptor/magnitude of impact).

  - Indirect – No indirect operational effects identified.

- Post operation – Quarry will be allowed to flood. All potential contaminants will be removed from site. No direct or indirect post-operational impacts anticipated.
- Unplanned events – EIAR identifies the potential for contamination from accidental spillages and uncontrolled discharge of surface water and flooding

(on and off site). It is stated that appropriate mitigation and monitoring measures are proposed to ensure that there are no potential impacts arising from unplanned events. Condition no. 7 of Discharge Licence specifically governs control of accidental spillages.

- Cumulative impacts – Potential for cumulative impacts on (a) surface water arising from recently reclaimed land upstream of site surrounding Lough Nameenbrack and inert waste recovery operations to the south of the Lough, (b) operation of asphalt plant (run off from plant area), (c) obsolete concrete plant/block yard (run off from area).
    - Sampling of surface water upstream and downstream of infilled area at Lough Nameenbrack (Figure 7-2), with water quality the same upstream and downstream. No adverse effects on Aghamore Stream or potential therefore for cumulative effects.
    - Asphalt plant – No point source of discharge from processing area and surface water from asphalt plant also percolates to ground (underlying sand and gravel with significant unsaturated zone).
    - Obsolete concrete block yard – No operation of block yard since 2014 and no intention to recommence production. No point discharges from processing area. Surface water from concrete plant/block yard will continue to percolate naturally to ground (underlying sand and gravel with significant unsaturated zone).

Having regard to foregoing, potential cumulative effects are assessed as Imperceptible (infilled area upstream) to significant (concrete plant/block yard) based on importance of receptor and magnitude of impact.

Mitigation Measures

7.5.72. Mitigation measures are set out in page 7-45 (construction) and 7-52 (operation) and include:

- CEMP to manage adverse effects during construction, including of settlement lagoons (including surface water runoff to be directed to the quarry void, with settlement prior to discharge under license DL(W)151)), management of

stockpiles, storage of oils, refuelling and measures for mitigation if contamination is encountered .

- Appropriately sized settlement lagoon to accommodate maximum discharge rates (section 7.213 and Appendix 7-19). Settlement lagoon to be lined to prevent leakage. Hydrocarbon interceptor to be installed to serve settlement lagoon, with alarm to automatically detect levels of oil, silt and liquid within. Alarm to activate if excessive levels and transmit text to site manager (DP008, Depot Procedures Manual, Appendix C, FI).
- Compliance with conditions of Discharge Licence, DL(W)151 (to ensure compliance with Groundwater and Surface Water Regulations). Amongst measures to comply with the licence, the applicant proposes a flow meter on the discharge to measure instantaneous final effluent discharged, with automatic turbidity monitor (section 2, Current Planning Permits, Registrations, Licences, Authorisations and Environmental Monitoring Plans, Appendix C, FI).
- Supply well for wheelwashes, dust suppression and non-potable uses.
- Closed loop wheelwashes.
- New wastewater treatment plant for welfare facilities (Appendix 7-24, site suitability assessment).
- No bulk storage of fuels and hardstanding area provided for on-site refuelling with hydrocarbon separator for runoff.
- Appropriate procedures for the storage of oils/chemicals on site and for dealing with accidental spills.
- Maintenance of plant and machinery and interceptors and separators.
- Site specific protocol for blasting to mitigate potential for impact of explosives on surface water quality (Appendix 2.1, EIAR). Includes use of waterproof, pumped explosive designed for wet conditions.
- Rock armour scour protection to prevent erosion at discharge point to Aghamore Stream.

- In extreme weather events, no pumping to eliminate the slight risk of flooding (Culvert no. 4).
- Construction of a berm across the open perimeter of the processing area where runoff from a collection sump overflows the Aghamore Stream. Berm will prevent direct discharge from processing area to stream. Ponded runoff in collection sump will be pumped to nearby soakaway for infiltration to ground.

7.5.73. NB the applicant's Site Specific Monitoring Plan (Appendix C of FI), in the context of a corporate Environmental Management Plan, sets out arrangements for the management of water and potential contaminants and details in respect of communications, incidents, corrective and preventative actions and accident prevention policy. Management procedures are specifically linked to the requirements for emission limits and monitoring set out in the discharge licence DL(W)151.

Residual Effects

7.5.74. As a consequence of the characteristics of the water environment, potential impacts likely to arise and proposed mitigation measures, the EIAR identifies no residual effects on the water environment, direct, indirect or cumulative as a consequence of construction, operation and post operation. The applicant's conclusions are supported in the application of the UK Environment Agency's Hydrological Impact Appraisal methodology (dewatering abstractions).

Assessment

7.5.75. The PA have refused permission for the development (second reason) on the grounds that having regard to the nature, scale and extent of the proposed development, including inadequacy of detail to mitigate the effects of the proposed development on the environment, in particular water quality, the proposed development would be prejudicial to public health.

7.5.76. The Planning Report (11th April 2022) recommending that permission be refused, refers to the FI submitted in respect of impacts on the water environment, and states that there are still concerns in relation to the proposed discharge to Aghamore Stream, emergency mitigation measures and lack of capacity during flood events for

the proposed settlement lagoon. The report also refers to the concerns raised by Irish Water. In their letter to the PA (7th April 2022), IW raise the following concerns:

- Discharges from development leading to the degradation of the existing water source (Lough Gill).
- Settlement lagoons exposed to elements and at risk of compromise during storm events, with contamination of Aghamore Stream and Lough Gill. IW not satisfied that the proposed monitoring regime or with the emergency response plan is suitable to mitigate spillage and overflow from settlement lagoons during storm and rainfall events.
- No review of current Trade Effluent Discharge Licence underway for site. In absence of this IW would expect at a minimum current discharge license requirements to be retained.
- Concerns re 10 year permission, risks to Lough Gill and significant growth expected as Regional Growth Centre status (population served by Foxes Den WTP and Lough Gill).
- Applicant's assessment finds Aghamore Stream and Lough Gill outside of the estimated drawdown radius for deepened quarry, with no reduction in flow within Aghamore Stream or effect on water levels in Lough Gill. Information and modelling exercise improves the case that dewatering/karst would not be an issue, but maintain that risks cannot fully be ruled out.

7.5.77. Subsequent to the appeal, IW (26th July 2022) refer to their assessment of the proposed development in the context of the requirements of the WFD (to avoid deterioration in drinking water sources and requirement for purification) and under the Irish Waters Drinking Water Safety Plan (a risk assessment/management approach to water supply). It identifies the quarry as having a potential direct or indirect effect on water supply as a result of contamination and/or abstraction (reduced supply). It refers to the EIAR, additional information submitted with the appeal and ongoing consultation with the applicant and states that IW is satisfied that the subject development provides adequate protection for drinking water source, subject to planning conditions. It is also stated that IW is satisfied with the conditions of the reviewed Discharge Licence DL(W) 151 and expects these conditions to be applied as a minimum to the operation. IW state that concerns remain regarding the

process of communication between the applicant and IW post development, specifically, timely notification should alarms and prohibits on the monitoring break down at the quarry. Notwithstanding this, IW recommend granting permission subject to conditions. Conditions include agreement on a Drinking Water Monitoring and Emergency Response Plan and agreement in respect of a discharge monitoring regime.

7.5.78. I have reviewed all of the detailed information on file, including Chapter 7 of the and Appendix 7-2 of the EIAR, the appeal documentation which includes the technical note prepared by Hydro-G integrating the research by Tynan (2021) and the geophysical investigations carried out. I am satisfied that substantive, detailed and robust survey work has been carried out subsequent to the Board's previous decision under ABP-305821, that supports the appellant's conceptual model for the water environment in which the site operations and the conclusions drawn in respect of absence of effects on ground or surface water. Notably, I am satisfied that:

- The site lies in a regional highly active karst system that operates at relatively shallow depths in the sub-surface i.e. the epikast or weathered top layer of limestone bedrock above 0m OD. In her 2021 report, Tynan (A7-2) states that:
    - '*epikart is visible in the quarry, with localised inflows occurring in the top 15-20m bgl of the quarry face. This is estimated from photographs to be at heights from c.30m OD to 15-10m OD, which is consistent with other epikast in the locality'.*
    - *Epikast flow gradients and directions are reasonably assumed to be controlled by topographic gradients (page 8)*
    - '*The existence of the quarry void causes local dewatering of epikast on the upgradient side and cross gradient sides, by significantly increasing the hydraulic gradient towards the void. The maximum depth of epikarst has probably already been excavated and so the upgraded and cross-gradient extent of this effect is already at its maximum, assuming an increase in quarry depth only (not laterally)'.*
- The geophysical survey of the quarry floor found no evidence of any karst conduits in the rock proposed for excavation to -50m OD (Appendix 7-6,

EIAR). There is, therefore, little potential for groundwater strikes at deeper depths in the location of the quarry void (current quarry depth -21m OD, proposed depth -50m OD).

- The Lough Gill Management Plan (Thompson et al, 1998) states that the dominant groundwater inflow into Lough Gill is from the north. Although the report is dated, it is one of multiple sources of information referred to by the applicant to provide an understanding of groundwater flows in the area of the site. Further, there is no information on file by any party to suggest any change in understanding of dominant groundwater inflow into Lough Gill.
- The water level in Lough Gill is highly responsive to rainfall (reflecting shallow epikast flow) and monitoring of water levels in Lough Gill over 50 years (Plate B, Appendix 7-2) indicates no significant change to water levels i.e. over lifetime of previous quarry.
- Water to be discharged to Lough Gill represents a very small proportion of the water discharged from the lake (to Garavogue River) i.e. 0.3% to <2% of daily flow (page 13, Appendix 7-2).
- As a worst case scenario, if the quarry intercepted a conduit linking the lake to the quarry void to 4mOD (as per Lough Gill), the maximum volume that could be taken out of the lake would be the volume of void i.e. a volume of 2% of Lough Gill and a water level change of 0.4m in Lough Gill. As stated in the EIAR, weir controls on the lake could mitigate for any risk posed and water rainfall would replenish lake levels.
- The risk from the quarry to lake water quality is similar to other potential threats from industry, agriculture etc. This risk has been assessed the planning authority's decision to grant a Discharge Licence for the deepened quarry (DL(W)151) and is supportive with assimilative capacity assessments (August 2019 and November 2019) which indicate low percentages of the available assimilative capacity are used by some parameters (Appendix 7-3 and 7-23). In some cases additional assimilative capacity is made available (TSS and BOD) as the mean concentrations in the discharge are lower than background concentrations upstream of the discharge. The only exceedances of Surface Water Environmental Quality Standards in recent

monitoring downstream of the discharge point were single occurrences of slightly elevated mercury and nickel which are considered to be derived from background water quality and not any activity within the inactive quarry.

- The current Discharge Licence for the quarry, DL(W)151 was issued by Sligo County Council on the 24th January 2020 (Appendix G, response to FI). It provides for a maximum daily discharge of trade effluent of 3,500m^3/day, with the maximum volume discharged in any one hour to 146m^3. Emission limit values are set out for temperature, pH, BOD, total ammonia, suspended solids, MRP, total phosphorus, sulphites and hydrocarbons. The licence requires active management of the site, sets out a regime for monitoring and reporting (with automatic turbidity monitor and shut down of pumps in event of exceedances) and conditions in respect of waste and oil management, accidents and emergency procedures.
- The quarry will discharge c.1 million m^3/year to Lough Gill (3,500x52x5.5 = 1.001m^3/year). In context, Irish Water have plans to abstract c.9.5million m^3/year from the lake (26,000m^3/day or 0.01% of the standing water in the Lough). As stated in technical reports, the discharge may have a beneficial impact on water supply (page 18, Appendix 7-2, EIAR, Hydro-G Technical Advice Note).
- Monitoring that was carried out for the previous quarry indicated exceedances of emission limits in water quality. The proposed development is brought forward by a new owner/operator. Monitoring in respect of the subject development is in the absence of quarrying with a predictive methodology used for impact assessment. The applicant is not responsible for the past operation of the quarry. The absence of significant impact on the water environment, using the predictive methodology, are predicated on careful control of discharge volumes and water quality of discharge waters. Consequently, close and transparent monitoring of water quality is important to demonstrate absence of effects.
- Waters arising at the quarry (even if all are assumed to be groundwater) are very small as a proportion of the two groundwater bodies that the site interfaces with, even if the boundary between waterbodies is affected by the

deepening of the quarry (no to low potential for impact, page 17, Appendix 7-2).

7.5.79. Having regard to the foregoing, and subject to detailed control by way of condition, I am satisfied that the proposed development is unlikely to adversely impact on water quality or water quantity in Lough Gill (or any other water body) **or therefore to have any significant direct, indirect or cumulative impact on the water environment**. If the Board are minded to grant permission for the development, and in order to address outstanding IW concerns, I would recommend enhanced measures to monitor the effects of the development on the water environment, to be agreed with IW, to include (subject to IW agreement), real time water quality/quantity monitoring data shared with Irish Water and the PA (see conditions).

7.5.80. Third parties raise the following issues in respect of effects of the development on water and I address these below:

- Flooding – The appeal site is not identified by OPW as a location where flood events have occurred. However, historic flood and recurring flood events are indicated on the R287 in the area of its junction with the L-3603. It is stated in the Area Engineer's report that this occurs during periods of heavy rain when the lake swells and prevents discharge of runoff to the lake. The OPWs Preliminary Flood Risk Assessment (which factors in climate change) indicates that Aghamore Stream would be liable to flood a narrow zone along its channel from Lough Nameenbrack to Lough Gill following an extreme rainfall event and Lough Gill would be liable to flood the low lying lands adjacent to the lake as far as the N287 (Appendix 7-7). Two other areas c.350m north and c.700m north west of the quarry at Cuilbeg/Aghamore Near and Tullynagracken South respectively (Figure 7-6) are also subject to historic groundwater flooding and identified by GSI as possible turloughs.

  Section 7.247 of the EIAR identifies 5 no. areas along the Aghamore Stream that are at risk of flooding under 1 in 100 year storm conditions (Figure 7-31), with the most sensitive location no. 3 (culvert no. 4). It is accepted that in such circumstances, any discharge water from the quarry at the time would exacerbate such flooding downstream. Mitigation measures include that in extreme weather events, the applicant will ensure that there is no pumping

during flood events which eliminates the risk of flooding at culvert no. 4 (section 7.308).

The approach taken by the applicant is not unreasonable, with the quarry floor flooding temporarily under such circumstances (once capacity of settlement lagoon is reached) and could be controlled by conditions.

Appendix 7-2 considers the potential for effects on groundwater flooding at Cuilbeg/Aghamore Near and Tullynagracken South. My understanding of the conceptual model is that these areas of flooding are created by local outflows from the epikast which lie outside the zone of influence of the proposed development i.e. the deepening of the quarry will have no impact on the surrounding epikast or any effect on the flooding of these areas.

- Effects of draining the current to void – The appeal site is governed by a Discharge Licence. Any drainage from the existing quarry void would be subject to this licence and adherence to emission limits set out in the licence.
- Impact on wells – In Section 7.147 it is stated that there are few wells in area of the site with most houses supplied by the public mains (Figure 7-19). None of the wells appear to be in the stormwater catchment and epikast drainage catchment area of the proposed deepened quarry extraction area (Figure 7-14) or the estimated radius of influence (Figure 7-26).
- Water supply to Tobernalt Spring – This spring discharges c.1km to the north east of the site. Information on file, including the conceptual model, supported by significant survey of the site and its regional context, indicates that it is highly unlikely that this spring will be impacted upon by the proposed development as it and the quarry are unlikely to be connected (Tobernalt spring receives flow from the west or north, rather than from the south).

Air

7.5.81. Chapter 8 of the EIAR deals with air. It considers the likely effects of the development on air quality arising from the development, fugitive dust and particulate matter and combustion emissions, based on the proposed extraction of up to 300,000 tonnes of rock per year and 164 daily HGV return trips per day (82 in and 82 out HGV movements based on a 50 week year, 5.5 days/week, and 24

tonnes/loads). NB In Chapter 14, the EIAR sets out details on the trips likely to be generated by the proposed development (see below). This refers to 50, 24 tonne loads per day exported from the quarry, staff vehicle movements and imports to the asphalt plant, giving rise to a total of 164 cumulative daily trips a day (64 trips/day associated with imported and exported asphalt – see Table 14.9). The assessment of impacts on air quality, based on 164 daily HGV trips, is therefore a little conservative as some trips would be made by light vehicle.

7.5.82. It is stated that no difficulties were encountered in compiling the required information.

7.5.83. Subsequent to the Board's determination of ABP-305821, additional survey work has been carried out. It includes additional baseline dust deposition surveys at the application site, increased planning application area, updated location of sensitive receptors and cumulative effects with asphalt plant.

Baseline

7.5.84. The appeal site lies in a rural area and the closest air quality monitoring station to the appeal site, and in a similar Zone D rural area, is at Castlebar, Co. Mayo. These indicate PM_{10} concentrations below annual Mean Air Quality Standard (AQS) of 40µg/m^3 (Table 8-3). Air quality monitoring at the appeal site was carried out between 2009 and 2014 for the operation of the previous quarry (Table 8-4) and for the periods February to April 2018 and August to September 2020 around the perimeter of the site (Figure 8-1, monitoring locations). Table 8-4 shows exceedances of the then 130mg/m^2/day dust deposition limit set out in condition no. 19 of PA ref. 02/271 and a smaller number of exceedances of the current guideline standard for dust emissions of 350mg/m^2/day. More recent monitoring, when the quarry has not been in operation, shows dust emissions below guideline limit value (Table 8-5). Data on prevailing wind and rainfall is set out in sections 8.63 to 8.65 of the EIAR, with the predominant wind direction from the south west and natural dust suppression from rainfall for c.48% of the year. The nearest sensitive ecological receptor is identified as Lough Gill to the north of the site. Sensitive locations where people may be exposed to dust are shown in Figure 8-1. These are primarily groups of residential properties along the public road network surrounding the site and commercial development to the east of it. Nearest receptors are identified in Table 8-6.

Impact Assessment

7.5.85. Potential effects on air quality will arise from extraction and processing (dust and particulate matter) and from vehicle exhaust (combustion emissions, primarily oxides of nitrogen). Methodology for defining sensitivity to dust and PM_{10} effects and impact significance is shown in Tables 8-7 and 8-8. Sensitivity of the area is considered to be low due to its rural and industrial location, no receptors within 20m, low local annual PM_{10} concentrations and wooded area between site and receptors. Methodology for determination of risk category for earthworks and trackout movements are shown in Table 8-9 and 8-10.

7.5.86. Rock extraction/processing.

- Dust. Potential sources of particulate emissions are indicated in Table 8-13 and include that arising from material being transferred to the processing area, processing, transferring to storage, storage, loading and transfer off site and from the asphalt plant. Effects on receptors within 500m of the site are assessed (Table 8-14), having regard to distance, wind and rainfall. In the absence of mitigation moderate adverse effects are predicted for receptor groups 1, 3, 7 and 8 lying west processing area and north of the site (Figure 8-1). Slight adverse effects are predicted for receptor group 2 and 6.
- Ecology. Having regard to the relative location of ecological receptors (Lough Gill), typical dust deposition within 100 to 200m of source and very low background levels of dust which are substantially below the 1000mg/m^2/day threshold where it is considered that dust could have an effect on sensitive ecosystems, impacts on ecological receptors are considered to be not significant.
- PM_{10}. On site activities are considered to generate up to 5µg/m^3 having regard to UK LAQM Technical Guidance (conservative estimate, EIAR states levels likely to be lower). In conjunction with low background levels (16µg/m^3), it is considered that PM_{10} levels arising from site activities will be well below the annual objective of 40µg/m^3

7.5.87. Traffic. The EIAR references the DMRB guidance document (207/07)[3] which provides guidance on the circumstances in which the assessment of air quality is required (section 8.125) and concludes that the 164 HGV movements a day is below the threshold for assessment (including that for the potential of significant effects HGV flows change by 200 Annual Average Daily Traffic Movements or more).

7.5.88. Cumulative impacts. The EIAR refers to emissions from the asphalt plant, adjoining the processing area. Table 8-16 indicates emission levels from the plant in October 2020. Emissions of NO_2, SO_2 and total particulates are well below emission limit values. It is concluded therefore that no significant cumulative effects will arise with the proposed development and asphalt plant. It is also stated that no cumulative effects are likely with the existing inert waste facility to the south of the site, as it was in operation at the time baseline data was gathered. No other development is planned in the area that may give rise to cumulative effects.

7.5.89. Restoration. Having regard to the short duration of restoration works, distance of works from sensitive receptors, risk of dust deposition (dust and smaller particles) comprising earthworks and trackout is considered to be negligible.

7.5.90. Unplanned events. The EIAR acknowledges that unplanned events could arise, with the potential for air pollution e.g. from equipment malfunction, vehicle collision, dry and windy weather with dust suppression equipment malfunction and accidental spillage of materials during transport. If unmitigated, the effects of dust during dry and windy conditions could lead to occasional increases in nuisance dust and 24-hour mean PM10 concentration immediately surrounding the quarry. Even in these circumstances, effects are not likely to be significant given the limited duration of such meteorological conditions. It is also stated that such incidents can be planned for and therefore mitigated.

Mitigation

7.5.91. Mitigation measures are summarised in Table 8-17. These refer to standard industry measures to control dust emissions and appropriate checks and maintenance of the asphalt plant.

Residual Impacts

[3] This guidance document has also been updated.

7.5.92. With the implementation of mitigation measures residual impacts are predicted to range from insignificant to acceptable (Table 8-18). Dust monitoring is proposed at locations to be agreed with the PA, with results submitted on a regular basis for review and record keeping.

Assessment

7.5.93. Parties to the appeal raise concerns regarding dust and air pollution from the quarry development. These concerns are raised, in part, due to issues associated with the previous operation of the quarry.

7.5.94. The proposed development is brought forward by a new owner/operator who is not responsible for the past operation of the quarry. A predictive assessment is used to assess the likelihood of environmental effects and this is not unusual or inappropriate.

7.5.95. The proposed development, as a quarry with an active extraction area, processing area which is separated from it by the public road and the movement of materials from the site will give rise to an increase in dust, particulate matter and exhaust emissions in the area of the site. Having regard to:

- The proposal to deepen the quarry (i.e. no lateral extension),
- Its location in a rural area largely removed from sensitive receptors,
- The presence of substantial vegetation which surrounds the quarry and processing area and separates it from sensitive receptor (people, businesses),
- Dust emission limits to be adhered to at the boundary of the site,
- The low potential for cumulative effects with the indicated emissions from the existing asphalt plant,
- The sub-threshold number of HGV trips proposed in terms of likely significant effects, and
- Mitigation measures to be used, which are standard within the industry and capable of reducing dust emissions if implemented in full,

I am largely satisfied that the proposed development will not give rise to **significant direct, indirect or cumulative significant impact on air quality** or therefore to

adversely affect residential amenity (directly by way of dust emissions or via cumulative air pollution with asphalt plant). If the Board are minded to grant permission for the development I would recommend specific conditions regarding regular maintenance of the public road in the area of the site and in the location of the haul road in particular as it crosses the public road.

Noise and Vibration

7.5.96. Chapter 10 of the EIAR deals with noise and vibration. The assessment is based on published guidance documents and site specific field surveys. No difficulties are identified in compiling the information. The assessment specifically includes additional baseline monitoring carried out since the Board determined ABP-305821, the revised application area (to include the processing plant), new sensitive receptors in the vicinity of the site and cumulative impacts with the existing asphalt plant.

Baseline

7.5.97. Dwellings and commercial development in the vicinity of the application site are shown in Figure 10-1. These are shown clustered on the local roads around the appeal site. Results of background noise monitoring are shown in Table 10-7 (average sound, background noise and traffic noise), with monitoring carried out from 7am to 7pm in 2018 and 2020 (quarry not operational) at 6 different residences, closest to the boundaries to the site (BN1 to BN6, Figure 10-1). Most locations are dominated by traffic noise. There are 12 sensitive receptors within 500m of the appeal site (Table 10-10). Lough Gill is identified as a sensitive ecological site, within a maximum 2km radius of likely effect.

7.5.98. Table 10-9 sets out historic monitoring of blast events at the nearest sensitive receptor, with all recorded levels of PPV and air over pressure within threshold limits (PPV 12mm/sec and air over pressure 125dBL).

Impact assessment

7.5.99. The impact assessment assumes no reduction for noise screening around the application site for soil stripping, berm construction and pit restoration, a reduction of -15dB(A) for full noise screening by constructed perimeter berms around the application site (with likelihood of greater screening provided by quarry void), an

absolute noise limit of 55dB $L_{Aeq, 1hr}$, during day time hours, a limit of 70db $L_{Aeq, 1hr}$ for periods of up to 8 weeks (temporary site set up), all noise sources active 100% of the time and cumulative assessment with existing asphalt plant. It is stated that the assessment is therefore very conservative. Noise sources considered are indicated in Table 10-12 (with specific reference to noise associated with the asphalt plant). It is stated that no equipment with a tonal or impulsive noise will be used on site. Detailed noise assessment calculations are shown in Appendix 10-B and predicted noise impacts ($L_{Ar, 1hr}$) at nearest sensitive receptors are shown in Table 10-13. This indicates operation within the daytime noise criteria (55dB $L_{Aeq, 1hr}$). Cumulative effects i.e. when predicted noise is added to background noise is shown in Table 10-14. Short term impacts are Moderate for Group 1 and Group 4 receptors, Minor for Group 2, R5, Group 7, 8 and 9 and Negligible for all others. Long term impacts are Minor from Group 1 receptors and Negligible for all others. No effects on ecological receptors are predicted at Lough Gill (predicted noise level < noise limit), see Table 10-15. Cumulative movements by HGVs, at 164 per day, are stated to be below all criteria for assessment of 'affected roads', set out in the Design Manual for Urban Roads and Bridges, including of change in HDV/HGV flows by more than 200 AADT/day (see Traffic section of this report for information on traffic movements associated with asphalt plant).

7.5.100. Predicted impacts of vibration at nearest receptors (within 500m) are shown in Table 10-16, Figure 10-1, are stated to be within industry standard emission limit values of 12mm/sec PPV (ground borne vibration) and 125dBL linear max peak (air over pressure), with no significant impact on sensitive receptors.

7.5.101. The EIAR acknowledges that human disturbance can affect individual ecological species differently depending on a number of factors including sensitivity, reproductive status, previous exposure to human disturbance, species tolerance to disturbance, location in relation to source. It considers that no adverse effects will arise on Lough Gill SAC as the development is sufficiently removed from the quarry to have any adverse effect.

Cumulative impacts

7.5.102. The EIAR states that the noise impact assessment has been carried out with regard to other existing activity (background noise levels). Existing development in

the area which could have cumulative effects is identified as the soil facility to the south of the site (PA ref. 18/49), with the relatively small traffic associated with the soil facility in conjunction with the proposed development having no significant adverse impact on traffic volumes on the local road network.

Do Nothing

7.5.103. The study area is dominated by road traffic noise and natural sounds such as farmyards animals, dogs etc. Over time it is anticipated that in a do nothing scenario, the volume of road traffic is likely to increase (as economic activity increases) leading to an increase in ambient and background noise levels.

Mitigation

7.5.104. Notwithstanding the absence of likely significant noise impacts, the EIAR in section 10.139 sets out mitigation measures. These are typical measures used on quarry sites to minimise the potential for noise impacts and include screening berms to act as acoustic barriers alongside nearest sensitive receptors, retention of existing berms and regular inspection of berms, use of quiet plant and regular maintenance of plant, deliveries during daylight hours, care when loading/unloading, good repair of haul roads etc. Anticipated reductions in noise by using these measures is stated to be 5dB(A) or more. Mitigation measures for vibration include adherence to air overpressure and ground borne vibration standards, limiting blasts to between 9am and 6pm Monday to Friday (with no blasts at eventing or weekends), notification in advance to all properties within 500m and efficient blast design.

Residual impacts and Monitoring

7.5.105. With the implementation of mitigation measures, residual impacts from noise (Table 10-18) and vibration are predicted to be negligible. Monitoring is proposed for noise and vibration, with results submitted regularly to Sligo County Council.

<u>Assessment</u>

7.5.106. Parties to the appeal, in particular residents, have raised concerns regarding the effect of noise and vibration on properties in the area, the Alzheimer Society's day care centre and on biodiversity. They have also raised concerns regarding the effect of HGVs on local roads and the limitations of self-regulation.

7.5.107. From my inspection of the appeal site and surrounding area, reflected in the applicant's drawings (e.g. Figure 10-1), residential and commercial development is situated on the public road network that surrounds the site (including the Alzheimer's day care centre to the east of the appeal site). The noise environment for these is dominated by traffic using the local road network, albeit intermittently on the smaller roads including the local road L3603. The proposed development comprises the quarry, the internal access roads and the processing area. Noise from the quarry void will be mitigated by working at depth and the internal haul road (linking the quarry to the processing area) and processing area are surrounded by a mix of bunds and mature/semi-mature vegetation. Having regard to this context and the noise impact assessment which is based on monitoring of the current noise environment, adopts a worst case scenario, with all equipment working simultaneously, and predicts no significant effects on sensitive receptors, I am satisfied that the proposed development will **not lead to significant adverse direct, indirect or cumulative impacts on sensitive receptors (people) in the area, as a consequence of noise**. Impacts on biodiversity are unlikely given the distance of the site from sensitive receptors (Lough Gill), absence of significant direct effects on habitats and likely habituation to noise/human activity.

7.5.108. Whilst I would accept that the proposed development gives rise to HGV movements which fall below the threshold for assessment of developments which are likely to have the potential to impact on surrounding receptors, the proposed development will give rise to a significant increase in HGV movements on local road L3603 (see Traffic section below) relative to existing levels. **This will change the noise environment of the road and is likely to detract from the amenity of properties situated alongside the road.**

7.5.109. With regard to blasting, I am satisfied that the proposed development can be worked in principle (as proposed by the applicant), within the parameters for air overpressure and ground borne vibration, regardless of depth of the quarry and **without significant direct, indirect or cumulative impacts on sensitive receptors.** However, I am mindful of the many concerns raised in respect of the past performance of the quarry and the stated effects, previously, on properties and residents. I also acknowledge the parties concerns regarding self-regulation. If the Board are minded to grant permission for the development I would recommend

conditions requiring monitoring of each blast at the nearest properties to provide transparent assurance of compliance with emission limit values to prevent damage to properties and human health.

Climate

7.5.110. Chapter 9 of the EIAR deals with climate. It refers to the absence of published guidelines and established methodology for the assessment of climate impacts from quarrying in the country. The EIAR therefore refers to general cross-sectoral advice and the governments overall objectives of achieving transition to a competitive, low carbon, climate resilient and environmentally sustainable economy.

Baseline

7.5.111. Baseline data refers to projected national impacts of climate change (Table 9-2) and local data for rainfall, wind and temperature.

Impact assessment

7.5.112. Based on a vulnerability assessment (Appendix 9-B), the EIAR identifies moderate likelihood of impacts arising from extreme rainfall events, storms and wind, with the requirement therefore for measures to improve resilience of the project to extreme rainfall, flood, flash flood, storms and wind. Greenhouse gas emissions are predicted on the basis of 164 HGV return trips/day, with vehicles travelling 50km, c.3000l/week of diesel to be consumed to power on the on-site generator. Emissions are estimated to be 0.000647% of Irelands annual CO_2 emissions for the duration of the project. It is not clear how the traffic movements have been calculated (e.g. 164HGV trips/day for 50 weeks @ 5days/week = 45,100 compared to value of 21,450 used in Table 9-5, which I assume to be based on the 82 HGV trips/day). Notwithstanding this, the calculation indicates the small proportion the quarry would contribute to national GHG emissions.

Mitigation and Monitoring

7.5.113. Mitigation measures are designed to increase resilience of the development to climate change and focus on increasing capacity to absorb climate related shocks and reducing GHG emissions. Measures are set out in Table 9-6 and 9-7. These include considering a design that allows for rising water levels and ground water levels, provides adequate drainage, ensuring that the project can withstand high

winds and storms and the adoption of a GHG monitoring programme to establish objectives for GHG reduction and energy management.

7.5.114. Section 9.94 states that a framework and set of indicators will be developed to assess project preparedness for adaption against climate change, with provision of review, allocation of responsibilities etc. Monitoring of GHG emissions and reduction progress will also be reported on and reviewed.

Residual impacts

7.5.115. No residual impacts are identified in the EIAR.

Assessment

7.5.116. In the absence of sector specific guidance, the EIAR has made a very reasonable effort to consider and assess the likely impact of climate change on the project, by way of increased risk of climate related incident and GHG emissions. It has properly identified the main risks of extreme rainfall, flash floods, storms and wind events. Section 9 of the EIAR addresses these risks largely through design and monitoring. Having regard to the assessment of likely effects on the water environment and the mechanisms in place during storm events where water will not be discharged to Aghamore Stream (and will not be pumped out of the quarry void), the applicant has addressed the likely key effects of such events on the wider environment, with issues remaining within the quarry (e.g. limitations on working during storm events if groundwater is not removed from the quarry).

7.5.117. The proposed development will provide aggregates for construction projects, but of itself will not give rise to these projects or environmental effects associated with them. The development should therefore be seen in the wider, changing policy context, which may in time reduce need for raw aggregates (e.g. reuse of demolition and construction waste etc.). Consent mechanisms for these projects will address the likelihood and significance of environmental effects. Cumulative effects have been addressed by the applicant's calculation of likely emissions in the context of national emissions.

7.5.118. Having regard to the foregoing, and subject to detailed implementation of mitigation measures, I am satisfied that **no significant direct, indirect or cumulative effects** arise as a consequence of climate change and that the

application includes specific measures to reduce on an on-going basis GHG emissions.

Material Assets, Cultural Heritage and the Landscape

Material Assets

7.5.119. Chapter 11 of the EIAR deals with material assets (built services and waste management) and Chapter 14 with Traffic. No limitations or difficulties were encountered in the assessment of effects.

Built Services and Waste Management

7.5.120. *Baseline*

7.5.121. The baseline environment for material assets includes electrical power to the site via the mains. This supply will provide electricity for heating and lighting (office). A new wastewater treatment plant will be constructed to service toilets from the portacabin/office. A supply well in the processing area will be used for water supply for wheelwashes, dust suppression and non-potable use in the canteen and toilet. Potable water will be provided to the site via a water cooler dispenser system. Potential waste produced on site includes scrap metal, used oil and oil filters, used batteries and domestic style waste.

Impact Assessment

7.5.122. No significant impacts on built services or waste management are predicted during operation and restoration (which comprises extraction, use of the processing area and restoration) or post operation.

7.5.123. Waste generated during the operation of the quarry will be dealt with in accordance with the relevant legislation, to minimise the production of waste, including using waste contractors with a valid Waste Collection Permit. Extracted materials all have commercial value. Any identified waste materials will be stored, collected, recycled and or/disposed of in accordance with the requirements of Sligo County Council. Top soil and overburden will be used in landscaping and/or restoration. It is considered that material assets are not at particular risk of unplanned events (e.g. instability of rock faces, flooding) and unplanned events would be unlikely to cause significant, sudden environmental effects in respect of built services or waste.

7.5.124. No cumulative impacts are predicted given the absence of planned development and the distance of the landfilling development to the south of the site from the subject development (PA ref. 18/49) and its limited duration.

7.5.125. No cumulative effects on material assets are predicted from the operation of the proposed development in conjunction with the adjoining asphalt plant, except for effects on traffic (examined below). No impacts on material assets are predicted for the do nothing scenario (neutral effects).

Residual Impacts

7.5.126. During operation and post-operation, waste will continue to be actively managed on site (appropriately stored) and removed by licenced contractor. No residual impacts are predicted at construction, operation or post operation.

Assessment

7.5.127. Parties to the appeal raise concerns regarding the effect of the development on utilities (ESB substation and broadband aerial at Cuilbeg). The development is removed from this location and impact assessment has not identified the potential for effects in this area.

7.5.128. Having regard to the absence of substantial material assets in the vicinity of the site and to the proposed means to handle waste, I am satisfied that **no significant direct, indirect or cumulative effects on material assets (built services or waste management) will arise as a consequence of the development**.

Roads and Traffic

7.5.129. Chapter 14 provides a traffic and transport assessment of the proposed development. It provides an assessment of the traffic implications of the proposed development in terms of its integration with existing traffic in the area. The assessment is based on desk study, site visits and traffic survey (21st February 2018) and takes account of traffic arising from the asphalt plant on the adjoining site. The proposed extraction rate of up to 300,000 tonnes of rock per year will result in a maximum of 50[4] loads per day from the quarry. It will also directly employ 6 full time

[4] 300,000t/pa; 50 weeks/year; in 24 tonne loads = 300000/50 = 6000 tonnes per week; removed in 24tonne loads = 250 loads/week. 250/5.5 = 45 loads per day.

staff and miscellaneous trips will be required for operational meetings, site inspections etc. (predicted to be 10 trips daily). Vehicle movements between the quarry and the processing area would be a maximum of 31 loads/day. Access to the site is from the L3603 for the quarry, internal haul road and processing area. The local joins the R287 to the north east and R284 to the south west. To the north both roads join the N4 at Carrowroe.

Baseline

7.5.130. Surveyed traffic volumes at the junction of the local road with the R287 and 284 are shown in Tables 14.1 and 14.2 (converted to Annual Average Daily Traffic values) for both HGVs and LVs.

7.5.131. Table 14.4 shows the predicted trip rate for the appeal site based on exported limestone, staff and miscellaneous trips. Tables 14.5 to 14.8 indicate the number of vehicle trips associated with the asphalt plant. Table 14.9 shows cumulative daily trips (100 from quarry, 32 from staff/miscellaneous, 32 from asphalt plant). Predicted trips are distributed and assigned in the assessment with regard to TRICS database and historic data on traffic movements from the quarry, with most travelling via Aghamore (R287).

Impact Assessment

7.5.132. The EIAR assesses the effect of the development on the local road network (with predicted traffic growth), with the quarry/processing area operating in isolation and with the asphalt plant. In the assessment, the L3603, R287 and R284 are all considered as a Type 3 single carriageway road with capacity of 5,000 AADT for Level of Service D. Conclusions of the assessment are:

- L3603 – Road will operate within capacity, development alone and with asphalt plant, with additional development traffic comprising up to 27.98% of traffic on the local road (Table 14.11 and 14.12).
- R287 - Road will operate within capacity, development alone and with asphalt plant, with additional development traffic comprising up to 21.35% of traffic on the regional road (Table 14.13 and 14.14).

- R284 - Road will operate within capacity, development alone and with asphalt plant, with additional development traffic comprising up to 0.17% of traffic on the regional road (Table 14.15 and 14.16).

7.5.133. For the junction capacity assessment, it is predicted that the following four junctions would continue to operate within capacity with and without the asphalt plant for each of the assessment years 2022, 2027 and 2037, junction R287/L3603/L36025; main access; haul route crossing and R844/L3603 crossroads.

Mitigation Measures

7.5.134. It is proposed to provide signage and sightlines at the main access (to processing area) and at the haul road crossing (Drawing no. P20-114-DG-002). Sightlines of 160m south and 100m north are proposed at the main site entrance and are considered to be acceptable given the 80kph speed limit and proximity to junction with the R287 which reduces vehicle speeds to the north. For the haul road junction, as it crosses the L3603, sightlines of 140m can be achieved to the west of the junction (northern and southern side) and 160m to the east (northern and southern side). Sightlines are considered to be acceptable given the close proximity of a high demand horizontal alignment on the L3603. Warning signs will be provided in advance of the main access and haul road (Drawing P20-114-DG-003).

Residual Impacts

7.5.135. No residual impacts are predicted.

Assessment

7.5.136. Parties to the appeal raise concerns regarding the increase in HGV traffic on inadequate local roads (including existing dangerous junction at Carrowroe) and tourist routes, the accuracy of HGV traffic estimates and the risk that Cairns Hill road becomes a rat run to planned Garavogue East Bridge.

7.5.137. Consistent with the applicant's traffic count data, traffic flows on local road L3603 at the time of site inspection were relatively low, with more significant volumes on the Regional Roads. In the vicinity of the quarry, the L3603 is narrower in width and goes through bends which limit visibility and traffic speeds.

7.5.138. The applicant has set out a detailed estimate of vehicle trips based on the planned extraction of aggregates and production of asphalt and this appeal is

considered on this basis. Notably, in section 14.35 the EIAR refers to a maximum of 50 loads of limestone a day from the quarry (in 20 tonne or 28 tonne loads, with 24 tonne loads used in the assessment). If permission is granted, the applicant will be required to adhere to the stated extraction/production levels to remain within the context of the permission.

7.5.139. The applicant's assessment has concluded that the proposed traffic flows, with and without the asphalt plant, can be accommodated on the local road network and at nearby junctions. In principle I would accept the veracity of this assessment with the number of vehicle trips falling below theoretical capacity of the road (Type 3 single carriageway with 6.0m cross section, with capacity of 5,000 AADT) and affected junctions operate well below capacity.

7.5.140. Notwithstanding this, the number of HGV vehicles on the L3603 would increase substantially and the effect of this on other road users be they driving, walking or cycling is substantial. For instance the 50 HGV vehicles arriving and leaving the site per day, the 31 HGVs crossing over and back on the L3603 and the 16 HGVs associated with the asphalt plant could introduce 174 HGV movements on or across the local road. This compares to 62 HGVs currently using the road (Tables 14.1 and 14.2). I consider that this increase would substantially change the environment of the road. The effect of this additional traffic would persist, to a lesser extent, on the Regional roads, which carry fairly modest levels of HGVs (105 on the R287 and 171 on the R284, Tables 14.1 and 14.2) with potential effects on amenity. The planning authority has not raised concerns regarding the impact of the development on the junction at Carrowroe and as this lies in the wider road network, I consider that it is a matter for the planning authority. In order to avoid use of inappropriate roads, conditions of the permission could require the applicant to agree haul routes with the planning authority in advance of commencement.

7.5.141. Sightlines at the junction of the main access road to the site and the haul road are limited. The increased sightlines are proposed have been accepted by the planning authority and given the alignment of the L3603 in the area of the site, which naturally slows traffic speeds, are not unreasonable.

7.5.142. Having regard to the foregoing, I consider that the proposed development will result in a significant increase in HGV movements on the L3603 and to a lesser

extent the R287 and R284 and that this will result in a **direct and cumulative adverse effect on the amenity of the road**, in particular for other road users and residential development along the public roads. Increase in HGV traffic in my view is the most significant impact of the development in the area of the site.

Cultural Heritage

7.5.143. Chapter 12 of the EIAR deals with cultural heritage. The assessment is carried out having regard to the policy context for the protection of archaeological and architectural/built heritage, desk, field study, previous licenced monitoring of groundworks when the quarry was extended (2000 and 2002) and licenced monitoring/geophysical survey in the wider area.

Baseline

7.5.144. There are no protected structures or other structures included in the National Inventory of Architectural Heritage within the appeal site or adjoining study area (Figure 12-1). Archaeological features identified within the site/landholding are:

- SL020-094 - Aghamore Near enclosure, situated within the appeal site in the location of the access road to the quarry and removed by 1995.
- SL020-093 – Ringfort – cashel Aghamore Near, circular area enclosed by a bank and wide external ditch. Situated c.30m north east of the quarry (Figure 12-1). No direct impacts but setting of monument is impacted by development, with unscreened view of quarry to west (Plate 12-3 and 12-4). To the north west the view of the extraction is screened by the rising ground and existing field bank and hedgerow (Plate 12-5).

7.5.145. Outside of the site, the nearest monument is RMP SL020-086 – ringfort, in Carrownamaddoo townland c.95m to the north west of the appeal site and others lie further afield (Figure 12-1).

Impact Assessment

7.5.146. The EIAR predicts that the development will have no direct impact on any known archaeology, cultural heritage or buildings of heritage interest. It acknowledges that the existing extraction has some impact on the setting of RMP SL020-093 – Ringfort. No indirect impacts on cultural heritage are predicted. No negative effects are predicted for the do nothing scenario. Worst case impact is that

the development may disturb previously unknown deposits or artefacts without preservation by record in the unextracted green field area 3 (Plate 12-6). I assume this to be the area associated with the construction of the settlement lagoon, as no other works are proposed in this field.

Mitigation

7.5.147. The EIAR recommends archaeological monitoring of soil stripping in field area 3 and construction of a landscape screening berm on the east side of the quarry where it faces RMP SL020 -93, and the retention of the field bank and hedgerow to the north.

Residual Impacts

7.5.148. None predicted.

Assessment

7.5.149. Having regard to the foregoing, my inspection of the appeal site and the surrounding area and proposed mitigation measures, I am satisfied that there will be **no significant direct or indirect impact on cultural heritage**. The EIAR did not expressly examine the potential for cumulative effects. However, given the absence of direct and indirect effects and limited proposed development in the wider area of the site (referred to elsewhere in the appeal documents), I am satisfied that **no significant cumulative effects arise in respect of cultural heritage**.

Landscape

7.5.150. Chapter 13 deals with impacts on landscape. It identifies the likely landscape and visual effects of the development based on desk study and detailed site survey. No difficulties were encountered in carrying out the assessment.

Baseline

7.5.151. Landscape. The appeal site lies in a 'Normal Rural Landscape', with a small part of the landholding in the 'Sensitive Rural Landscape' to the south and east of the site (which includes the upland landscape associated with Slieve Dragan and Slieve Daeane and the shore alongside Lough Gill) (Figure 13-1). The R287 to the north and east of the site and the R284 to the west of the site are designated Scenic Routes (other scenic routes, no. 36 and no. 4 are designated to the north of the R287 and west of the R284). The North West Trail Cycle Route passes c.240m to

the east of the appeal site as it follows roads along the shore of Lough Gill. The Sligo Way passes c.1.5km to the south east of the site, beyond the ridgeline formed by Slieve Dargan and Slieve Daeane. A number of other local signposted walking routs are within the 3km study area, also along the shore of Lough Gill.

7.5.152. Visual. A study area of c.3km surrounding the appeal site was identified, from desk top study and preparation of zone of theoretical visibility mapping (Figure 13-2). Six representative viewpoints are identified in the zone of influence of the proposed development for assessment (VPA-F, Figure13-2). As a consequence of vegetation, roadside development and local topography, the appeal site is identified as potentially most visible from the mountain landscape associated with Slieve Dargan and Slieve Daeane up to 2km to the south and east of the site and from the elevated southern edge of Sligo Town (Tullynagracken and Carns), again within c.2km to the north of the site. The EIAR states that the quarry and processing area are likely to be visible from the south, northern slopes of Slieve Dargan and Slieve Daeane, but that due to the bare rocky terrain of the mountain and limited public access, no visual receptors are likely to be affected. Very limited views of the site are available from the public road passing it (e.g. Figure 13-3, Viewpoint A). Views of the quarry void are visible from a number of locations along and in the vicinity of the local road, heading in a north western direction from Aghamore (Figure 13-3 and 13-4, Viewpoints B, C and D). From the local road to the south of the highpoint in the townland of Carns (c.1.3km north of the appeal site), upper sections of the existing quarry void and parts of the processing area are visible (Figure 13-5, Viewpoint E). The EIAR states that is no intervisibility between the appeal site and Lough Gill. It refers to Viewpoint F, Figure 13-5. However, this is taken from the access road the GAA grounds, north of the appeal site.

7.5.153. Sensitive landscape receptors are identified as the undulating farmland landscape of the site and to its north and west; the lakelands landscape of Lough Gill and the mountainous landscape surrounding Slieve Dargan and Slieve Deane. Sensitive visual receptors are road users and local residents, in three principle locations, the c.250m stretch along the local road to the south west of the entrance to the quarry (VRG 1), intermittently along c.1,400m of local road at Tullynagracken and adjoining properties/minor roads (VRG 20) and along c.450m of local road at

Carns and a number of properties along a minor road to the south (VRG 3) (see Table 13-2, Figure 13-2 to 13-5).

Impact Assessment

7.5.154. Landscape. Operational stage impacts are predicted to be a low sensitivity of landscape receptors to change as a consequence of the development (undulating farmland, lakelands and mountainous landscape) and a negligible magnitude of landscape change. Impact predictions are based on the designated value of the landscape and the limited effect of the development on landscape character (already established in landscape, integration with landscape features and distance from landscape receptors). Overall landscape effects are therefore considered to be negligible. With restoration, post-operational effects will remain negligible.

7.5.155. Visual effects. During operation, the proposed development will be largely screened in views from most locations including all locations beyond the site boundary to the west, north west, south west and north east. Visual effects will be experienced from the three identified VRGs. Proposed planting along site boundaries will reduce views of the quarry and processing area. There will be no static lighting in the quarry and mobile lighting will be screened by quarry depth. Existing static light sources will be used in the processing area, for short durations during winter.

7.5.156. Sensitivity of visual receptors ranges from low to high based on designated value of visual resource (e.g. scenic view), nature of receptor (e.g. static resident, transient road user). Magnitude of visual change is predicted to range from beneficial to slight negative during operation by virtue of the limited visual change, proximity to change, duration of change, number of viewers affected and level of effect. Overall significance of no significant visual impacts are predicted. On completion of restoration, visibility will decline with some enhanced vegetation and weathering of quarry face, visual effects are predicted to be negligible.

7.5.157. All effects identified are direct. No indirect effects are predicted as the development is unlikely to cause consequential effects to the surrounding landscape character or to existing views of the landscape.

7.5.158. As a consequence of the assessment, the EIAR considers that the development complies with policies of SCDP, in that it will not affect Visually

Vulnerable Areas or Sensitive Rural Landscapes or designated scenic routes (with roadside vegetation and topography screening views of the site). No impacts on other tourist routes (North West Trail Cycle Route, Sligo Way etc.) are predicted.

7.5.159. It is considered that no unplanned events are likely to impact on landscape or visual resources and there are no known existing or planned development in the area that would give rise to cumulative effects. Do nothing scenario would result in the restoration of the quarry, with similar effects to the restoration of the proposed development.

Mitigation

7.5.160. The EIAR states that during operation, the existing landscape context for the development (including abundant hedgerows and woodland vegetation along site boundaries) are naturally mitigating factors, significantly reducing potential landscape and visual effects. The landscape and restoration plan includes hedgerow and woodland planning along boundaries of the quarry and retention of existing vegetation during operation, removal of all plant and equipment, break up and regrading of the processing area, natural flooding of the quarry and natural colonisation during restoration.

Residual Impacts

7.5.161. Subject to mitigation measures, no significant landscape or visual effects are predicted during operation and post-operation.

Assessment

7.5.162. Parties to the appeal raise concerns on the amenity of the area (including that the existing site is an eyesore), Tobernalt Holywell, recreational activities on Lough Gill and the scenic setting of Lough Gill.

7.5.163. Having regard to my inspection of the appeal site and surrounding area, I would accept that the appeal site is situated in a wider scenic area which hosts recreational activities on and alongside Lough Gill and Tobernalt Holywell. However, the appeal site is removed from Lough Gill and there is no intervisibility between the Lough and the appeal site. Further, the appeal site is well screened from public roads (including designated scenic routes), with no clear views of the site or the

processing area. In more distant views the quarry void and part of the processing area are visible but these effects are all at distance.

7.5.164. The proposed development will deepen the existing void and recommence working in the processing area. The visual presence of the development will not therefore significantly extend with little potential for significant effects (including with the introduction of plant and stockpiles to the processing area).

7.5.165. The landscape and visual impact assessment does not address the effect of the provision of sightlines. These are shown in Drawing no. P20-114-DG-004, with roadside verges cleared and excavated back to such levels that the proposed sightlines will be achieved. This loss of vegetation will have a substantial effect on the appearance of the local road in the area of the site and has the potential to increase views from the public road. In order mitigate this effect, I would recommend that additional planting is carried out behind the sightline to provide appropriate screening of the site and that the roadside verge is planted and maintained over the lifetime of the project to provide a high quality visual environment e.g. natural grassland, wildflower species.

7.5.166. Subject to the forgoing and having regard to inspection of the appeal site and the surrounding area, the limited views of the site from the public road network largely by virtue of vegetation and topography, I am satisfied that the applicant's the visual and landscape assessment accurately predicts **an absence of direct, indirect and cumulative significant landscape effects** as a consequence of the development.

Interactions

7.5.167. Chapter 15 of the EIAR summarises interactions in Table 15.1. I am satisfied that the key interactions have been identified and addressed in the EIAR (Table 15-1). They are also addressed also in this report and notably include population and human health with water, air quality, noise and vibration and landscape and visual effects and the interactions between water, biodiversity and soils.

7.5.168. **Reasoned Conclusion on the Significant Effects**

7.5.169. Having regard to the examination of environmental information contained above, and in particular to the EIAR and appeal documentation, and the submissions

from the planning authority, prescribed bodies and observers in the course of the application, it is considered that the main significant direct, indirect and cumulative effects of the proposed development on the environment are as follows:

- **Population and human health** – Short term positive direct and indirect effects on the local economy. Medium term negative adverse effects on population with the increase in HGV movements on local roads, with associated noise and dust, and noise and vibration from intermittent blasting. These effects will be mitigated by the conditions to minimise environmental effects, including maintenance of the public road, operation within defined emission limit values and transparent monitoring of effectiveness of measures.
- **Biodiversity** – With the strict implementation of mitigation measures to avoid potential adverse effects, and subject to condition requiring the active management of the site during operation for nature conservation (net gain), the proposed development will have a positive impact on biodiversity.
- **Land, soils, geology, water, air quality or climate** – For the duration of the development emission to air, including from blasting, dust and dirt on the public road, and noise from HGV movements are likely to result in a significant adverse effect in the local noise environment and the amenity of the public road. These effects can be mitigated by strict operation of the development within the ceiling of emission limit values and proposed HGV movements and monitoring of activities to demonstrate compliance. The potential for significant effects on the water environment will be avoided by strict adherence to mitigation measures and a transparent and shared monitoring regime.
- **Material Assets –** For the duration of the development, a significant increase in HGV movements on the L3603 and to a lesser extent the R287 and R284 will result in significant adverse effects on local road users and residential development alongside affected roads. This impact will be mitigated by strict operation of the development within the ceiling of proposed HGV movements, improved sightlines and

signage in the area of the site and agreed haul routes. Loss of vegetation to provide sightlines to the development will result in a short term adverse visual effect in the area of the site. This can be mitigated by additional planting behind the sightline and appropriate planting and maintenance of the sightlines.

7.5.170. Notwithstanding the conclusion reached in respect of the inability of the proposed measures to fully mitigate the impact of the development on local amenity arising from noise, dust, vibration and HGV traffic, it is considered that the environmental effects would not justify a refusal of planning permission having regard to the overall benefits of the proposed development.

7.6. Appropriate Assessment

Screening

7.6.1. Screening Report. The applicant has submitted a screening report for Appropriate Assessment as part of the planning application, 'Appropriate Assessment Screening and Natura Impact Assessment Report, January 2022'. The report was prepared in line with best practice. It provides a description of the proposed development and identifies European sites within a possible zone of influence of the development, having regard to the nature, scale and form of the development. The report makes reference to the detailed assessments carried out in the individual topic sections of the EIAR and concludes that the continued use and deepening of the quarry, in the absence of suitable mitigation, could pose a risk of likely significant effects on Natura sites, Lough Gill SAC and Sligo/Leitrim Uplands SPA. It carries these sites forward for Appropriate Assessments.

7.6.2. Having reviewed the documents and related submissions, I am satisfied that the information allows for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

7.6.3. Test of likely significant effects. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on a European site(s). The proposed development is examined in relation to any possible interaction with European sites to assess whether it may give rise to significant effects on any European Site.

7.6.4. Description of development. The proposed development is described in Chapter 2 of the EIAR and in section 4 of the Appropriate Assessment Screening and Natura Impact Assessment Report. It is also described in section 2.0 of this Report. In essence it comprises deepening of the existing quarry void to -50mOD by dewatering and extraction of rock by blasting techniques, processing limestone within previously permitted processing area and transport of material off site. A settlement lagoon will provide storage and settlement for discharge waters prior to discharge to Aghamore Stream.

7.6.5. Submissions and observations. Subsequent to FI, the DHLG&H acknowledges that consideration has been given to many of previous concerns. It requires any updated breeding bird survey and specific mitigation measures to be submitted to PA and NPWS for record, recommends blasting to be carried out outside of bird nesting season (peregrine falcon) and states that consultation of ringing studies for peregrine falcon has not addressed. Third parties argue that the NIS is deficient and raise concerns regarding the risk of pollution of Aghamore Stream and Lough Gill SAC and the effects of the development on biodiversity including Raven and Peregrine Falcon.

7.6.6. European sites. The development site is not located in or immediately adjacent to a European site. The closest European site is Lough Gill SAC, which lies c.365m to the north east of the site.

7.6.7. A summary of European Sites that occur within a possible zone of influence of the proposed development is presented in the table below. Where a possible connection between the development and a European site has been identified, these sites are examined in more detail.

Summary Table of European Sites within possible Zone of Influence

European Site (code)	List of Qualifying interest /Special conservation Interest	Distance from proposed development (Km)	Connections (source, pathway receptor)	Considered further in screening Y/N
Lough Gill SAC (001976)	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Austropotamobius pallipes (White-clawed Crayfish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]	365m (NE)	Discharges to Aghamore Stream	Yes.
Union Wood SAC (000638)	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	2.7km (SW)	No pathway.	No.
Ballysadare Bay SAC (000622)	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140]	3.0km (W)	Groundwater connects site to Bay but over significant distance, impacts on water quality of Ballysadare Bay are therefore	No.

	Embryonic shifting dunes [2110] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190] Vertigo angustior (Narrow-mouthed Whorl Snail) [1014] Phoca vitulina (Harbour Seal) [1365]		highly unlikely (see below for explanation).	
Ballysadare Bay SPA (004129)	Light-bellied Brent Goose (Branta bernicla hrota) [A046] Grey Plover (Pluvialis squatarola) [A141] Dunlin (Calidris alpina) [A149] Bar-tailed Godwit (Limosa lapponica) [A157] Redshank (Tringa totanus) [A162] Wetland and Waterbirds [A999]	3.0km (W)	Groundwater connects site to Bay but over significant distance, impacts on water quality of Ballysadare Bay are therefore highly unlikely and impacts on water quality dependent bird species equally highly unlikely (see below for explanation).	No.
Unshin River SAC (001898)	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	4.0km (SW)	No pathway.	No.

	Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]			
Cummeen Strand/Drumcliff Bay SAC (Sligo Bay) (000627)	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Juniperus communis formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Petrifying springs with tufa formation (Cratoneurion) [7220] Vertigo angustior (Narrow-mouthed Whorl Snail) [1014] Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099] Phoca vitulina (Harbour Seal) [1365]	4.0km (NW)	Hydrological link via Lough Gill, however European site is separated from the appeal site by significant distance and substantial body of water. Adverse effects on the SAC by way of water pollution from the quarry are therefore highly unlikely.	Yes.
Cummeen Strand SPA (004035)	Light-bellied Brent Goose (Branta bernicla hrota) [A046] Oystercatcher (Haematopus ostralegus) [A130] Redshank (Tringa totanus) [A162]	4.0km (NW)	Hydrological link via Lough Gill, however European site is separated from the appeal site by significant distance and substantial body of water. Adverse effects on the SPA by way of water pollution,	Yes

	Wetland and Waterbirds [A999]		with impacts on conservation interests, from the quarry are therefore highly unlikely.	
Sligo/Leitrim Uplands (004187)	Peregrine (Falco peregrinus) [A103] Chough (Pyrrhocorax pyrrhocorax) [A346]	9.1km (NE)	Appeal site may be part of territory	Yes
Ben Bulben, Gleniff and Glenade Complex SAC (000623)	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Juniperus communis formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140] Petrifying springs with tufa formation (Cratoneurion) [7220] Alkaline fens [7230] Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110]	9.1km (NE)	No pathway.	No

	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii) [8120] Calcareous rocky slopes with chasmophytic vegetation [8210] Vertigo geyeri (Geyer's Whorl Snail) [1013] Lutra lutra (Otter) [1355]			

7.6.9. Identification of likely effects. There is no direct loss of habitat for any European site as a consequence of the development. Potential indirect effects arise from:

- Drawdown of groundwater. The assessment of likely effects of drawdown are discussed in the Water section of the EIA above. The drawdown of water in the quarry has the potential to impact on groundwater flowpaths in the area of the site and on related surface water bodies, including Lough Gill which lies c.365m to the north east of it. The effect of drawdown of groundwater on Lough Gill SAC is therefore carried forward for appropriate assessment.

  The appeal site is hydrologically connected to Ballysadare Bay SAC and SPA by surface and groundwater i.e. the western half of the site discharges to Ballysadare Bay. As discussed above under Water, given the distance to Ballysadare Bay from the site (>3km), the size of the catchment and the relatively small rate of abstraction from the groundwater body, significant effects on this water body are not likely.

- Emissions to water. The proposed development is connected to Lough Gill via Aghamore stream and the discharge of waters from the quarry to the stream. There is potential therefore for impacts on water quantity and water quality in Lough Gill e.g. arising from increased sediment load, accidental spills etc. and the potential for effects on Lough Gill SAC is therefore carried forward for appropriate assessment.

  Cummeen Strand/Drumcliff Bay SAC and Cummeen Strand Spa form part of the Garavogue Estuary Transitional Waterbody. This is located 7km downstream of the quarry and downstream of Lough Gill. Given the distance and substantial body of water that separates the European sites from the quarry, the potential for adverse effects on the European sites by virtue of water pollution arising in the quarry is highly unlikely. The effects of the quarry on these European sites can therefore be ruled out.

- Emissions to air. Dust deposition from the quarry is likely to be most significant within 100m to 200m of the site. Further consideration of potential effects on the nearest European site, Lough Gill SAC, are therefore warranted. Effects on all other sites can be ruled out. Baseline dust

deposition in the vicinity of the site indicate levels well below the 1000mg/m^2/day likely to have a significant effect on sensitive ecosystems. Predicted levels at site boundaries are similarly, substantially below this limit. No other significant sources of air pollution are situated in proximity to the site. It can be concluded therefore that significant effects arising from the proposed development or cumulative effects with other development, by virtue of dust, are unlikely to have an adverse effect on the conservation interests of Lough Gill. Predicted PM_{10} levels are well below the annual mean Air Quality Standard of 40µg/m^3 and therefore, adverse effects by way of fine particulate matter with cumulative impacts arising from the operation of the asphalt plant (with emissions again substantially below threshold) are unlikely.

- Noise and vibration. Operational noise is unlikely to affect mobile species of conservation interest in European sites as these are substantially removed from it and features of interest in the European sites are unlikely to be found in the site given the habitats present (as demonstrated by survey). However, Peregrine Falcon, a qualifying feature of the Sligo/Leitrim Uplands SPA, could form part of the larger SPA population. Consequently, the potential for effects on this SPA is carried forward for appropriate assessment.

- Cumulative effects. The appeal site lies in a rural area where policies of the plan facilitate appropriate rural development and extraction of mineral resources. The Appropriate Assessment Screening report refers to applications for single dwellings in the area of the site, a planning application for filling of lands to the south west of the quarry under PA ref. 21/475 (refused), the existing asphalt plant and obsolete concrete batching plant, as developments in the area which may give rise to cumulative effects. As the developments are small scale (residential development), reasonably removed from the site, subject to appropriate assessment in the course of the planning application or have been expressly examined for the subject development (noise, air pollution, HGVs), there is no potential for significant cumulative effects on European sites from plans or projects in the area of the site.

7.6.10. Mitigation. No measures designed or intended to avoid or reduce any harmful effects of the project on a European Site have been relied upon in this screening exercise.

7.6.11. Screening determination. The proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually (or in combination with other plans or projects) could have a significant effect on European Site Nos. 001976 and 004187, in view of the site's Conservation Objectives, and Appropriate Assessment is therefore required.

Appropriate Assessment

7.6.12. The Natura Impact Statement. In section 6 of the applicant's Appropriate Assessment Screening and Natura Impact Assessment Report, January 2022, the applicant provides a Natura Impact Assessment (NIA) for the proposed development. It considers the likelihood of significant effects on the integrity of Lough Gill SAC and Sligo/Leitrim Uplands SPA. The report also refers to the detailed assessments carried out which are reported on in detail in the EIAR. The NIA concludes that the development is not likely to give rise to significant effects on the integrity of the European sites, either alone or in combination with other projects or plans. It refers to 'designed in' measures and additional mitigation which is typical of quarry developments and provide certainty the SAC and SPA will not be affected by the proposal to resume quarrying.

7.6.13. Having reviewed the documents and submissions and consultations, I am satisfied that the information allows for a complete assessment of any adverse effects of the development, on the conservation objectives of the two European sites alone, or in combination with other plans and projects:

7.6.14. European Sites. The following sites are subject to Appropriate Assessment:

- Lough Gill SAC (001976).
- Sligo/Leitrim Uplands SPA (004187).

7.6.15. A description of the sites and their features of interest are set out in the applicants Appropriate Assessment Screening Report. Features of interest are also set out above. Conservation objectives are detailed in the NIA. In summary, Lough Gill SAC is a large lake, c.8km long, with steep limestone shores and underwater cliffs. It is over 20m deep in places. The lake appears to be naturally eutrophic and limited

aquatic macrophyte flora (due to the rapid increase in depth around most of the margin). Habitats and species of conservation are Natural Eutrophic Lakes, Orchid-rich Calcareous Grassland, Old Oak Woodlands, Alluvial Forests, White-clawed Crayfish, Sea Lamprey, Brook Lamprey, River Lamprey, Atlantic Salmon and Otter. Conservation objectives are to restore to favourable conservation condition of habitats of interest and maintain or restore the favourable conservation condition of species of interest, both by reference to attribute, measure and targets.

7.6.16. Sligo/Leitrim Uplands SPA is located to the north east of Sligo town in the mountain ranges of Ben Bulben, Arroo and Cope's Mountain/Crockauns. The site straddles the Sligo/Leitrim border and includes six separate lengths of cliffs in the mountain ranges. The site is an SPA for two species, Chough and Peregrine, with the extensive uplands on the plateau providing excellent habitat for Peregrine, including the cliffs as nest sites. Conservation objectives are generic and are to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests.

7.6.17. Aspects of Proposed Development. Aspects of the proposed development that could adversely affect the conservation objectives of the European site include:

- Drawdown of groundwater (Lough Gill SAC).
- Emissions to water, quantity and quality (Lough Gill SAC).
- Noise and vibration (Sligo/Leitrim Uplands SPA).
- Cumulative effects (both).

7.6.18. *Lough Gill SAC.* The appeal site straddles two groundwater bodies, with the quarry void lying primarily in the Carrowmore West GWB and the processing area in the in the Carrowmore East GWB. Deepening of the quarry will result in abstraction of water from Carrowmore West GWB and discharge into surface water body (Aghamore stream and Lough Gill) overlying the Carrowmore East GWB. Quantitative assessment of abstracting water from the groundwater bodies that the site straddles has been demonstrated to be negligible in the context of the total rainfall recharge for the underlying waterbodies. I am also satisfied based on technical assessment and the applicant's conceptual model, that effects of

drawdown of groundwater will be confined to an area of c.286m, with no potential for effects on Aghamore stream baseflows or Lough Gill.

7.6.19. Surface water to be discharged into Aghamore Stream and therefore indirectly to Lough Gill. It has been demonstrated that the volume of discharge comprises a very small proportion of the lake waterbody and the volume discharged to Garavogue River (0.3% to <2% of daily flow, page 13, Appendix 7-2). The survey of Aghamore Stream, which included macroinvertebrate survey and trail cameras, found no evidence of Crayfish or otter and the presence of extensive culverts between the appeal site and Lough Gill indicated that it is unlikely that the stream is used by spawning salmonids as these would act as barriers to movement. It was also evident that the stream was likely to be ephemeral, drying up in summer months.

7.6.20. Construction of the settlement lagoon will be governed by mitigation measures set out in the CEMP (Appendix 2-2, EIAR). During construction (settlement lagoon), surface water will be directed to the quarry void, with fines settling in the quarry sump, prior to discharge, with the discharge regulated under the existing discharge licence.

7.6.21. During operation, all water will be pumped from the quarry floor via the settlement lagoon prior to discharge, with the settlement pond reducing suspended solids and alerting the operator to any hydrocarbon pollution. Assimilative capacity assessments, which have been accepted by the PA in the issue of a discharge licence, have demonstrated little potential for adverse effects on water quality in Aghamore Stream, or therefore Lough Gill downstream of the site.

7.6.22. From the processing area, surface water will percolate through sand and gravels to ground (no point discharges) and a 25m standoff will be provided to prevent any uncontrolled run off to Aghamore stream (see Drawing 4).

7.6.23. Cumulative effects, with existing development, have been assessed in sampling of water quality upstream and downstream of the discharge point. No other development is proposed in the immediate area with potential for additive effects.

7.6.24. The absence of effects on the water environment are predicated by mitigation measures. These are summarised in section 6.33 of the applicant's Appropriate Assessment report. These include provision of an appropriately sized and designed settlement lagoon for discharge waters, construction of the settlement lagoon to

direct temporary surface water flows to the quarry floor, discharge of water to Aghamore stream in line with the discharge licence and emission limits specified in it, no bulk fuels stored in the application site, use of mobile refuelling plant as required on hardstand with hydrocarbon interceptor, spill kits, oversight and implementation of mitigation measures by Quarry Manager. Specifically in respect of crayfish, the applicant proposes that all new pipes and pumps brought to the quarry for pumping of water into Aghamore stream area cleaned and sterilised to prevent any accidental introduction of Crayfish plague. The settlement pond will also be lined with a HDPE liner that is not suitable for Signal Crayfish, which carry Crayfish plague.

7.6.25. In principle, I am satisfied that the proposed mitigation measures are sufficient to prevent adverse effects on the conservation interests of Lough Gill. Irish Water has raised concerns regarding communication between the application and IW post development, specifically the timely notification should alarms arise during the monitoring of operations. This matter, whilst significant, is one which can be addressed by condition requiring shared, open, real time monitoring of data by the applicant and the PA and Irish Water.

7.6.26. Integrity Test. Following the appropriate assessment and the consideration of mitigation measures, I am able to ascertain with confidence that the project would not adversely affect the integrity of Lough Gill SAC in view of the Conservation Objectives of this site. This conclusion has been based on a complete assessment of all implications of the project alone and in combination with plans and projects.

7.6.27. *Sligo/Leitrim Uplands SPA.* It is not unusual for both active and used quarry sites to host breeding Peregrine Falcon[5]. Peregrine Falcon has been recorded on the appeal site, nesting in the quarry between 2013 and 2017, present in 2018 and 2021, and it is listed as a Conservation Interest of this upland SPA. Working of the quarry may expose birds to noise and activity, to which they are not habituated, with the potential for birds, if nesting on cliff ledges, to abandon nest sites and eggs/chicks.

[5] Moore, N.P. & Kelly, P.F. & Lang, F.A. & Lynch, J.M. & Langton, S.D.. (2010). The Peregrine Falco peregrinus in quarries: Current status and factors influencing occupancy in the Republic of Ireland. Bird Study. July 1. 176-181. 10.1080/00063659709461053.

7.6.28. The applicant's Natura Impact Assessment report states that it is difficult to predict if the Peregrine Falcon pair then nesting in the quarry area are related to the species of conservation interest in the SPA. I note in this regard that the applicant has not consulted the ringing studies for the SPA as advised by the Department. However, it is assumed that the birds are offspring of the raptors nesting in the SPA and this does not seem an unreasonable conclusion.

7.6.29. As a consequence of risk to Peregrine Falcon, the applicant proposes the following mitigation measures during operation:

- Cliff faces/rocky ledges currently used by raptor species within the exhausted quarry/worked areas will be retained,
- Toolbox talks to all staff over the lifetime of the project on how to identify the species and reporting of sightings to the environmental manager and site supervisor/manager,
- From 2022, Peregrine Falcon survey 3 times a year by ornithologist (early March to mid April, late April to end May and Early June to mid July over the nesting season).
- In the event that birds are attempting to breed, a Peregrine Falcon management plan will be agreed to prevent disturbance until chicks have fledged, to include working method, blasting strategy, buffer zone etc.

7.6.30. There is no other development in the area that has the potential for cumulative impacts on the species within the quarry.

7.6.31. Having regard to the evidence for Peregrine Falcon in active and closed quarries (above) and the proposed mitigation measures, I am satisfied that there is scope to manage quarry operations for the period of the nesting season such that there is no potential for adverse effects on Peregrine Falcon.

7.6.32. Integrity Test. Following the appropriate assessment and the consideration of mitigation measures, I am able to ascertain with confidence that the project would not adversely affect the integrity of Sligo/Leitrim Uplands SPA in view of the Conservation Objectives of this site. This conclusion has been based on a complete assessment of all implications of the project alone and in combination with plans and projects.

Appropriate Assessment Conclusion

7.6.33. 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.

7.6.34. Having carried out screening for Appropriate Assessment of the project, it was concluded that it may have a significant effect on two European sites, Lough Gill SAC and Sligo/Leitrim Uplands SPA. Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of the site, in light of their conservation objectives.

7.6.35. Following an Appropriate Assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site or any other European site, in view of the site's Conservation Objectives. This conclusion is based on a full and detailed assessment of all aspects of the proposed development including mitigation measures and monitoring in respect of environmental effects (notably in respect of water and Peregrine Falcon) and there is no reasonable doubt as to the absence of adverse effects..

8.0 **Recommendation**

8.1. I recommend that permission for the development be granted, subject to conditions.

9.0 **Reasons and Considerations**

Having regard to:

- The policy context for the development, including the strategic growth planned for Sligo Town in the National Planning Framework and the zoning of the appeal site for NR – natural/mineral resource reservation' in the current Sligo County Development Plan 2017 to 2023,
- The proximity of the appeal site to Sligo Town,
- The nature, scale and design of the proposed development which comprises the deepening of an existing quarry void and utilisation of a previous processing area,
- The location of the site in a rural area with limited residential development, and largely screened from the public road network,
- The detailed survey work which has been carried out in respect of the site and the conceptual model of the water environment,
- The proposed means to mitigate potential impacts and the arrangements for monitoring,
- Conditions of the permission which require measures to increase the biodiversity of the site over the duration of the permission and shared real time monitoring of environmental effects,
- The acceptability of environmental impacts and the lack of adverse effects on Natura 2000 sites,

It is considered that the proposed development would not seriously injure the residential or visual amenities of the area or property in the vicinity of the site, or be prejudicial to public health or biodiversity and would be acceptable in terms of traffic safety. The proposed development would therefore be in accordance with the proper planning and sustainable development of the area.

10.0 **Conditions**

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted on the 3rd day of February 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.	The grant of permission shall be for a period of 10 years from the date of this Order. At the end of this period, the quarry use shall then cease and all related structures removed and remedial works including restoration works, in accordance with the general principles set out in the application, shall be carried out, unless, before the end of that period, planning permission shall have been granted for the continuance of quarrying for a further period. The site restoration works described in the application shall be completed within two years of the cessation of quarrying on the site. **Reason**: In the interest of visual amenity.
3.	No more than 300,000 tonnes of quarried material shall be extracted from the subject quarry within any one year. Extraction depth from the area indicated in Drawing 4, Proposed Site Layout, shall not exceed -50mOD. **Reason**: In the interest of clarity and having regard to the fact that this extraction rate was used for the analysis set out in the submitted Environmental Impact Assessment Report submitted with the application.
4.	Prior to the commencement of development, the applicant shall: i. Agree in writing with Irish Water and the Planning Authority, detailed arrangements for on-going Drinking Water Monitoring and an Emergency Response Plan for the construction, operation and restoration phases of the development. This shall

	include real time monitoring of surface water discharges to Aghamore Stream and a protocol for communication in respect of unforeseen events, to the satisfaction of Irish Water. ii. Notify Irish Water in advance of site works. **Reason:** In the interest of protecting a public water supply.
5.	Prior to the commencement of development, the applicant shall submit arrangements for the provision and management of compensatory habitat within the landholding, for the lifetime of the quarry, as per 'Biodiversity Net Gain Good Practice Principles for Development – A Practical Guide, CIEEM'. **Reason:** In the interest of biodiversity.
6.	a) Mitigation and monitoring measures outlined in the Environmental Impact Assessment Report, the Natura Impact Statement and associated documents submitted with this application, shall be compiled into a single Schedule of Monitoring and Mitigation Measures and submitted to the planning authority. These measures shall be carried out in full, except where otherwise required by conditions attached to this permission. b) The Schedule shall be included in an updated Environmental Management System (EMS) and an updated Site Specific Environmental Monitoring Plan (EMP) which shall be submitted to and agreed in writing with the planning authority prior to re-commencement of the development. c) The EMS and EMP shall be integrated with the discharge licence for the facility (DL(W)151) and shall include: i. The Drinking Water Monitoring and an Emergency Response Plan required under condition no. 4. ii. Proposals monitoring of each blast event at the nearest sensitive receptors. iii. Measures to address invasive species within the site,

	iv. Means of public access to monitoring data. d) The development shall be operated and managed in accordance with the agreed EMS required under (a) above. **Reason**: In the interest of protecting the environment and the residential amenities of property in the vicinity and in the interest of public health
7.	(a) Prior to the commencement of development, the applicant shall agree in writing with the planning authority, arrangements for planting behind sightlines (drawing no. P20-114-GD-004) and treatment and maintenance of sightlines for the duration of the development. (b) No development shall commence on site prior to the implementation of the of the sightlines (drawing no. P20-114-GD-004) to the written satisfaction of the planning authority. **Reason:** In the interest of visual amenity and traffic safety.
8.	a) The developer shall monitor and record groundwater, surface water flow, noise, ground vibration, and dust deposition levels at monitoring and recording stations, the location of which shall be agreed in writing with the planning authority prior to commencement of development. Monitoring results shall be submitted to the planning authority at agreed intervals for groundwater, surface water, noise and ground vibration. 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 of the quantity of material leaving the site, to ensure compliance with the

	limits set out in condition number 3 of this permission and the associated HGV vehicle movements per day indicated in the EIAR (maximum of 50 HGV loads of limestone/day from 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, depth of excavation, those areas being actively managed for biodiversity gain and restored. iii. A written record of all complaints, including actions taken in response to each complaint. c) All incidents where levels of noise or dust exceed the levels specified in this permission 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 Irish Water and the planning authority to comply with condition no. 4. 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 to further develop the quarry. **Reason**: In the interest of protecting residential amenities and ensuring a sustainable use of non-renewable resources.
9.	The quarry, and all activities occurring therein, shall only operate between 0700 hours and 1800 hours, Monday to Friday and between 0700 hours and 1400 hours on Saturdays. No activity (e.g. loading, movement of machinery or material etc.) shall take place outside these hours or on Sundays or public holidays. **Reason**: In order to protect the amenities of property in the vicinity.

10.	During the operational phase of the proposed development, the noise level from within the boundaries of the site measured at noise sensitive locations in the vicinity, shall not exceed: • an LArT value of 55 dB(A) during 0800 and 2000 hours. The T value shall be one hour, and • an LAeqT value of 45 dB(A) at any other time. The T value shall be 5 minutes. **Reason**: In order to protect the amenities of property in the vicinity.
11.	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 re-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. **Reason**: To control dust emissions arising from the development and in the interest of the amenity of the area.
12.	(a) All Heavy Goods Vehicles departing the site (quarry void and processing area) shall do so via a wheel-washes adjacent to the public road. (b) Prior to commencement of the development: (i) technical details of the wheel-wash design and operation and its location shall be submitted to and agreed in writing with the planning authority. (ii) Arrangements for cleaning, as required, the public road at the junction of the haul road and site entrance, and (iii) Haul roads to be used by HGV traffic accessing the site. **Reason**: In the interest of ensuring that a clean road surface is maintained and in the interest of traffic safety.

13.	(a) Prior to the commencement of development, detailed design of the proposed wastewater treatment system shall be submitted to the planning authority for written agreement. (b) The proposed wastewater treatment system shall be designed, constructed and operated in accordance with the requirements of the planning authority. **Reason:** In the interest of public water supply.
14.	Bird surveys carried out during the construction, operation and restoration phases of the development shall be submitted to the planning authority and NPWS. **Reason:** In the interest of biodiversity.
15.	The developer shall facilitate the archaeological appraisal of the area of ground works in the area of the settlement lagoon. In this regard, the developer shall: (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, (b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works, and (c) provide arrangements, acceptable to the planning authority for the recording and for the removal of any archaeological material which the planning authority considers appropriate to remove. In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination. **Reason:** In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.
16.	Prior to commencement of development, details for a phased restoration plan, generally in accordance with the principles as set out in the

	application, shall be submitted to, and agreed in writing with, the planning authority. The plan which shall be based on best practice shall include, inter alia, removal of all plant and equipment from the site within 6 months of cessation of operation, existing and proposed finished ground levels, landscaping proposals, proposals for the enhancement of the biodiversity of the area post-closure, safety measures proposed for steep faces and areas of deep water and a timescale for implementation. Phased restoration of the site shall be carried out in accordance with this plan. **Reason**: To ensure the satisfactory restoration of the site and in the interest of visual amenity.
17.	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 and Development Act 2000, as amended. The contribution shall be paid prior to re-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 to further develop the quarry.
18.	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 the Board for determination. **Reason**: To ensure the satisfactory restoration of the site in the interest of visual amenity.

Deirdre MacGabhann

Planning Inspector

19th December 2022