An Bord Pleanála

Inspector's Report ABP 309891-21

Development	Vertical extension of existing quarry
Location	Castlemore Quarry, Crookstown, Co. Cork
Planning Authority	Cork County Council
Planning Authority Reg. Ref.	20/5074
Applicant	Roadstone Ltd.
Type of Application	Permission
Planning Authority Decision	Grant subject to conditions
Type of Appeal	3rd Party v. Grant
Appellant(s)	1. Dermot & Deirdre O'Leary 2. Cian O'Leary
Observer(s)	1. Peter Sweetman & Associates 2. Karoline Kinnerk
Date of Site Inspection	08/07/21
Inspector	Pauline Fitzpatrick

Contents

1.0 Site Location and Description

1.1. The Castlemore quarry is accessed from regional road R585 to the south of the N22 Cork to Killarney National Primary Road. Crookstown Village is c. 1.2km to the south-west with Cloughduv Village c. 800 metres to the south east. Cork city is approx. 25 km to the north-east with Macroom c. 12 km to the north west.

1.2. The site subject of the appeal comprises part of a larger quarry operation which straddles local road L6233 which has an area of c.90 hectares. The appeal site forms the southern part of the overall site and has a stated area of 40.17 hectares with a permitted extraction area of 20.2 hectares. Limestone is being extracted to a depth of c.4mOD. The main sump is in the south-western corner with water pumped to a lagoon located along the southern boundary prior to discharge to the River Brouen. Material is transported via the existing network of haul roads and across local road L6233 at two points to the existing processing plant located to the north. Sand and gravel is also being extracted on the lands to the north of the road with a previously extracted area now flooded.

1.3. The overall quarry operation is served by two entrances. HGV traffic is limited to the access developed off the regional road. Access is also available from L6233 with the site offices accessed from same. As noted above there are two crossing points on the road used by quarry vehicles.

1.4. The River Brouen runs along the southern and eastern boundaries of the site with the River Bride to the north of the overall quarry site. The rivers converge approx. 700 metres to the north-west of the site and meet the River Lee west of Ballincollig c.14 km to the east of the site.

1.5. The lands in the vicinity are largely in agricultural use with single, one off houses along the local road network, the nearest form a ribbon along L6233 immediately to the west of the quarry with a further dwelling to the north east. Castlemore Tower which is a recorded monument, is located within the western quarry boundary.

2.0 Proposed Development

2.1. The application was lodged with the planning authority on 28/05/20 with further plans and details submitted 16/12/20 following a request for further information dated 21/07/20. Copies of revised public notices were submitted 19/01/21.

2.2. The development as proposed entails the vertical extension of the quarry by an additional 2 x 18 metre high benches from the current floor level of c. 4m AOD to -32 m AOD and a deepening the quarry sump from c. -22m AOD to -36m AOD. The works are proposed within the existing extraction area of 20.2 hectares.

2.3. The site is to be worked in 3 no. phases with an approx. 5,354673m3 (12.851 million tonnes) of material to be extracted

2.4. Extraction of rock is by means of blasting, crushing and processing. Existing quarry infrastructure is to be used.

2.5. The development will also entail stripping of overburden and its storage for use in berms around the north western, northern and north eastern boundaries of the site and for site restoration. They will range in height from 3 to 5 metres and in width from 13 to 16 metres.

2.6. The application is accompanied by an EIAR and NIS.

3.0 Planning Authority Decision

3.1. Decision

Grant permission for the above described development subject to 35 conditions:

Condition 1: Compliance with terms and conditions of planning permission 06/13499 (PL04.226347) save where amended by the terms and conditions of this permission.

Condition 2(b): permission for extraction granted for 20 year period including completion of restoration.

Condition 3: Mitigation measures to be implemented.

Condition 4: Special contribution of €493,023.50 towards future resurfacing works on the R585 between N22 and Crookstown village and safety upgrade of junction of R585 and N22.

Conditions 5, 6, 7, 8, 9 and 10: Requirements on local road L6233.

Condition 11: Monitoring to ensure the structural integrity of Castlemore Tower and bawn and limekiln.

Condition 12: Restoration plan to be submitted within 24 weeks.

Conditions 13 & 20: Environmental Management System requirements.

Conditions 14 & 15: Requirements for Peregrine Falcon and Sand Martin protection plan and measures.

Conditions 16 & 17: Noise parameters not to be exceeded and monitoring requirements.

Condition 18: Dust deposition limits.

Condition 19: Fixed water spray system to be installed within 12 weeks.

Conditions 21 & 23: Submission of monitoring results to planning authority.

Conditions 22 & 30: Treatment and recording of complaints

Condition 24: Construction dust and noise management plan to be prepared.

Conditions 25, 26, 27, 28 & 29: Blasting time restrictions, monitoring, ground vibration and air overpressure parameters, advance notice requirements and submission of blasting monitoring and procedures to planning authority.

Condition 31: Bunding of fuel tanks.

Condition 32: Discharge of water contaminated with hydrocarbons including stormwater from bunded and fuel handling areas to be via grit trap and hydrocarbon interceptor to surface water drainage system.

Condition 33: Groundwater monitoring proposals to be submitted to planning authority prior to excavation below existing permitted levels. Monitoring programme to include testing of existing Cloughduv/Crookstown water supply.

Condition 34: Surface water discharge to be monitored daily.

Condition 35: Landscaping requirements.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The **1st Area Planner's** report dated **21/07/20** which contains an EIAR assessment in Appendix 2 refers to the reports and submissions received.

- regard to be had to conditions 3, 4, and 7 attached to PL04.236347 (06/13499) and the reasons cited for same.
- restoration plan could be improved.
- there are concerns about the mitigation measures for dust control.

Recommends refusal as per submission from TII but sets out details for which further information is required if deferred.

The **1st report** from the **Senior Executive Planner** dated **21/07/20** notes the above report. It is considered that the applicant be afforded an opportunity to address the traffic issues highlighted. FI recommended as set out in the above report.

The **2nd Area Planner's** report dated **12/03/21** following FI refers to the other Council internal reports summarised below. No objection subject to conditions. The **Senior Executive Planner** endorsed the recommendation.

3.2.2. Other Technical Reports

The **Area Engineer's** report dated **25/06/20** notes that the L-6233 is located along the northern boundary. At present heavy quarry traffic crosses the road at 2 locations bringing unprocessed materials from the southern side of the road to the north. The quarry has operated this way for many years but it is not an ideal scenario. This should be reviewed to see if the situation could be improved. Applicant to be requested to examine the situation and to submit a road safety audit addressing same. Confirmation of compliance with condition 14 of PL04.226347 in relation to L6233 required. Location of septic tanks on site to be identified.

Engineering Report dated **21/07/20** recommends FI seeking clarity on the existing and proposed number of HGV movements from the site. The 2nd report dated 06/01/21 following FI recommends that a special contribution be sought towards planned future resurfacing works on the R585 between the N22 and Crookstown village (costs detailed).

Environment Report (Dust and Noise) dated **15/07/20** recommends FI.

Environment Report (Ground and Surface Water) dated **20/07/20**:

- recommends FI on upgrading of oil interceptors to provide adequate capacity for the projected discharge.
- A more than 50% increase in the permitted discharge from the quarry may impact on the River Bride, particularly in the flood situation when the quarry discharge is also likely to be at a maximum. Flood risk and proposed mitigation measures should be submitted to the relevant body for approval.
- There are mixed views on why the Brouen River runs low or dry upstream of the quarry during summer months. Whilst water loss to the existing quarry is a factor, it is not the only factor cited. Based on the information provided and reports attached to previous planning applications, the proposed development is unlikely to impact significantly in this regard.
- Need to submit a more comprehensive EMS.

The **2nd Engineering Report** on surface and ground water dated **11/03/21** following FI has no objection subject to conditions.

Ecology Report dated **16/06/20** defers to the EO for assessment of increased volume of pumped water to be discharged to the Brouen River. There is a potential for activities associated with rock extraction to cause disturbance to breeding birds even if works do not cause direct disturbance/damage to nest sites themselves. It would be appropriate that mitigation be proposed and incorporated into the Environmental Management System to address the issue. This would include a requirement for annual monitoring of breeding sites and control on timing of activities within and around active nest sites. Further information recommended on same. The **2nd report** dated **12/03/21** following FI considers the Peregrine Falcon Conservation Plan to be acceptable. A condition seeking a Sand Martin protection plan recommended. The report includes a 'Habitats Directive Assessment'. It concludes that the development does not pose a risk of causing adverse effects or cumulative or in-combination effects on the integrity of Cork Harbour SPA or any Natura 2000 site subject to implementation of conditions as set out.

Conservation Officer in a report dated **20/07/20** recommends a condition requiring a programme/schedule of monitoring to ensure the structural integrity of Castlemore Tower House.

Council Archaeologist in a report dated **27/07/20** has no objection subject to a condition.

3.3. Prescribed Bodies

An Taisce submits that all issues of compliance with existing permissions should be addressed as a preliminary matter and that any permission be limited to 10 years.

Environmental Health Officer, HSE in a report dated **01/07/20** can be summarised as follows:

- Need for consultation in the development process and ongoing engagement with sensitive receptors.
- System to be put in place for dealing with complaints/queries.
- It is unable to determine how the proposed increase in water discharge to the Brouen River can be reconciled with the present discharge volume which is already exceeding current licence conditions.
- Clarification as to whether ammonia exceedance in surface water monitoring is due to blasting.
- All discharges to be routed through class 1 hydrocarbon interceptor. Maintenance programme for interceptors to be included in EMP.
- Private well located within 500 metres down gradient should be sampled.
- Additional dust monitoring at nearest dwelling recommended. There is concern about the recorded exceedances and that existing mitigation measures are not effective. Recommendations for additional mitigation measures. Where exceedances are identified a full review of mitigation measures should be undertaken.
- Consideration should be given to the alterative use of the quarry following cessation of activities.

A **2nd report** from **HSE** dated **15/03/21** received after the planning authority's notification of decision states that it does not have confidence that the applicant will be able to maintain dust deposition levels below maximum permitted levels. This concern is raised in the interest of public health. In the absence of complete and representative monitoring results combined with 3rd party concerns it is unable to conclude that blasting events are undertaken in compliance with existing conditions. Consequently there are concerns that blasting events may give rise to a significant impact on public health. Conditions recommended should permission be granted.

Department of Agriculture, Food and the Marine has no observations.

Irish Water requires that the developer/operator complies with the Water Framework Directive and River Basin Management Plan objectives to ensure that the development will not negatively impact on the water quality of source/receiving waters during both construction and operational phases.

Geological Survey Ireland notes:

- Its records show that there are no County Geological Sites in the vicinity of the proposal.
- Groundwater Vulnerability Map indicates the area cover is variable. It recommends use of Groundwater Viewer to identify areas of High to Extreme Vulnerability.
- Crookstown Pound Cross Water Scheme (PWS) is located 0.5km south and west of the proposed development of Zone A and Zone E respectively. A groundwater source protection zone report was undertaken in 2009. Given the drinking water sources, the effects of potential dewatering as a result of the development and operation of the proposed pit extension should be assessed by a competent person by means of a suitable pump testing programme on site and at surrounding wells/schemes.

Transport Infrastructure Ireland considers the proposal would adversely affect the operation and safety of the national road network. The N22/R585 is a high collision location. The generation of additional traffic will introduce additional safety risks to road users. The details provided in the N22/R585 Preliminary Design Note are insufficient to address road safety concerns.

Inland Fisheries Ireland in a submission dated **17/06/20** has serious concerns that the proposal could have significant negative impacts on flows in the Brouen River which is a salmonid river particularly during periods of low flow when the habitat is at its most vulnerable. A refusal of permission on the grounds that the proposal is liable to be injurious to fish habitat is recommended.

3.4. Third Party Observations

Objections to the proposed development received by the planning authority are on file for the Board's information. The issues raised relate to impacts on human health, amenities of adjoining property, flooding, access and traffic, groundwater, surface water, ecology, cultural heritage, consultation and non-compliance with existing permission.

4.0 Planning History

PL04.226347 (06/13499) - permission granted for continued operation of quarrying activities on a wider 90.5 hectare site.

Conditions 3 and 4 restricted the depth and extent of excavation in the southern portion of the quarry (corresponding to the appeal site) to the maximum depth of +4m O.D and a setback of 300 metres from the eastern site boundary. The reason for the condition stated that it had not been demonstrated in the planning application, the Environmental Impact Statement and the appeal that quarrying to the depth and extent proposed would not have a detrimental impact on the surface water and groundwater resources of the area, with particular reference to maintaining the flow in the adjacent River Brouen, to the potential for flooding related to the discharge of extracted water into this river, and to the value of groundwater as a potable water supply in this general area. It was considered that a reduction in both the depth and extent of quarrying in the southern portion of the site was necessary in the interest of environmental protection.

19/6082 – permission refused for restoration/infill of part (c.7.75 hectares) of the existing quarry using inert soil and stone on the grounds that the cross traffic movements on the adjoining heavily trafficked road (N22) would endanger public safety by reason of traffic hazard.

The Area Planner's report summarises other applications which pertain to certain aspects within the overall quarry operation.

5.0 Policy Context

5.1. National Policy

National Planning Framework (NPF)

Extractive industries are important for the supply of aggregates and construction materials and minerals to a variety of sectors….. The planning process will play a key role in realising the potential of the extractive industries sector by identifying and protecting important reserves of aggregates and minerals from development that might prejudice their utilisation. Aggregates and minerals extraction will continue to be enabled where this is compatible with the protection of the environment in terms of air and water quality, natural and cultural heritage, the quality of life of residents in the vicinity, and provides for appropriate site rehabilitation.

National Policy Objective 23 - Facilitate the development of the rural economy through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.

5.2. Regional Policy

Regional Spatial and Economic Strategy for the Southern Region

The RSES provides the framework through which the NPF's vision and the related Government policies and objectives will be delivered for the Region.

It identifies high-level requirements and policies. It does not provide detail for each matter.

5.3. **Local Policy**

Cork County Development Plan, 2014

Objective EE 12-1 Safeguarding Mineral Reserves

Protect and safeguard the county's natural mineral resources from inappropriate development, by seeking to prevent incompatible land uses that could be located elsewhere, from being located in the vicinity of the resource, since the extraction of minerals is resource based.

Objective EE 12-3 Impacts of Mineral Extraction

Minimise environmental and other impacts of mineral extraction through rigorous application of licensing, development management and enforcement requirements for the extractive industry and ancillary developments.

All extractive industry developments to have regard to the 'Quarries and Ancillary Activities Guidelines for Planning Authorities (2004)' published by DoEHLG or as may be amended from time to time.

With new quarry and mines and extensions to existing quarries and mines regard should be had to visual impacts, methods of extraction, noise levels, dust prevention, protection of rivers, lakes, European sites and other water sources, impacts on residential and other amenities, impacts on the road network (particularly with regard to making good any damage to roads, road safety, phasing, reinstatement and landscaping of worked sites.

5.4. **Natural Heritage Designations**

The nearest designated site is Gearagh SAC which is located c. 10km to the northwest.

6.0 The Appeal

6.1. Grounds of Appeal

2 no. 3rd Party appeals have been received.

6.2. **Dermot & Deirdre O'Leary** (submission by Sean R. McCarthy Consulting Engineers Ltd. accompanied by supporting details on their behalf).

The appeal submission can be summarised as follows:

- There is non-compliance with the planning permissions on the site to date. Details provided.
- Since the access road was constructed following permission 03/5726, which removed up to 15% of the storage capacity of the flood plain, their property has been flooded on a frequent basis. As a consequence of same their septic tank does not function properly and will have to be replaced.
- Many of the conditions attached to permission PL04.226347 have not been complied with. The planning authority has failed to ensure compliance.
- The planning authority decided to grant permission for the subject development in the knowledge of non-compliance with previous permissions and unauthorised development carried out on the site.
- Condition 7 requiring a speed ramp will add to noise levels.
- Conditions 16 & 17 - the planning authority should specify the locations of the noise monitoring stations. The measurement of noise internally within the site cannot be used as a reference to noise generated by the development and experienced outside the site boundaries.
- Conditions 20 and 21 give carte blanche approval to the applicant.
- Condition 22 is similar to condition 19 of the Board's decision under ref. PL04.226347. Records of compliance with condition 19 have not been made available.

- Condition 23 effectively gives permission to alter activities on the site without the necessity of planning permission and without the facility to allow 3rd parties to made submissions to the said alterations.
- Condition 24 - there is no facility in the permission for the planning authority to approve or reject the plan submitted. This indicates that it is unsure of what is required leaving the adherence of compliance with regulations to be determined by the applicant.
- Condition 26: The appellants' dwelling is showing signs of serious structural defects with significant cracking evident.
- Section 35 of the Planning and Development Act, 2000, as amended, should be invoked.

6.3. **Cian O'Leary**

The appeal submission can be summarised as follows:

- Quarrying operations impact on human beings including air quality, noise and vibration from blasting.
- The operations destroy wildlife habitats.
- Loss of agricultural land
- Pollution from noise and dust.
- Heavy traffic results in pollution and congestion on the narrow county roads.
- Visual impact and adverse impact on the landscape.
- Limestone is a non-renewable resource. The quarrying can be considered to be unsustainable.
- The activities will release dust and particulate matter (PM). Issues of air pollution arise. The health effects of PM are well documented both in short term and long term. There is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur.
- Blasting events are having an adverse impact on the structural integrity of his home.

- Conflict of interest arising with the applicant being a supplier to the County Council.
- Compliance with conditions queried.
- The applicant is operating outside the existing planning permissions.

Note: links are provided to papers in support of his submission with respect to air pollution and particulate matter.

6.4. Applicant Response

The submission by MKO Planning and Environmental Consultants on behalf of the applicant, which is accompanied by supporting detail, can be summarised as follows:

*6.4.1. **Compliance***

- It is not accepted that there has been substantial non-compliance with regard to historic planning applications. Details of compliance with conditions attached to 03/13499 itemised (refer to Table 3-1).
- The Board has no remit in terms of invoking the provisions of Section 35. The planning authority has not raised any issue in relation to compliance with previous permissions.
- Appendix 8 contains a copy of proposed additional blast/vibration, dust and noise locations in relation to permission ref. 06/13499 (PL04.226347). The complaints register for 2020 is also included.
- Environmental Monthly reports for 2019 and 2020 and the AWN technical response to the FI request included in Appendix 9.
- The 35 no. conditions attached to the notification of decision to grant permission are acceptable (refer to Table 3-2).
- An Environmental Management System (EMS) has been provided in Appendix 3.1 of the EIAR and was updated by way of FI response. It provides the environmental management framework to be adhered to during the operational phase of the development.

6.4.2. ***Site Access and Flooding***

- The access road was initially granted permission under ref. 03/5746. This was superseded by planning permission ref. 06/13409 (PL04.226347). In 2016 a section of the road was lowered and 2 no. additional diameter culverts were installed as additional mitigation measures to tie in with the existing road levels and to address any potential future flooding risk on Roadstone Lands. This brought the total number of culverts installed to four (2no. 900mm and 2no.1200mm diameter pipes). This was carried out following settlement of legal proceedings relating to alleged flooding of private property. Appendix 4 shows a survey of the road carried out prior to lowering and a survey carried out after.
- An inspection regime is in place whereby the culverts are inspected and cleared, where necessary, every 3 months.
- The capacity of the fields functioning as a flood plain have not been adversely impacted on by way of the access road. The lowering of the road levels ensure that there are no adverse impacts on the capacity of the floodplain (report by JBA attached in Appendix 5).

6.4.3. **Noise and Vibration**

- The existing development is operating in compliance with the relevant noise conditions.
- Offsite activities (traffic) have also been considered in the EIAR and it is not proposed that there will be an increase in the intensity of the extraction as a result of the proposed development. Therefore, there will not be additional vehicle trips generated.
- Best practice noise mitigation measures will form part of site management practices.
- The modelling results presented in Table 9.12 of the EIAR show that the operational noise levels associated with the proposed extraction works are below the operation noise criterion of 55dB L_{Aeq} at all noise sensitive receptors.

- Blasting will be undertaken periodically. There is no change proposed to the current blasting procedures. Best practice measures to form part of the blast design process.
- Blast results demonstrate compliance with the environmental thresholds in place. It is not accepted that blasts from quarry operations are found to contribute to defects within private residences.
- Blast monitoring has taken place at the appellant's address. He has requested that the results of the monitoring not be submitted to Cork County Council for planning compliance purposes or as part of the FI response.

6.4.4. **Air Quality and Dust**

- Chapter 8 of the EIAR addresses air quality and was supplemented by further detail at FI stage. Mitigation is detailed. The residential impact is found to be Long Term Imperceptible Negative Impact while it was also concluded that based on the assessment undertaken there will be no significant effects.
- Chapter 8 of the EIAR addresses dust. Additional dust assessment was undertaken following FI.
- The dust monitoring records for the period January 2016 to March 2019 have been reviewed.
- An evaluation of existing dust levels was undertaken by Malone O'Regan and addressed dust deposition monitoring, assimilative capacity of the environment, disamenity dust risk assessment and cumulative and in-combination impacts. Mitigation measures are detailed.

6.4.5. **Other Issues**

- It is not accepted that a conflict of interest arises or has arisen.
- 3 incidents where power outages arose detailed.

6.5. Planning Authority Response

None received.

6.6. Observations

Observations received from

1. Peter Sweetman & Associates on behalf of Wild Ireland Defense CLG
2. Karoline Kinnerk (accompanied by supporting detail)

The submissions can be summarised as follows:

- The applicant has not complied with previous permissions on the site.
- The traffic generated by the quarry gives rise to traffic hazard.
- The condition of the road from the water sprayer makes it dangerous for vehicles and pedestrians. The mobile water bowser used along the eastern section of the L6233 is dangerous.
- The comments from TII noted.
- Activity by the applicant has resulted in power cuts. Utilities are undermined by machinery.
- Notice should be given prior to a blast event.
- Dust pollution from activities and impacts on health.
- Noise pollution
- The cover over the crushing machine is unsightly and amplifies noise.
- Operating hours are not being adhered to.
- The planning authority has failed to form and record a view as to the environmental impacts of the development
- The planning authority failed to carry out and record the required assessment under Article 6.3 of the Habitats Directive.

6.7. Further Responses

Section 131 notice was issued to The Heritage Council.

No response received.

7.0 **Planning Assessment**

I consider that the issues can be assessed under the following headings:

- Policy Context
- Planning History and Nature and Extent of Development
- Access and Traffic
- Amenities of Adjoining Property
- Ecology
- Other Issues

7.1. **Policy Context**

7.1.1. Permission is sought for the vertical extension of the existing limestone extraction area within a larger quarry operation which includes sand and gravel extraction and related aggregate processing activities. The extension entails an additional 2 x 18 high benches from the current floor level of 4mOD to -32mOD. The vertical depth of the proposed extraction areas will be 36 metres. The working area is 20.2 hectares. It is proposed to carry out the extraction in phases over an 18 year period.

7.1.2. The current Cork County Development Plan recognises that aggregate resources contribute significantly to the economic development of the county and seeks to facilitate its further development. However it is acknowledged that the exploitation of such resources is required to be carried out in a manner that does not adversely impact on the environment, existing infrastructure and the amenity value of neighbouring lands.

7.1.3. Subsequent to the adoption of the development plan the NPF reiterates the importance of the supply of aggregates and construction materials to a variety of sectors and states that extraction will continue to be enabled where it is compatible with the protection of the environment and community amenities. National Policy Objective 23 embodies this commitment in seeking to facilitate the development of the rural economy through supporting sustainable and economically efficient agricultural and food sectors, together with forestry, fishing and aquaculture, energy and extractive industries….while at the same time noting the importance of

maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.

7.1.4. The lateral extension of the extraction area within an existing quarry can be considered to be in accordance with the above policy provisions. However such compliance cannot be viewed in a vacuum and due regard must be had to other policy considerations, notably those pertaining to landscape, biodiversity and protection of the community.

7.2. Planning History and Nature and Extent of the Development

7.2.1. Quarrying on the overall lands dates back over a significant period of time and is stated to have commenced prior to 1963. The quarry operator submitted an application to register the quarry under Section 261 of the Planning and Development Act, 2000, as amended, and, pursuant to the provisions of Section 261(7), the Council decided that an application for planning permission accompanied by an EIS be submitted to the Planning Authority. Consequent to same the continued operation of quarrying activities on a 90.5 ha site was granted permission by the Board in 2008 under ref. PL04.226347 (06/13499) subject to 31 conditions. By way of condition 2 the permission is for a period of 25 years with the use to cease unless planning permission has been granted for the continuance of the use and retention of the structures for a further specified period. The said permission is due to expire in July 2033.

7.2.2. I note that the said application for continuation of quarrying activities sought permission to extract to a depth of -36mOD at the location subject of this appeal. Condition 3 attached to the permission limited the depth and extent of excavation of the said area to +4m O.D with a setback of 300 metres to be maintained to the eastern site boundary. The condition was considered necessary in the interests of environmental protection as it had not been demonstrated that quarrying to the depth and extent proposed would not have a detrimental impact on the surface water and groundwater resources of the area, with particular reference to maintaining the flow in the adjacent River Brouen, to the potential for flooding related to the discharge of extracted water into the river, and to the value of groundwater as a potable water supply in the general area.

7.2.3. The planning history pertaining to permission or retention permission for specific elements within the quarry operation such as offices, lime storage facility, extension to brick factory etc. is set out in the Area Planner's report on file. I note that permission was refused by Cork County Council for restoration/infilling of part of the existing quarry to the north of the current application site (c.7.75ha) using inert soil and stone under ref.19/6082 in January 2020 on the grounds that the proposal would endanger public safety by reason of traffic hazard due to the cross traffic movements likely to be generated at the N22/R585 junction.

7.2.4. The current proposal before the Board relates to the current area of rock extraction located in the southern extent of the overall quarry operation, only, and the red line delineating the site boundary is limited to same. The extent of the application seeks the vertical extension of the extraction area only. No changes are proposed to the rate of annual extraction with the existing access arrangements and processing facilities on the larger site as delineated within the blue line on the plan accompanying the application to be used.

7.2.5. The proposed vertical extension has an estimated resource of 5,354,673m^3 (12.851 million tonnes) with a permission for 20 years being sought. This would extend the life of the extraction area from 2033 to 2041. A grant of permission in this instance would not extend to the rest of the quarry operation. I consider that to allow for a period of extraction which extends beyond the duration afforded to the larger quarry operation and on which the extraction area is entirely reliant is not appropriate. Should permission be granted in this instance a permission that aligns with that as provided for in the permission ref. PL04.226347 is recommended. I consider that this can be addressed by way of condition.

Compliance with Previous Permissions

7.2.6. Of material concern to the 3rd Parties is the issue of non-compliance with conditions attached to previous grants of planning permission with a detailed schedule of the allegations in terms of the conditions attached to the permission granted under PL04.226347 (06/13499) submitted in support. The applicant in response counters the claims with a schedule setting out how it considers that it has been in substantial compliance with the said conditions. The Board has no function in respect of issues pertaining to enforcement of conditions attached to an existing permission and has

no remit in terms of the provisions of section 35 of the Planning and Development Act, 2000, as amended. Matters arising are more appropriately directed to the planning authority. The development before the board for assessment is the works described in the plans and particulars submitted with the application including the EIAR, only. Notwithstanding, the consideration of cumulative/in-combination impacts with the existing operations which do not form part of the application will form an integral component of the assessment of the development as proposed.

7.2.7. Should the Board be disposed to a favourable decision I consider that the conditions that are attached to the permission for the overall quarry operation under ref. PL04.226347 would be applicable.

7.3. **Access and Traffic**

7.3.1. Chapter 10 of the EIAR addresses traffic and transportation and is supplemented by amended plans and details submitted by way of FI. At the outset I note that there will not be an increase in intensity of extraction and, as a result, no increase in vehicular movements is proposed arising from the vertical extension of the extraction area. In addition, there will be no increase in staff employed at the site and thus no increase in staff related vehicular movements.

7.3.2. As per the traffic counts and survey conducted in 2019 on the R585 218 daily HGV movements were observed. This pertains to the overall quarrying operation at the site. In its FI response the agent for the applicant states that the HGV movements as permitted on the site refers back to the details provided in the Section 261 quarry registration process wherein 125,000 HGV movements plus 10% additional flexibility giving a total of 137,500 HGV movements per annum was stipulated. This translates to 466 HGV movements per day based on a working year of 295 days. Section 10 of the EIS accompanying the application for continuation of quarrying activities for the overall site under ref. PL04.226347 did not make reference to the 10% flexibility and referenced 125,000 movements per annum only. This lower figure would result in 423 movements per day based on 295 working days. Notwithstanding, that currently being generated is materially below that previously assessed by the Board. I note that the permission pertaining to the overall site under ref. PL04.226347 did not include any specific conditions relating to vehicular movements.

7.3.3. The overall quarry operation is served by two entrances. The first has been developed to the north-west off the R585 which is used by HGVs. The access is approx. 200 metres to the south of the R585/N22 junction. The appellants D. & D. O'Leary contend that the access road as constructed has resulted in flooding of their property. They reside in a dwelling on local road L6233 to the south of the said access. The permission governing the access was granted under 03/5726 with evidence of correspondence with the planning authority regarding compliance with the requirements of the said permission provided in support of the appeal response. The access was in place at the time of the Board's assessment of the application for continued use of the quarry operations in 2007/2008. The planning authority and subsequently the Board raised no concerns regarding the said access save with respect to vehicular movement safety. I note no conditions specifically requiring it's alteration. The applicant in its appeal response states that in 2016, following legal proceedings taken by adjoining landowner, a section of the access road was lowered and 2 no. additional 1200mm diameter culverts installed bring the total number of culverts installed to 6 no. with an inspection regime and cleaning where necessary of the culverts in place.

7.3.4. In view of the fact that the proposal before the Board is for the vertical extension of the extraction area, only, with no changes in vehicular movements arising any further issues arising with the existing access would more appropriately be addressed to the planning authority in terms of compliance with the relevant permission governing same.

7.3.5. The quarry is also accessed from the L6233 which bisects the overall quarry site connecting with the R585 to the west and L2205 to the east. By reason of the quarrying activities straddling the road currently there are vehicular movements including HGVs and 50 tonne CATS traversing same between the extraction area to the south and the processing area to the north at two crossing points identified as the 'eastern access junction' and 'western access junction'. There are a number of dwellings including the appellants' dwellings accessed from same to the west of the quarry site with a further dwelling noted to the east. The road is relatively narrow with signage prohibiting HGVs from accessing the quarry from same although traffic counts taken in September 2020 and provided by way of FI noted a small number using the road in both directions (average daily 8 no two way between the R585 and

the entrances and 11 no. to the east of the entrances). The applicant by way of FI proposes to consolidate the vehicular movements across the road by closing the 'western access junction'. This will result in the increase in the number of heavy plant movements at the eastern junction increasing from 94 per day to 140 per day. Additional measures to improve vehicular and pedestrian safety along the local road are detailed with a summary of the Stage 1 Road Safety Audit provided in Table 2:2 of the FI response. The measures include the introduction of edge of carriageway markings, improved warning signage and installation of wheel wash facilities.

7.3.6. I note that Transport Infrastructure Ireland in a submission on the application raised concerns as to the traffic hazard arising at the junction of the regional road and the N22. As noted previously the proposed development will not result in any increase in intensity or additional vehicular movements.

7.3.7. I note that a special contribution of €493,023 was attached by way of condition 4 to the planning authority's decision towards future resurfacing works on the R585 between the N22 and Crookstown village and the safety upgrade of the R585/N22 junction. The calculations for the resurfacing works, only, are provided in the Engineering Report dated 06/01/21 totalling €75,000. I can find no details as to how the remainder of the contribution has been calculated or how it is apportioned.

7.3.8. As to when a planning authority may require the payment of a Special Contribution is covered in Section 48(2)I of the Planning and Development Act 2000, as amended, with Section 7.12 of the Development Management Guidelines, 2007 providing guidance with respect to same.

7.3.9. The overall cost of the resurfacing works of the R585 and the apportioning of same to the development are on file and can be considered to come within the parameters of what can be considered for application as a special contribution. The absence of any detail pertaining to the R585/N22 junction improvements, its total cost and apportioning to the development is contrary to the legislative requirements. I would also bring to the Board's attention that the indicative proposal for the junction improvement submitted for information purposes, only, in support of the application has not been agreed or finalised with the appropriate authorities, with TII in its submission on the application stating that the details provided would be insufficient to address road safety concerns. On this basis, should the Board be disposed to a

favourable decision, I recommend that the condition be appropriately modified to exclude this contribution requirement and to provide for the resurfacing works on the regional road, only, the amount to be agreed between the applicant and the planning authority

Access and Traffic - Conclusion

7.3.10. The Board considered it appropriate to grant planning permission for the continuation of the existing quarry operations under PL04.226347 in 2008. As there will be no increase in intensity of activity, I do not consider that the baseline environment will be altered in terms of traffic generation and I consider that the Board can reach a similar conclusion that traffic to and from the quarry will be acceptable having regard to its previous decision. The proposed consolidation of the accesses from L6233 will have a positive impact on vehicular and pedestrian safety along same.

7.4. **Amenities of Adjoining Property**

7.4.1. The nearest dwellings to the existing quarry are located immediately to the west along local road L6233 with a further dwelling along the road to the east. Cloughduv village is c.800 metres to the south-east with Crookstown c.1.2km to the south-west. Appellants and observers to the appeal consider that the noise, dust, vibration and traffic adversely impact on their residential amenities, that conditions attached to the existing permission are not being complied with and that the vertical extension will exacerbate the current problems. Activities outside of the permitted operating hours is also a concern. I have addressed traffic in section 7.3 above.

Noise

7.4.2. I note that there will be no change in the current practices within the processing area of the existing quarry whilst the process in terms of means of extraction in the vertical extension will be the same as currently used. As the tonnage to be processed and transported off site is to remain the same no additional traffic will be generated by the proposed development.

7.4.3. Condition 10 attached to the permission granted under ref. PL04.226347 limits noise at the nearest sensitive receptors to not more than 55 dB(A) L_{Aeq} (one hour) between 0800 hours and 2000 hours, Monday to Saturday with emissions not to exceed 45 dB(A) L_{Aeq} (15 minutes) at any other time. 95 % of all noise levels are required to

comply with the specified limit values with no noise level exceeding the limit value by more than 2 dB(A). The condition permits these levels to be exceeded to allow for temporary but exceptionally noisy phases in the extraction process or for a short term construction activity which is required to bring long term environmental benefits. The said stipulated noise parameters are in accordance with those as recommended in the Guidelines on Quarries and Ancillary Activities issued in 2004 and EPA Guidance on Environmental Management in the Extractive Industry (Non-Scheduled Minerals). I also note that condition 9 allows for on-site operations between 0700 hours and 2000 hours Monday to Saturday, inclusive, thus there is an hour in the morning whereby operating levels are not to be exceed 45dB(A) L_{Aeq} (15 minutes).

7.4.4. An attended baseline noise survey was carried out on 01/04/19 to inform the EIAR. The 4 no. locations chosen differ from the 4 no. locations where bi-annual noise monitoring is carried out in compliance with an agreed programme as required by condition 18 attached to permission PL04.226347. The locations are delineated on Figure 9-1 of the EIAR and in Appendix 1 of the FI response. Of the locations where bi-annual monitoring is undertaken I consider N3 is representative of the nearest noise sensitive receptors.

7.4.5. The results of the bi-annual monitoring dating back to 2016 are provided in Appendix 9 of the EIAR with a summary provided in Table 9-7. This was supplemented by further results for 2020 provided in the FI response. The results of the monitoring at the 4 no. locations shows compliance with the above stated limits save at N1 in 2019 Q3 where 57 L_{Aeq} (15 mins) dB(A) was recorded. This location is to the north of the overall quarry site at a remove from nearby dwellings with the exceedance explained by wind derived noise source.

7.4.6. By way of further information noise monitoring was undertaken for the period between 0700 and 0800 and concludes that the noise impact from the quarry is not significant with traffic noise from the N22 dominant. AWN in its report recommends that any new condition for noise for the quarry defines the night time period as 2300 to 0700 so that the noise criterion for the period between 0700 and 0800 is 55dB LAeq 1 hour. Reference is made to EU Directive 2002/49/EC and the National European Communities (Environmental Noise) Regulations which define the night times period as being between 2300 to 0700. Reference is also had to the RPS document Guidance Note for Noise: Licence Applications, Surveys and

Assessments in Relation to Scheduled Activities (NG4) 2016 which also defines night time periods as between 2300 to 0700.

7.4.7. Modelling was undertaken for the noise sensitive receptors in the vicinity including the appellants' properties to the west. 3 no. scenarios were modelled corresponding with the 3 phases proposed in the development as follows:

- Scenario 1 : Start of 1st extraction phase and modelled at 4mOD representing the worst case scenario for phases 1 and 2 extraction.
- Scenario 2: Start of 3rd phase of extraction and modelled at -14mOD representing the worst case scenario.
- Scenario 3: End of 3rd Phase with extraction activities modelled at -32mOD.

7.4.8. For each of the 3 scenarios the major potential noise sources were identified and the assumptions made provide for a conservative assessment with allowance had for the berms proposed along the northern boundaries. The results of the modelling are set out in Table 9.9 of the EIAR and conclude that the predicted noise emissions for the proposed extraction works are not of enough magnitude and there is no potential that a cumulative increase in the overall site noise emissions would exceed the 55dB L_{Aeq} noise limit. Having regard to the principles of the logarithmic scale this conclusion is accepted. I would also accept the argument that as the quarry floor is lowered activities will be further shielded from nearby properties by the quarry face.

7.4.9. The berm construction works are anticipated not to exceed 63 dBA at 80 metres which is the closest distance between a berm and dwelling. In the absence of Irish guidance for noise limits for such type construction works the applicant has regard to BS 5228-1&2:2009 & A1 2014 Code of Practice for noise and vibration control construction and open sites. The works will be required to comply with the parameters set out therein. Although the timescale for the construction of the berm is not clear, by its nature it would be completed within a defined period and thus temporary in duration. I consider that appropriate conditions stipulating the time period within which the berms are constructed and noise parameters to be adhered to could be attached should the Board be disposed to a favourable decision.

7.4.10. I consider that no significant change is proposed to working methods and having regard to the generally high level of compliance with existing noise emission limits,

the screening effects of the proposed berms and the quarry face, and the implementation of best practice mitigation measures, the conclusions of the noise impact assessment appear reasonable and I consider that significant residual noise impacts on sensitive receptors are unlikely to arise. I note that an additional noise monitoring location is proposed in proximity to the nearest noise sensitive location bringing the total to 5 no. and is delineated on Drawing No. 181001a-02 accompanying the further information.

Blasting and Vibration

7.4.11. The impact of blasting and vibration on the structural integrity of properties in the vicinity and procedures in terms of prior notification of affected persons are raised by the appellants and one of the observers. The applicant in response to the appeal submission provided a copy of the complaints register for 2020. The majority of the complaints pertained to blasting.

7.4.12. Conditions 12 and 13 attached to permission ref. PL04.226347 impose controls on blasting activities. These controls relate to vibration and overpressure limits, advance notification to residents, sirens before blasting and allowable hours for blasting (10.30am – 4.30 pm Monday to Friday). I note that the vibration and overpressure limits set out in condition 12 are consistent with the recommendations set out in the Guidelines on Quarries and Ancillary Activities 2004 and the EPA Guidelines on Environmental Management in the Extractive Industry (2006), that is that vibration levels shall not exceed a peak particle velocity of 12mm/sec and air overpressure values shall not exceed 125 dB (Lin)max peak, when measured at any noise sensitive house within the surrounding area.

7.4.13. I consider that the EIAR document is somewhat sparse in terms of its assessment of blasting save to state that blasting will continue and that a review of the most recent blast monitoring in 2019 indicates that blasting does not exceed the blasting criteria. By way of further information it is confirmed that the number of blasts per month varies depending on demand and is currently 2 to 3 times per month with the blast results between 2015 and 2020 submitted (Appendix 8). An interrogation of the said results is complicated by the fact that a number of property owners would not agree to monitoring and/or requested that the results recorded at their properties not be submitted to the County Council. The blast monitoring locations for which details are

provided are delineated on the accompanying map. I submit that location V4 for which continuous monitoring is available and which is closest to the northern boundary of where the blasts have been undertaken can be considered representative of other sensitive receptors in the vicinity. All the results for the said location and those available at locations V3 and V7 comply with the specified parameters. Details of the procedures giving public notice prior to blasting are detailed in section 21.8 of the FI submission and is considered to be in accordance with industry best practice.

7.4.14. Having regard to the history of compliance with blasting limits on the site and subject to appropriate conditions regarding monitoring, notification and vibration/overpressure limits, I do not consider that blasting associated with the proposed development is likely to result in any significant impacts on sensitive receptors.

Dust and Air Quality

7.4.15. Parties to the appeal raise concerns with regard to air quality impacts, including dust emissions.

7.4.16. Air quality is addressed in Section 8 of the EIAR, supplemented by further detail submitted by way of further information. Dust deposition monitoring is undertaken at 4 No. locations around the perimeter of the site, as indicated in Figure 8-1, and baseline monthly dust monitoring results for the period January 2016 to March 2019 are provided in Appendix 8-1. This detail was supplemented by further information with monitoring results for the rest of 2019 and those available for 2020 provided.

7.4.17. The monitoring undertaken is consequent to the requirements of condition 11 of permission re. PL04.226347. The said condition sets out the emission limit value of 350 mg/m^2/day which corresponds with the recommendations set out in the Quarries and Ancillary Activities Guidelines for Planning Authorities (2004) and the EPA Guidelines on Environmental Management in the Extractive Industry (2006).

7.4.18. From the details provided there have been a number of exceedances at all of the monitoring locations. A summary of the dust deposition monitoring data for the period of 2014-2020 is set out in the Malone O'Regan report in Appendix 7 of the further information response. I note that there have been 5 exceedances at DCDM01 over the period which is the nearest to the sensitive receptors to the north

of the extraction area. This equates to 6.4%. At DMCM02 the exceedances equate to 17.5% and 20.7% at DMCM03. Consistent exceedances equating to 42.8% have been recorded at DCDM04 which is positioned on farmland to the east of the quarry. The latter two monitoring positions are located c. 200m and 468 metres to the north-east and east from the closet active area of the site respectively. The report refers to a study of a quarry operation in the UK[1] and the Institute for Air Quality Management guidance document 'The Assessment of Mineral Dust Impacts for Planning wherein it is stated that adverse dust impact from sand and gravel sites are uncommon beyond 200 metres and beyond 400 metres from hard rock quarries. The report considers that it is unlikely the monitoring results for DMCM04 represent quarry activities.

7.4.19. The appellants raise concerns in terms of the impact of dust and PM_{10} on human health and I note the links to papers in support of their concerns. The relevant Air Quality Standards set out in the Air Quality Directive (2008/50/EC) which were transposed into Irish Law in 2011 (S.I. No. 180 of 2011) and the standards set for PM_{10} are based on the effects of the pollutant on human health.

7.4.20. In response to the further information request ambient PM_{10} monitoring was undertaken to provide site specific data at two locations and I refer the Board to the report by Malone O'Regan in Appendix 7 of the response. The monitoring took place over two periods in July and August during which it is stated that typical activities were being carried out on site. The report concludes that:

- At location 1 the average 24 hour mean for the monitoring period was 16.4ug/m^3 which is 33% of the Air Quality Standards Regulations (SI. No.180 of 2011) limit value of 50 ug/m3
- At location 2 the average 24 hour mean for the monitoring period was 20.1ug/m^3 which is 40% of the said regulations limit of 50 ug/m^3.

7.4.21. On this basis and having regard to the legislative framework and limits set out therein the existing PM_{10} levels at the quarry are within the parameters set in terms of human health. I would also accept the conclusions that sufficient assimilative

[1] Walton, G., Dalton, H. and Wardrop, D.R. 2008. Dust movement from and into quarries.Pp.45-52 in Walton, G, (Ed.) Proceedings of the 14th Extractive Industry Geology Conference, EIG Conferences, 109p.

capacity remains in the local ambient air to accommodate the life of the extension as the activities and intensity of operation are to be remain the same as is currently the case.

7.4.22. The said report also includes a disamenity dust risk assessment and cumulative impact assessment which concludes that the pathway for dust to reach sensitive receptors is ineffective but that in view of their sensitivity a slight adverse effect may occur without mitigation.

7.4.23. Mitigation measures are set out in Tables of the EIAR and in section 2.5 of Malone O'Regan's report in Appendix 7 of the FI response. The measures proposed are generally typical industry good practice measures, similar to those set out in the previously referenced Planning Guidelines and EPA Guidelines. They include minimising drop heights, water sprays to moisten handled material/haul routes, processing of material on the quarry floor, paving of haul routes and control of vehicle speed, seeding of soil mounds etc. With the implementation of the mitigation measures including the preparation of a Dust Minimisation Plan it is considered that residual dust impacts at sensitive receptors will reduce with, at worst, an 'acceptable' impact on those receptors likely to be most adversely affected.

7.4.24. Monitoring is to continue at the existing locations save for DCMCM04 which is proposed to be moved west closer to the applications site with 3 no. additional monitoring locations proposed.

Residential Amenities – Conclusion

7.4.25. I consider that the proposed vertical extension of the quarry subject to appropriate mitigation measures in line with best practice will ensure that noise, vibration and dust impacts arising will not have an adverse impact on the residential amenities of property in the vicinity. An Environmental Management System (EMS) is in place for the existing quarry operation. Following the further information request a revised EMS was submitted (Appendix 3). A condition requiring its review to be agreed with the planning authority will be required should permission be granted in this instance.

7.5. Ecology

7.5.1. I refer the Board to sections 8.3 and 9 of this report which address biodiversity and appropriate assessment.

7.5.2. A desk study was undertaken followed by site surveys which were carried out January, May and August 2019. The habitats recorded are reflective of those found within a working quarry area and are classified as being of local importance. The majority of birds utilising the site are common in the vicinity. One peregrine falcon pair was confirmed as present in the active since 2017 and breeding. Two active and three inactive sand martin colonies were recorded.

7.5.3. The proposal will not result in any loss or alteration to the existing/known peregrine falcon nesting site or the active sand martin colony. The proposed landscaping works will result in the loss of two banks containing old inactive sand martin burrows. By way of FI the applicant has prepared a Peregrine Falcon Conservation Management Plan and details proposals to address avoidance of habitat loss, disturbance/displacement and monitoring. This will include controls in terms of timing and location of blasting in the vicinity of the western boundary (section 3.2 of the plan).

7.5.4. Due to the existing quarry activity on the site and in the vicinity, it is not unreasonable to suggest that fauna identified including Peregrine Falcons and Sand Martin would appear to have generally adapted to the level of disturbance arising from same and there is no substantive reason as to why the said species will not continue to do so with the continuing activities.

7.6. **Other Issues**

7.6.1. By reason of the proposal being a vertical extension of the extraction area the visual impact of the proposal relative to that existing within the larger quarrying operation will be indiscernible. Localised impacts of proposed berms will arise but will assist in screening the existing quarrying activities.

7.6.2. As a vertical extension is proposed there would be no loss of agricultural land.

8.0 **Environmental Impact Assessment**

8.1. ***Introduction***

8.1.1. This section of the report comprises an environmental impact assessment of the proposed development. A number of the matters to be considered have already been addressed in the Planning Assessment above. This section of the report should therefore be read, where necessary, in conjunction with the relevant sections of the said assessment.

8.1.2. Both the 2014 amended EIA Directive (Directive 2014/52/EU) and the European Union (Planning and Development)(Environmental Impact Assessment) Regulations 2018 are applicable.

8.1.3. In terms of the classes of development in Schedule 5, Part 2 of the Planning and Development Regulations 2001, as amended, for which an EIAR is required, the extraction area, at approx. 20.2 hectares, is above the 5 hectare threshold for extraction of stone, gravel, sand or clay.

Content and Structure of EIAR

8.1.4. The EIAR consists of 2 volumes, grouped as follows:

Volume 1 – Main Report and Non-Technical Summary

Volume 2 – Appendices

A Stage 2 NIS Report also accompanies the application.

8.1.5. In accordance with Article 5 and Annex IV of the EU Directive, the EIAR provides a description of the project comprising information on the site, design, size and other relevant features. It identifies, describes and assesses the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape and it considers the interaction between the factors referred to in points (a) to (d). It provides a description of forecasting methods and evidence used to identify and assess the significant effects on the environment. It also provides a description of measures envisaged to avoid, prevent or reduce and, if possible, offset likely

significant adverse effects. The mitigation measures are presented in each chapter. Where proposed, monitoring arrangements are also outlined. It is stated that no difficulties were encountered in compiling the required information.

8.1.6. The EIAR is supplemented by further information submitted in response to a request for same by the planning authority during its assessment of the application.

8.1.7. I am satisfied that the information provided in the EIAR is sufficiently up to date and is adequate for the purposes of the environmental impact assessment to be undertaken.

8.1.8. I am satisfied that the EIAR has been prepared by competent experts and note the qualifications and expertise of the persons involved in its preparation as set out in Section 1.8.1. and at the beginning of each chapter.

8.1.9. I am satisfied that the information provided is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment. I am also satisfied that the information contained in the EIAR complies with the provisions of Articles 3, 5 and Annex (IV) of EU Directive 2014/52/EU amending Directive 2011/92/EU and Article 94 of the Planning and Development Regulations 2000, as amended.

8.1.10. I have carried out an examination of the information presented by the applicant, including the EIAR and further information response and the submissions made during the course of the application and the appeal. A summary of the submissions made have been set out in sections 3 and 6 of this report.

8.1.11. The main issues raised specific to EIA can be summarised as follows:

- Impact on population and human health arising from noise, dust and traffic.
- Impact on biodiversity arising from activities on the site.
- Impact on material assets arising from vehicular movements.

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

Consultations

8.1.13. Details of the consultations entered into by the applicant by way of an informal scoping exercise as part of the preparation of the project are set out in section 2.5 of the EIAR and Appendix 2-1. The list of consultees and a summary of submissions received are set out in Table 2-3.

8.1.14. Submissions received during the course of the planning authority's assessment of the application including submissions from prescribed bodies are summarised in sections 3.4 and 3.4 above with the 3rd party appeals and observations received by the Board summarised in sections 6.1 and 6.4 above.

Vulnerability to Risk of Major Accidents and/or Disaster

8.1.15. The requirements of Article 3(2) of the Directive include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disaster. The EIAR addresses this issue in section 4.4.1.

8.1.16. The potential for natural disasters that may occur are considered to be limited to flooding and fire and the risk of such events occurring affecting the proposed development and causing the works to have significant environmental effects is limited.

8.1.17. The proposed development is not regulated or connected to or close to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations (Seveso sites).

Alternatives

8.1.18. Article 5 (1) (d) of the 2014 EIA Directive requires:

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

8.1.19. Annex (iv) (Information for the EIAR) provides more detail on 'reasonable alternatives':

"2. A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are

relevant to the proposed project and its specific characteristics, and an indication of the main reasons for electing the chosen option, including a comparison of the environmental effects."

8.1.20. As the proposed development relates to the vertical extension of an existing, long-established quarry, I consider that the ability to consider alternatives is somewhat constrained. Such scenarios are acknowledged in the Guidelines for Planning Authorities on EIA which notes that some projects may be site specific so the consideration of alternative sites may not be relevant. I note from the EIAR that consideration was given to development of a green field site in addition to site layout and project design in addition to a do-nothing alternative.

8.1.21. I acknowledge that aggregates can only be worked where they occur and as a relatively low-value, high-density material, must be located within reasonable distance of key markets in order to make transport costs economically viable. I am therefore satisfied that the EIAR has satisfactorily addressed the issue of alternatives.

8.2. Population and Human Health

8.2.1. Chapter 4 of the EIAR addresses Population and Human Health but, as would be expected, the likely effects of the proposed development on human beings and health are addressed under several of the headings of this environmental impact assessment and, as such, should be considered as a whole. The chapter addresses socio-economic considerations, land use, health and safety, and human health. Chapter 9 addresses noise. Other impacts that have the potential to impact on humans include potential effects on water, air, traffic and landscape. These are discussed in the respective chapters of the EIAR.

8.2.2. I consider that there is an overlap with section 7.4 of the planning assessment above and I recommend that the sections be read in tandem.

Receiving Environment

8.2.3. I refer the Board to section 1 above which gives a description of the site and its location. Crookstown Village is c. 1.2 to the south-west with Cloughduv Village c. 800 metres to the south east. The lands in the vicinity are largely in agriculture use. One off housing along the local road network is noted.

8.2.4. The baseline environment in terms of population is set out. A demographic profile of the area is presented. No tourist attractions are noted in the vicinity.

8.2.5. The baseline environment in terms of noise is set out with the monitoring locations considered to be acceptable in view of the nearest sensitive receptors. The results of the bi-annual monitoring dating back to 2016 are provided in Appendix 9 with a summary provided in Table 9-7. This was supplemented by further results for 2020 provided in the FI response. The results of the monitoring at the 4 no. locations shows compliance with the above stated limits save at N1 in 2019 Q3 where 57 L_{Aeq} (15 mins) dB(A) was recorded. In addition an attended baseline noise survey was carried out on 01/04/19.

8.2.6. Blasting is carried out approx. 2 to 3 times per month. Blast results between 2015 and 2020 are provided showing compliance with specified parameters.

8.2.7. In a 'Do Nothing Scenario' the quarry would cease operation following extraction of the remaining reserves in the existing quarry with loss of employment and failure to provide for a source of aggregate material for the construction industry.

Predicted Effects

8.2.8. The continuance of extraction within the existing quarry and its extension will maintain the existing workforce of 35 full time staff with a further 30 no. subcontractors indirectly employed at the site for drilling, haulage etc. It will not contribute to new employment opportunities. It will support the construction and related industries.

8.2.9. As quarrying has been carried out on the site for a significant period of time with the current extraction methods to continue it is not envisaged that property values would be adversely impacted.

8.2.10. It is considered that the extension will have an imperceptible impact on recreation, amenity and tourism given its distance from any major tourist sites and absence of recreational or amenity uses in the vicinity.

8.2.11. For the purposes of environmental impact assessment health and safety matters are controlled by other regulatory instruments.

8.2.12. Modelling was undertaken for the noise sensitive receptors in the vicinity including the appellants' properties to the west. 3 no. scenarios were modelled corresponding

with the 3 phases proposed in the development. The results of the modelling are set out in Table 9.9 of the EIAR and conclude that the predicted noise emissions for the proposed extraction works are not of enough magnitude and there is no potential that there would be a cumulative increase in the overall site noise emissions that would exceed the 55dB L_{Aeq} noise limit. I would also accept the argument that as the quarry floor is lowered activities will be further shielded from nearby properties by the quarry face.

8.2.13. Impacts of blasting on the structural integrity of adjoining property.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.2.14. Berms are to be constructed along the northern boundaries and will provide noise attenuation.

8.2.15. Implementation of best practice methods in terms of operations and machinery use to limit noise.

8.2.16. Ongoing noise monitoring with an additional monitoring location proposed in proximity to the nearest noise sensitive receptor.

8.2.17. Vibration and overpressure will be required to meet the requirements of the Guidelines on Quarries and Ancillary Activities 2004 and the EPA Guidelines on Environmental Management in the Extractive Industry (2006), in that vibration levels shall not exceed a peak particle velocity of 12mm/sec and air overpressure values shall not exceed 125 dB (Lin)max peak, when measured at any noise sensitive house within the surrounding area. Ongoing monitoring will be required.

Residual Impacts

8.2.18. In terms of noise the proposed extraction works are not predicted to increase above noise and vibration levels.

Population and Human Health – Conclusion

8.2.19. Parties to the appeal consider that the noise and blasting are having and will continue to have a negative impact on their residential amenities and structural integrity of property with adverse effects on health.

8.2.20. I note that no significant change is proposed to working methods and having regard to the generally high level of compliance with existing noise emission limits, the screening effects of existing berms and the quarry face, and the implementation of best practice mitigation measures, the conclusions of the noise impact assessment are accepted and I consider that significant residual noise impacts on sensitive receptors are unlikely to arise. I note that an additional noise monitoring location is proposed in proximity to the nearest noise sensitive location bringing the total to 5. Blasting to date has been in compliance with parameters in terms of air overpressure and vibration. Appropriate measures to ensure advanced warning of blast events will continue to be required.

8.2.21. I have considered all the information on file including written submissions made in relation to population and human health and the information contained in the EIAR. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on population and human health.

8.3. **Biodiversity**

8.3.1. Chapter 5 addresses biodiversity. In addition an NIS accompanies the application with appropriate assessment undertaken in section 9 of this report. There is also an overlap with land, soil and water which are addressed below. I recommend that the relevant sections be read in conjunction with each other.

Receiving Environment

8.3.2. The EIAR includes a desk top study and site surveys. The chapter also identifies all Natura 2000 sites within a 15 km radius. The site is not within or adjacent to a European Site, the nearest being The Gearagh SAC (site code 000108) c. 10.2km to the west.

8.3.3. A desk study was undertaken followed by site surveys carried out January, May and August 2019. The habitats recorded are reflective of those found within a working quarry area and are classified as being of local importance. The majority of birds utilising the site are common in the vicinity. One peregrine falcon pair was confirmed

as present and breeding in the activity quarry. An active sand martin colony was recorded. Both are outside the extraction area. The Brouen River was assessed as providing suitable commuting and foraging habitat for otter although no signs of otter were recorded. Pipistrelle, Soprano Pipistrelle, Leisler's, and an unidentified Myotis bat species were recorded commuting and/or foraging along linear features and are considered to be common in the wider landscape. Activity at the site was considered to be low-moderate. No bat roosts were identified.

8.3.4. In a 'Do Nothing Scenario' extraction will continue with no change to the habitats and species thereon. On cessation of operation a restoration programme is to be carried out entailing flooding the quarry floor and naturally colonising vegetation.

Predicted Effects

8.3.5. The proposal entails the vertical extension of an existing quarry void and, thus, there will be minimal net loss of habitats.

8.3.6. The proposal will not result in any loss or alteration to the existing/known peregrine falcon nesting site or the active sand martin colony. The proposed landscaping works will result in the loss of two banks containing old inactive sand martin burrows.

8.3.7. There is the potential for slight negative effect on water quality arising from the quarry pumping and dewatering system which discharges water to the Brouen River. Deterioration in water quality may affect the water quality and habitats of aquatic species downstream of the site.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.3.8. The peregrine falcon nest and active sand martin colony will not be subject to any blasting or alterations. Proposals to address avoidance of habitat loss, disturbance/displacement and monitoring including controls in terms of timing and location of blasting in the vicinity of the western boundary are set out in a Peregrine Falcon Conservation Management Plan.

8.3.9. The measures to be employed to protect ground and surface water which are detailed under the heading 'Water' below in addition to measures to deal with dust under the heading 'Air and Climate' are relevant in terms of biodiversity. To avoid undue repetition, I recommend that these sections be read in tandem.

Residual Impacts

8.3.10. No significant residual impacts anticipated.

Biodiversity – Conclusion

8.3.11. I note that a 3rd party appellant raised concerns as to the impact of the proposed development on ecology. I submit that the development will impact primarily on low to moderate value habitats. In view of the existing quarry activity on the site and in the vicinity, fauna identified including Peregrine Falcons and Sand Martin would appear to have generally adapted to the level of disturbance arising from same and there is no substantive reason as to why the said species will not continue to do so with the continuing activities.

8.3.12. I have considered all of the written submissions made in relation to biodiversity. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on biodiversity.

8.4. Land and Soil

8.4.1. Chapter 6 of the EIAR addresses land, soils and geology. I consider that there is an overlap with hydrology and recommend that this be read in conjunction with the section below.

Existing Environment

8.4.2. Based on the GSI subsoils map bedrock, outcrop or subcrop is mapped in the central area of the site along with Devonian sandstone tills towards the boundaries. Soils and subsoils from the extraction areas have already been removed due to previous and ongoing quarrying activities. The extraction area is underlain with Waulsortian and Little Island limestones. There are no significant faults or fracture lines visible of the current quarry walls with all structural features being tight and closed. All current groundwater inflows to the operational quarry are mainly from relatively shallow depth along the eastern quarry wall.

8.4.3. From previous bedrock investigation drillings undertaken in 1994 the base of the limestone below the quarry floor was not reached with the deepest borehole extending 68.2 metres (-64m OD) below. 2019 geophysical and drilling investigations identified competent limestone down to the total depth of the survey which was approx. 30 metres (-26m OD). Further investigations were undertaken to a depth of -36mOD.

8.4.4. In a do nothing scenario the quarry will continue to operate in accordance with the current planning permission and related conditions and following completion, a restoration programme will be undertaken.

Predicted Effects

8.4.5. Sedimentation of surface and groundwater due to erosion of exposed topsoil and subsoil.

8.4.6. Accidental spillages or leakages of fuel and lubrication oils from machinery.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.4.7. Measures employed in the existing quarry site are to continue including use of machinery and storage of fuel/oils. Best practice methods to be incorporated in terms of storage of material, stripping of material and slope angles of storage mounds.

8.4.8. Approx. 70,000m^3 of overburden to be stripped along the north of the extraction area. It is to be used to construct berms.

8.4.9. Landscaping and restoration plan is to be implemented when extraction is complete.

8.4.10. A designated person is to have overall responsibility for ensuring excavation is carried out appropriately and monitoring the performance of pollution control measures adopted.

Residual Impacts

8.4.11. The extraction of the materials is a permanent and irreversible impact.

Land and Soil – Conclusion

8.4.12. I note that an appellant to the appeal expressed concern as to the loss of agricultural land. As the proposal entails the vertical extension of an existing extraction area within an operational quarry no loss of agricultural land will arise.

8.4.13. I have considered all the written submissions made in respect of land and soil. I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of land and soil.

8.5. Water

8.5.1. Chapter 7 addresses water which is supplemented by details provided in the further information response. The Board is advised that there is an overlap with respect to land and soil in section 8.4 above and the appropriate assessment in section 9 below. I recommend that the sections be read in tandem.

Receiving Environment

8.5.2. The elevation of the site, outside of the proposed extension area, ranges from 65mOD at its highest point at the current stockpile area on the south of the site to 55mOD at the manufacturing/processing yard area on the north of the site. The elevation of the current floor at the quarry is at approx. 4mOD with the quarry floor sump bottom at -22mOD over an area of approx. 1.5 ha.

8.5.3. Existing aggregate processing areas, workshops and office block are located on the northern section of the overall quarry site. A flooded quarry void area covering an area of 3.47 hectares is located c. 250 metres to the north of the application area.

Surface Water

8.5.4. The River Brouen flows in an eastern direction along the southern and eastern boundaries of the quarry. At the south eastern corner of the site the river changes course and flows northwards towards the River Bride c.1.2km downstream of the site. The River Bride is within the River Lee surface water catchment. The River Bride flows in an easterly direction approx. 300 metres to the north of the overall site.

8.5.5. River Flow measurements were undertaken to assess the impact of current quarry pumping on surface water flows. The upstream flow measurement which was taken 200 metres from the quarry site recorded a flow of 0.062m^3/s. A 2nd flow measurement was taken at the approx. middle point of the quarry footprint where a reduced flow of 0.045m^3/s was recorded. The 3rd, 4th and 5th locations were at the quarry discharge point, further downstream where the river bends to the north and 400 metres downstream with flow measured at 0.051m^3/s, 0.053m^3/s and 0.055m^3/s respectively. The stretch of river affected by water loss is c. 400 metres in length. During normal quarry operations the water lost is returned to the river by quarry pumping at the discharge point.

8.5.6. There are no EPA Q-rating status data available for the Brouen River. There is data available for the downstream River Bride. 2017 data show that the Q-rating for the River Bride both upstream and downstream of the Brouen River confluence is High (Q4-5). The WFD status for the Brouen River and River Bride is good.

8.5.7. With respect to Environmental Objectives Surface Water Regulations the River Brouen had an average value for BOD and ortho-phosphate that exceeded both the High status and Good status threshold. Ammonia-N exceeded the High status threshold but was below the Good status threshold. Total Suspended Solids was below the Freshwater Fish Directive (2006/44/EC) requirements.

8.5.8. Discharged water from the quarry is sampled monthly as part of the existing discharge licence monitoring programme. Further sampling at the discharge point was undertaken to inform the EIAR. There are no exceedance of the discharge licence limits in data available from 2017 to date.

Groundwater

8.5.9. The Little Island Formation and the Waulsortian limestones are Dinantian Pur Unbedded Limestones and are classified by the GSI as a Regionally Important Karstified Aquifer (diffuse flow). The vulnerability of the aquifer is classified as predominately 'Extreme – X'

8.5.10. Groundwater inflows are coming in at the upper benches. Investigation drilling on the quarry floor below the proposed depth of -32mOD intercepted competent limestone with no significant water bearing fractures, karst zones or weathered zones.

8.5.11. The natural (pre-quarry) groundwater level gradient is an easterly/north-easterly direction along the Bride River Valley. Continuous water level data demonstrates that groundwater levels in the vicinity of the site are being affected by the ongoing quarry dewatering. The current quarry groundwater level cone of drawdown/contribution extends predominately to the east/northeast (down gradient) of the quarry. The cone of drawdown extends south below the Brouen River. The river has a channel bed elevation of approx. 48.5mOD. The groundwater level ranges between 39.5mOD and 42.9mOD. Thus the groundwater level is some 6-9 metres below the river bed elevation which results in some surface water loss through the river bed. The fluvial/alluvial deposits below the river bed are leaking as a result of groundwater level drawdown. The losses are measured to be relatively minimal (-17L/s).

8.5.12. Monitoring of groundwater levels up gradient (west of the site) between the site and the River Bride show levels only 1-2 metres below ground level and do not appear to be affected by quarry pumping.

8.5.13. In terms of groundwater quality testing the 2 no. exceedances with respect to drinking water regulations value was for iron and manganese. This is normally due to the local geology (limestone). 1 no. exceedance for ortho-phosphate in one well and elevated nitrate in another were recorded. These are considered likely due to agricultural activities nearby.

8.5.14. The Crookstown public water supply well is due to be decommissioned in 2020 as mains have been laid to join Cloughduv/Crookstown to the Cork City and Harbour WSS. There is 1 no. well serving a farm within 500 metres.

8.5.15. Dewatering of the existing quarry extraction area is carried out by pumping at 3 sump locations via rising mains to a 144m^3 sealed lagoon which is adjacent to the Brouen River discharge point at the southern boundary of the site. The purpose of the lagoon is so that water discharges to the Brouen River under gravity via Class 1 full retention oil interceptors rather than for attenuation/treatment. The discharge is subject to licence from Cork County Council (ref. WP(W)1013R). A discharge of up to 19,200m^3/day is permitted. The current permitted discharge level is exceeded on a regular basis in winter and early spring but is generally compliant during the summer and autumn months.

8.5.16. In terms of the Brouen River assimilative capacity there has been a reduction/improvement in the concentrations of BOD, Ammonia-N and ortho-phosphate

8.5.17. The site is located in Flood Zone C. Much of the northern section of the overall landholding is mapped in Flood Zone A namely the Bride River and Brouen River Floodplain.

8.5.18. In a Do Nothing Scenario the quarry will continue within the parameters of the permission as permitted. Pumping of water would continue to exceed its discharge licence.

Predicted Effects

8.5.19. Increased groundwater vulnerability with decreased groundwater levels and increase in cone of drawdown.

8.5.20. Surface water loss from the River Brouen arising from the potential expansion of cone of drawdown due to increased quarry pumping.

8.5.21. Increase in dewatering and discharge to River Brouen and impacts on water quality

8.5.22. The adequacy of the River Brouen channel to accept the proposed maximum quarry discharge

8.5.23. Removal of overburden will expose subsoil to erosion and potential for sediment laden run off to surface water.

8.5.24. Potential for pollution via hydrocarbons/spillage on the site.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.5.25. All surface water arising from stripping overburden will be directed to the quarry sump for treatment. Silt fences are to be placed downslope of overburden stripping areas. Works are to be carried out during period of low rainfall. Daily monitoring of overburden stripping/overburden works by suitably qualified person. Berms to be planted as soon as possible.

8.5.26. Best practice methods of storage of fuels/lubricants and protocol for dealing with accidental spillages.

8.5.27. Best practice in control and management on the site ie. wheel washers and dust suppression.

8.5.28. The floor of the quarry will continue to be dewatered using the existing system installed at the quarry. All water pumped out of the quarry passes through a water attenuation/settlement system prior to discharge to the Brouen River for removal of suspended sediments as well as an oil interceptor at the existing discharge point.

8.5.29. Water is to be pumped directly to the Brouen River via a new discharge location (DP2) rather that pumping to the existing discharge point (DP1).

8.5.30. A discharge licence will be sought for the proposed development. The extension will require an additional 6500m^3/day (270m^3/hour) discharge. It is proposed to seek an increased limit of 30,700m^3/day to regularise the current pumping regime and to take account of additional groundwater and surface water inflow volumes arising from the proposed quarry extension. By way of the appeal response the applicant has stated that it has been granted a discharge licence by Cork County Council under ref. WP W 03/20 on the 30th March 2021.

8.5.31. Surface water monitoring regime of the discharge waters will continue as per the discharge licence and any possible future amendment.

8.5.32. Groundwater monitoring to continue with data loggers installed in the wells to allow for continuous monitoring.

8.5.33. Upgrade of the existing Class 1 full retention oil interceptors at the discharge point to allow for increased discharge rate.

8.5.34. To avoid bank flooding in the Brouen River where flows exceed Q_{med} (median of the annual maximum series and it is the flood with a return period of approx. 2 years) the quarry will stop pumping for 2 days to ensure flood risk is not increased downstream of the site. The water will be stored in the quarry floor sump and gradually pumped out over a few days. Automated telemetry to be used to signal the pumps to turn off including installation of a permanent data logger/ weir at river cross section XS14 (lowest channel capacity downstream of discharge point).

8.5.35. On completion of restoration works the pumps will be removed from the quarry and the water level in the void will be allowed to return to its natural level.

Residual Impacts

8.5.36. Due to the non-significant effects of the current pumping regime on local groundwater levels and the low potential for increased groundwater inflows it is considered that the residual impacts are slight negative.

8.5.37. The proposed quarry discharge will improve current surface water quality in the Brouen River resulting in positive residual impacts.

8.5.38. The proposal to hold and manage discharge within the quarry sump until flood events have subsided means an imperceptible residual effect.

8.5.39. Impact on River Brouen with respect of water loss from quarry pumping is expected to be imperceptible to slight.

Water – Conclusion

8.5.40. The permission granted under PL04.226347 (06/13499) by way of Conditions 3 and 4 restricted the depth and extent of excavation in the southern portion of the quarry (corresponding to the appeal site) to a maximum +4mOD and setback of 300 metres from the eastern site boundary. The reason for the condition stated that it had not been demonstrated in the planning application, the Environmental Impact Statement and the appeal that quarrying to the depth and extent proposed would not have a detrimental impact on the surface water and groundwater resources of the area, with particular reference to maintaining the flow in the adjacent River Brouen, to the potential for flooding related to the discharge of extracted water into this river, and to the value of groundwater as a potable water supply in this general area. It was considered that a reduction in both the depth and extent of quarrying in the southern portion of the site was necessary in the interest of environmental protection.

8.5.41. I note that Inland Fisheries Ireland in a submission on the planning application expressed concern that the proposal could have significant negative impacts on flows in the Brouen River which is a salmonid river particularly during periods of low flow when the habitat is at its most vulnerable

8.5.42. I consider that the current proposal in terms of the extent of the study undertaken including quarry floor drilling and geophysical survey, Brouen river channel capacity assessment and assimilative capacity, provides sufficient detailed assessment of the future likely impacts of continued quarrying to a greater depth on the surrounding ground water environment and the adjoining rivers.

8.5.43. The surface water flow monitoring shows that losses from the Brouen River are relatively small (0.017m^3/s) and the losses are limited to the 400 metre stretch of the river which flows immediately to the south. The assessment suggests that even during a 95%ile (0.026m^3/s) flow the river would not dry up. During higher flows the loss would become less significant. Due to the fact that the groundwater cone of drawdown already extends out below the river it is not expected that any further water losses will occur as a result of the proposed extension. Also the cone of drawdown is extending preferentially to the east of site where the river is underlain by thick deposits of low permeability gravelly silt/clay which is preventing losses to the underlying ZOC which is demonstrated by the surface water flow monitoring. The current cone of drawdown is largely driven by relatively shallow groundwater inflows with no significant inflow from the walls of the lower benches. The drilling and geophysical results from the quarry floor investigations would support the conclusions that the proposed deepening of the quarry has low potential to further reduce groundwater levels.

8.5.44. With regard to the provisions of the Water Framework Directive, as transposed by article 5 of the Surface Water Regulations, which state that permission cannot be granted for development which may cause a deterioration of the status of a surface water body, I consider that sufficient detail has been provided as to the water volumes to be discharged and the assimilative capacity of the River Brouen to demonstrate that the proposed development would not cause a deterioration in the status of this surface water body. The assimilative capacity assessment shows that the river has capacity to accept the proposed increased discharge and will improve the overall status for some of the key chemical conditions supporting biological elements. During floods exceeding the Q_{med} the quarry will stop discharging into the river allowing the peak flood to pass with water to be stored in the quarry floor sump. This will ensure that no flooding of the river will occur was a result of discharge.

8.5.45. I have considered all of the written submissions made in relation to water. I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions including monitoring conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of water.

8.6. Air and Climate

8.6.1. Chapter 8 of the EIAR addresses Air and Climate with further details provided in the further information response. I consider that there is an overlap with section 7.4 of the planning assessment above and I recommend that the sections be read in tandem.

Receiving Environment

8.6.2. The site is within an existing larger quarry operation where extraction is currently occurring. The lands in the vicinity of the overall site are generally in agricultural use with the nearest sensitive receptors to the north of the extraction area.

8.6.3. Dust deposition monitoring is undertaken at 4 No. locations around the perimeter of the site, as indicated in Figure 8-1, and baseline monthly dust monitoring results for the period January 2016 to March 2019 are provided in Appendix 8-1. This detail was supplemented by further information with monitoring results for the rest of 2019 and those available for 2020 provided. There have been a number of exceedances at all of the monitoring locations. A summary of the dust deposition monitoring data for the period of 2014-2020 is set out in the Malone O'Regan report in Appendix 7 of the further information response. There have been 5 exceedances at DCDM01 over the period which is the nearest to the sensitive receptors to the north of the extraction. At DMCM02 the exceedances equate to 17.5% and 20.7% at DMCM03. Consistent exceedances, 42.8%, have been recorded at DCDM04 which is positioned on farmland to the east of the quarry. The latter two monitoring positions are located c. 200m and 468 metres to the north-east and east from the closet active area of the site respectively.

8.6.4. In response to the further information request ambient PM_{10} monitoring was undertaken to provide site specific data at two locations and I refer the Board to the report by Malone O'Regan in Appendix 7 of the response. The monitoring took place over two periods in July and August during which it is stated that typical activities were being carried out on site. It concludes that at location 1 the average 24 hour mean for the monitoring period was 16.4ug/m^3 which is 33% of the Air Quality Standards Regulations (SI. No.180 of 2011) limit value of 50 ug/m^3. At location 2 the average 24 hour mean for the monitoring period was 20.1ug/m^3 which is 40% of the said regulations limit.

8.6.5. In a do nothing scenario the existing quarrying operations including extraction will continue within the parameters of the extant permission with no change to the prevailing air quality.

Predicted Effects

8.6.6. Extraction and processing of materials, transport of materials and construction of the berms along the northern site boundaries can all give rise to dust generation and deposition.

8.6.7. Use of machinery resulting in greenhouse gases.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.6.8. Industry best practice measures are to be incorporated including minimising drop heights, water sprays to moisten handled material/haul routes, processing of material on the quarry floor, paving of haul routes and control of vehicle speed, use of wheel wash system etc.

8.6.9. A Dust Minimisation Plan is to be prepared.

8.6.10. Berms are to be constructed along the northern site boundaries.

8.6.11. Ongoing monitoring of dust deposition with an increase in the number of monitoring locations from 4 to 7.

Residual Impacts

8.6.12. Residual impact from potential sources of dust will have a Long-term Imperceptible negative impact.

8.6.13. There will be no increase in greenhouse gas emissions from vehicular movements to and from the site which are to remain as existing.

Air and Climate – Conclusion

8.6.14. Parties to the appeal consider that their amenities are and will be adversely impacted from dust arising from the existing quarry and the proposed extension.

8.6.15. Sufficient detail has been provided to support the conclusion that the proposed development with mitigation would not result in excessive dust emissions with the preparation of a Dust Minimisation Plan proposed. A condition requiring its

preparation within a specified time period is recommended should permission be granted. Further monitoring locations are also proposed.

8.6.16. The appellants raise concerns in terms of the impact of dust and PM_{10} on human health and I note the links to papers in support of their concerns. The relevant Air Quality Standards set out in the Air Quality Directive (2008/50/EC) which were transposed into Irish Law in 2011 (S.I. No. 180 of 2011) and the standards set for PM_{10} are based on the effects of the pollutant on human health. In response to the further information request ambient PM_{10} monitoring was undertaken to provide site specific data at two locations and I refer the Board to the report by Malone O'Regan in Appendix 7 of the response. The monitoring took place over two periods in July and August during which it is stated that typical activities were being carried out on site. The results were 33% and 40% of the Air Quality Standards Regulations (SI. No.180 of 2011) limit value of 50 ug/m^3 respectively. On this basis and having regard to the legislative framework and limits set out therein the existing PM10 levels at the quarry are within the parameters set in terms of human health. I would also accept the conclusions that sufficient assimilative capacity remains in the local ambient air to accommodate the life of the extension as the activities and intensity of operation are to be remain the same as is currently the case.

8.6.17. The mitigation measures proposed are generally typical industry good practice measures, similar to those set out in the previously referenced Planning Guidelines and EPA Guidelines. They include minimising drop heights, water sprays to moisten handled material/haul routes, processing of material on the quarry floor, paving of haul routes and control of vehicle speed, seeding of soil mounds etc.

8.6.18. I have considered all of the written submissions made in relation to air and climate. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on air and climate.

8.7. Material Assets

8.7.1. Traffic and Transportation is addressed in Chapter 9. I refer the Board to my assessment in section 7.3 of the planning assessment above. I recommend that the sections be read in tandem.

Receiving Environment

8.7.2. The existing quarry is accessed from an access off the R585 and from Local Road L5233. The overall quarry straddles the local road with quarry vehicles crossing the road at two points.

8.7.3. As per the traffic counts and survey conducted in 2019 on the R585 218 daily HGV movements were observed.

8.7.4. Existing services in terms of electricity will continue to be used in the overall quarry operation.

8.7.5. In a 'Do Nothing Scenario' following the extraction of the remaining reserves the quarry would close with cessation of quarry related traffic using the existing accesses.

Predicted Impacts

8.7.6. The proposal before the Board is for the vertical extension of the extraction area, only. There will be no change in vehicular movements arising.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.7.7. Consolidation of the existing vehicular accesses off Local Road L6233 by closing the 'western access junction' is proposed. Additional measures to improve vehicular and pedestrian safety along the local road are proposed, including the introduction of edge of carriageway markings, improved warning signage and installation of wheel wash facilities.

8.7.8. Regular road cleaning is to be undertaken.

Residual Impacts

8.7.9. None anticipated as the existing vehicular movements generated by the quarry operation will not be altered. The impact from the consolidation of the crossing points on L6233 is considered a positive impact.

Material Assets – Conclusion

8.7.10. Parties to the appeal raise issues in terms of the condition of the local road network arising from the vehicular movements. As noted, the existing regime in terms of road cleaning and the use of wheel wash facilities will continue. There will be no increase in intensity of activity on the site with no increase in vehicular movements. I note the issues arising in terms of impact of vehicular movements on utilities. Appropriate on site procedures to avoid overhead wires etc. would be in accordance with best practice.

8.7.11. I have considered all of the written submissions made in relation to material assets. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on material assets.

8.8. Cultural Heritage

8.8.1. Chapter 11 addresses archaeology and cultural heritage.

Receiving Environment

8.8.2. The existing site is an existing extraction area within a larger quarry operation. Both desk top and field inspection dating back to 2010 were carried out. Extraction has been carried out below the level at which archaeological horizons would occur. There are no recorded monuments within the site with two within the larger quarry site, namely the limekiln on the west side of the overall quarry c. 160 metres from the appeal site and Towerhouse and Bawn also to the west of the quarry site and c. 190 metres from the appeal site. There are no protected structures in the vicinity.

8.8.3. In a ‘Do Nothing Scenario’ extraction would continue as per the existing permission.

Predicted Effects

8.8.4. No effects anticipated.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.8.5. None proposed.

Residual Impacts

8.8.6. None anticipated.

Cultural Heritage – Conclusion

8.8.7. I note that the Council's Conservation Officer recommends blast monitoring at Castletown Tower to ensure stability. This is considered a reasonable requirement into the future with the vertical extension as proposed.

8.8.8. I have considered all of the written submissions made in relation to cultural heritage. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on cultural heritage.

8.9. **Landscape**

8.9.1. Chapter 10 addresses Landscape and Visual Impact.

Receiving Environment

8.9.2. The site is within a larger quarry operation and extraction is on-going. The lands around the larger quarry site are in agricultural use with one off housing along the local road network. The nearest dwellings are located along local road L6233 to the west. It is not in proximity to an area designated as being a high value landscape with no designated views or scenic routes in the vicinity. The landscape is relatively level with hedgerows delineating roadside boundaries. No long distance views of the existing quarry are available with views restricted to the immediate vicinity along R535 and L6233.

8.9.3. In a do nothing scenario the extraction would continue within the parameters of the existing permission.

Predicted Effects

8.9.4. 5 no. viewpoints the locations of which are delineated on Figure 10.1, were assessed. The existing quarry is visible in some. The proposed development is for the vertical extension of the extraction area, only, and as such there will be no change to the views available.

Features and measures to avoid, prevent, reduce or offset likely significant adverse effects on the environment

8.9.5. Earth berms to be planted with native species are proposed around the northern perimeter of the site to assist in screening the extraction area.

Residual Impacts

8.9.6. The berms would have a positive impact in terms of providing for additional screening of the extraction area.

Landscape – Conclusion

8.9.7. I have considered all of the written submissions made in relation to landscape. I am not satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on landscape.

8.10. Interaction of the Above and Cumulative Impacts

8.10.1. I have considered the interrelationships between factors and whether these may, as a whole, affect the environment, even though the effects may be acceptable when considered on an individual basis. The details of all interrelationships are set out in Chapter 13 with Table 13-1 providing a matrix of the impact interactions. In my assessment of each environmental topic I have considered the likelihood of significant effects arising as a consequence of interrelationship between factors. Most interactions e.g. the impact of noise and air quality on the population and human health, water and land and soil and biodiversity and land and soil are addressed under individual topic headings. I am satisfied that effects as a result of

interactions can be avoided, managed and/or mitigated by the measures which form part of the proposed development, mitigation measures, and suitable conditions. There is, therefore, nothing to prevent the approval for the development on the grounds of significant effects as a result of interactions between the environmental factors.

8.10.2. Cumulative impacts were assessed in each chapter of the EIAR and have considered the total effect of the overall quarry operation of which the proposed development forms part in addition to other projects in the vicinity which are listed in section 2.6.2 of the EIAR. I am satisfied that the cumulative assessment assesses the impacts of the current proposal in the context of other developments and projects.

8.11. Reasoned Conclusion on the Significant Effects

8.11.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant by way of further information and submissions made by prescribed bodies to the application and the 3rd party appeals and observations received by the Board, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows. Where appropriate the relevant mitigation measures are cited.

Population and Human Health - impacts arising from emissions of dust, noise and vibration during operation, with potential for nuisance to sensitive residential receptors proximate to the site. Such impacts are proposed to be mitigated by measures to reduce and control the emissions in the first instance and thereafter by the adoption of specific measures, including those forming part of the operation of the development including monitoring proposals.

Biodiversity – impacts arising from extraction activities including blasting on breeding pair of Peregrine Falcon and colony of Sand Martin. Such impacts are proposed to be mitigated by measures to avoid habitat loss, disturbance/displacement, controls in terms of timing and location of blasting and monitoring proposals.

Water – impacts on water levels and quality of the River Brouen arising from continuing dewatering and discharge. Such impacts are proposed to be mitigated by specific measures to control the levels and quality of the discharge including a water management system with all water pumped out of the quarry passing through a water attenuation/settlement system prior to discharge. To avoid bank flooding in the Brouen River where flows exceed Q_{med} the quarry will stop pumping to ensure flood risk is not increased downstream of the site. Surface water monitoring of the discharge waters will continue as per the discharge licence and any possible future amendment. Groundwater monitoring is to continue with data loggers installed in the wells to allow for continuous monitoring.

8.11.2. In conclusion, having regard to the above identified significant effects, I am satisfied that the proposed development would not have any unacceptable direct or indirect impacts on the environment, subject to the implementation of the mitigation measures and any conditions recommended in section 12 of this report.

9.0 Appropriate Assessment

9.1. Compliance with Articles 6(3) of the EU Habitats Directive

9.1.1. The requirements of Article 6(3) as related to screening the need for appropriate assessment of a project under part XAB, section 177U of the Planning and Development Act 2000 (as amended) are considered fully in this section.

9.1.2. The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site before consent can be given. The proposed development is not directly connected to or necessary to the management of any European site and, therefore, is subject to the provisions of Article 6(3).

9.1.3. The application is accompanied by a Natura Impact Statement (NIS) prepared by MKO Planning and Environmental Consultants dated 15/0/520 with an addendum dated 06/12/20 taking account of the further information response (Appendix 9 of said response). It contains a description of the proposed development, the project site and the surrounding area. It contains a Stage 1 Screening Assessment in Section 4. It outlines the methodology used for assessing potential impacts on the habitats and species within the European Sites that have the potential to be affected by the proposed development. It predicts the potential impacts for the sites and their conservation objectives, it suggests mitigation measures, assesses in-combination effects with other plans and projects and it identifies any residual effects on the European sites and their conservation objectives.

9.1.4. An EIAR accompanies the application with further information submitted in response to a request for same by the planning authority.

9.1.5. Having reviewed the documents and 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.

Need for Stage 1 AA Screening

9.1.6. 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 designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) to assess whether it may give rise to significant effects on any European Site in view of the conservation objectives of those sites.

Brief Description of the Development

9.1.7. The applicant provides a description of the project in Section 2 of the NIS. The development is also summarised in Section 2 of this Report. In summary the proposed development entails the vertical extension of the existing extraction area for extraction of limestone at the existing Castlemore Quarry. The extension will entail an additional 2 x 18 metre high benches from the current floor level of 4mAOD to -32mAOD and the deepening of the quarry sump from the current level of c. -

22mAOD to -36mAOD. The working area is approx. 20.2 hectares. The existing quarry infrastructure and processing areas are to be used. Berms along the northern boundaries are proposed. Rock will be extracted by blasting and will be processed accordingly. Dewatering is carried out by pumping at 3no. sump locations on the quarry floor via rising mains to a sealed lagoon with a capacity storage of 144m^3 which is located adjacent to the Brouen River and which is discharged to same under gravity via 2no. class 1 full retention oil interceptors. Attenuation/treatment of quarry water is provided by the main quarry floor sump. Water will continue to be discharged by this method albeit proposed to be pumped directly to the Brouen River via a new discharge location. This is subject to a discharge licence review.

9.1.8. The nearest surface water features to the site are the River Brouen which runs along the southern and eastern boundaries of the site and the River Bride which is to the north of the overall quarry operation and which is approx. 300 metres north of the existing limestone extraction area. The River Brouen and River Bridge converge approx. 700 metres to the northeast of the extraction area and joining the River Lee west of Ballincollig approx. 14km to the east of the site.

9.1.9. The dominant habitat on site is active quarries and mines and spoil and spare ground and the site does not currently support habitats of ex-situ ecological value for relevant qualifying interests of any Natura 2000 site. The ecology team undertook site visits in January, May and August 2020.

9.1.10. Taking account of the characteristics of the proposed development in terms of its location and the scale of works, the following issues are considered for examination in terms of implications for likely significant effects on European sites:

- Surface water related pollution during earthworks
- Water quality and base flows

European Sites

The development site is not located in or immediately adjacent to a European site. In determining the extent of potential effects of the development, the applicant took a precautionary approach in using a 15km radius around the development footprint as a potential zone of influence. In addition the potential for connectivity with European Sites at distances greater than 15 km were also considered and thereby included 4

European Sites in the screening exercise. The source-pathway-receptor model of impact prediction was employed.

A summary of European Sites that occur within a possible zone of influence of the proposed development is presented in the table below.

- Water discharge under licence is occurring to the River Brouen which bounds the extraction area to the south. The River Brouen and River Bridge converge approx. 700 metres to the northeast of the extraction area joining the River Lee west of Ballincollig approx. 14km to the east of the site. The River Lee enters the Cork Harbour SPA at Lough Mahon, an approx. hydrologic distance of 35 km downstream. The NIS concludes that there is a hydrological connection between the development site and the Cork Harbour SPA and that there is the possibility that surface water runoff containing silt or contaminants could reach the SPA and have effects on the qualifying interests of the site. The potential for effects on QI's of this Natura 2000 site cannot, therefore, be screened out and Stage II Appropriate Assessment is required in respect of the Cork Harbour SPA.

- The Gearagh SAC and SPA which are designated for range of water dependent habitat and species is approx. 10km upstream of the site and thus there is no pathway for effect between the site and the qualifying interests. The potential for effects on QI's of this Natura 2000 sites can therefore be screened out.

- Great Channel Island SAC which is designated for coastal habitat is over 32km hydrologic distance from the site. The Brouen River flows into the River Bride which is a tributary of the River Lee which enters the sea at Cork Harbour. It does not flow into Great Island SAC which is fed by tidal flows and by streams flowing in a southern direction towards the SAC. I am satisfied that the potential for likely significant effects on the qualifying interests of the Great Island Channel SAC can be excluded given the distant connection, the nature and scale of the development and the volume of the receiving waters within Cork Harbour (dilution factor).

- The Gearagh SPA is designated for the protection of waterbird species whilst Cork Harbour SPA is designated for the protection of a range of waterbird species that typically forage and roost along the intertidal mudflats and

coastal wetlands or fields. The site does not support habitats of ex-situ ecological value for qualifying interest species of The Gearagh and Cork Harbour SPAs. The bird surveys carried out on the site indicated that the site is not used by any qualifying species of the SPAs or any other waterbirds for foraging / roosting. In addition, the site is not of known historical importance for waterbirds. On the basis of the foregoing the potential for significant impacts on waterbirds that are a qualifying species of the Cork Harbour and The Gearagh SPAs due to disturbance / displacement / collision effects can be screened out. I consider that the survey methodology and timing of bird surveys are adequate to support the conclusions of the NIS.

Mitigation measures

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.

Screening Determination

9.1.11. 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 no. 004030 in view of the site's Conservation Objectives and Appropriate Assessment (and submission of a NIS) is therefore required.

- **AA Screening Summary Matrix**

European /Natura 2000 Site www.npws.ie	Distance from proposed development/ Source, pathway, receptor	Possible significant effect (alone)	In combination effects	Screening conclusion
The Gearagh SAC (site code 000108)	10km to west and hydrologically upstream of the site.	No possibility of effects due to separation distance and absence of ecological connections	No possibility of in combination effects	Screened out for need for appropriate assessment.
The Gearagh SPA (site code 004109)	11.5 km to the west of the site	The dominant habitat within the site and the waterbody at the quarry floor does not support suitable habitat for the special conservation interests. No hydrological link. No possibility of effects due to separation distance and absence of ecological connections.	No possibility of in combination effects	Screened out for need for appropriate assessment.
Great Channel Island SAC (site code 001058)	c. 32 km hydrologic distance to the east. The Brouen River flows into the River Bride which is a tributary of the River Lee which enters the sea at Cork Harbour. It does not flow into Great Island SAC which is fed by tidal flows and by streams flowing in a	No possibility of effects due to separation distance and absence of ecological connections	No possibility of in combination effects	Screened out for need for appropriate assessment.

	southern direction towards the SAC.			
Cork Harbour SPA (site code 004030)	c. 30km as the crow flies and c. 35km hydrologic distance to the west. The Brouen River flows into the River Bride which is a tributary of the River Lee which enters the sea at Cork Harbour at Lough Mahon	Potential for impacts to surface and groundwater water quality and downstream impacts on supporting wetland habitat: **development may result in significant effects alone.** The dominant habitat within the site and the waterbody at the quarry floor does not support suitable habitat for the special conservation interests.	Possible- requires more detailed analysis.	Possible significant effects cannot be ruled out without further analysis and assessment and the application of mitigation measures- **Appropriate assessment required**.

Appropriate Assessment of Implications of the Proposed Development.

9.1.12. The following is an assessment of the implications of the project on the relevant conservation objectives of the European site using the best available scientific knowledge in the field (NIS). All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are examined and assessed. I have relied on the following guidance:

- DoEHLG (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service. Dublin
- EC (2002) Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC
- • EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC.

The following site is subject to appropriate assessment

Cork Harbour SPA (Site Code 004030)	
Conservation Objectives and Qualifying Interests / Special Conservation Interests	**Potential Impacts**
CO – To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. Qualifying Interests/Species of Conservation Interest: Little Grebe (Tachybaptus ruficollis) [A004], Grey Plover (Pluvialis squatarola) [A141], Great Crested Grebe (Podiceps cristatus) [A005], Lapwing (Vanellus vanellus) [A142], Cormorant (Phalacrocorax carbo) [A017], Dunlin (Calidris alpina) [A149], Grey Heron (Ardea cinerea) [A028], Black-tailed Godwit (Limosa limosa) [A156], Shelduck (Tadorna tadorna) [A048],	<u>Direct Effects:</u> No direct effects due to separation distance. <u>Indirect Effects:</u> Potential for indirect effects from surface water discharge and water levels arising from dewatering in the absence of site specific mitigation measures.

Bar-tailed Godwit (Limosa lapponica) [A157], Wigeon (Anas penelope) [A050], Curlew (Numenius arquata) [A160], Teal (Anas crecca) [A052], Pintail (Anas acuta) [A054], Black-headed Gull (Chroicocephalus ridibundus) [A179], Shoveler (Anas clypeata) [A056], Common Gull (Larus canus) [A182], Red-breasted Merganser (Mergus serrator) [A069], Lesser Black-backed Gull (Larus fuscus) [A183], Oystercatcher (Haematopus ostralegus) [A130], Golden Plover (Pluvialis apricaria) [A140], Redshank (Tringa totanus) [A162], Common Tern (Sterna hirundo) [A193] and Wetlands and [A999]	

9.1.13. A description of the site is set out in section 4.3.1.1 of the NIS with the qualifying interests set out in Table 4.1 and which are set out above. I have also examined the Natura 2000 data forms as relevant and the Conservation Objectives document for the site available through the NPWs website.

9.1.14. The main aspects of the proposed development that could adversely affect the conservation objectives of the European site include:

- impact on water quality and wetland habitat through operational related pollution events and water flows arising from discharge into the River Brouen.

Sections 2.3 and 5.2.2.1 of the NIS, Section 7 of the EIAR supplemented by further information and the Environmental Management Plan prepared detail mitigation measures to be employed, the majority of which are measures already in operation at the quarry including:

- The floor of the quarry will continue to be dewatered using the existing system installed at the quarry. All water pumped out of the quarry passes through a water attenuation/settlement system prior to discharge to the Brouen River for removal of suspended sediments as well as an oil interceptor at the existing discharge.
- All surface water arising from stripping overburden will be directed to the quarry sump for treatment. Silt fences to be placed downslope of overburden

stripping areas. Works to be carried out during period of low rainfall. Daily monitoring of overburden stripping/overburden works by suitably qualified person. Berms to be planted as soon as possible.

- Best practice methods of storage of fuels/lubricants and protocol for dealing with accidental spillages.
- Best practice in control and management on the site ie. wheel washers and dust suppression.
- Water is to be pumped directly to the Brouen River via a new discharge location (DP2) rather than pumping to the existing discharge point (DP1).
- Upgrade of the existing Class 1 full retention oil interceptors at the discharge point.
- The extension will require an additional 6500m^3/day (270m^3/hour) discharge. It is proposed to seek an increased limit of 30,700m^3/day to regularise the current pumping regime and to take account of additional groundwater and surface water inflow volumes arising from the proposed quarry extension. The said discharge licence has been granted by Cork County Council under ref.WP W 03/20.
- Surface water monitoring will continue as existing in accordance with the revised discharge licence.
- Groundwater monitoring to continue with data loggers installed in the wells to allow for continuous monitoring.
- To avoid bank flooding in the Brouen River where flows exceed Q_{med} (median of the annual maximum series and it is the flood with a return period of approx. 2 years) the quarry will stop pumping for 2 days to ensure flood risk is not increased downstream of the site. The water will be stored in the quarry floor sump and gradually pumped out over a few days. Automated telemetry to be used to signal the pumps to turn off including installation of a permanent data logger/ weir at river cross section XS14 (lowest channel capacity downstream of discharge point).

9.1.15. I consider that the proposed mitigation measures are clearly described, are reasonable, practical and enforceable. I am satisfied that the measures outlined fully

address any potential impacts on the Cork Harbour SPA arising from the proposed development and that this conclusion can be made on the basis of objective scientific information.

Cumulative and In-Combination Effects

9.1.16. The existing extraction area and proposed development form part of a larger quarry operation and the cumulative impacts are fully assessed. I do not consider that there are any specific in-combination effects that arise from other plans or projects.

9.1.17. 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 Cork Harbour 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

9.1.18. 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.

9.1.19. Having carried out screening for Appropriate Assessment of the project, it was concluded that it may have a significant effect on the Cork Harbour SPA. Consequently, an appropriate assessment was required of the implications of the project on the qualifying features of those sites in light of its conservation objectives.

9.1.20. 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 No. 004030 or any other European site, in view of the site's conservation objectives.

9.1.21. This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable scientific doubt as to the absence of adverse effects. This is consistent with the findings of the submitted NIS.

9.1.22. This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project including proposed mitigation measures.

- Detailed assessment of in combination effects with other plans and projects including historical projects, current proposals and future plans.
- No reasonable scientific doubt as to the absence of adverse effects on the integrity of Cork Harbour SPA.

10.0 **Recommendation**

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

11.0 **Reasons and Considerations**

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

(a) the National Planning Framework issued by the Department of Housing, Planning and Local Government in February 2018, relating to the extractive industry including National Policy Objective 23;

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

(c) the policies set out in the Cork County Development Plan 2014 relating to the extractive industry;

(d) the pattern of development in the area;

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

(f) the planning history of the site;

(g) the submissions made in connection with the planning application and appeal;

Appropriate Assessment: Stage 1:

The Board considered the Natura Impact Statement and all the other relevant submissions and carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites. The Board agreed with and adopted the screening assessment carried out and conclusions reached in the Inspector's report that the Cork Harbour SPA (site code 004030) is the only European Site in respect of which the proposed development has the potential to have a significant effect.

Appropriate Assessment: Stage 2:

The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the aforementioned European Site in view of the site's Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment. In completing the Appropriate Assessment, the Board considered, in particular, the following:

i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,

ii. the mitigation measures which are included as part of the current proposal, and

iii. the Conservation Objectives for the European Sites.

In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Sites, having regard to the site's Conservation Objectives.

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

Environmental Impact Assessment

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

(a) the nature, scale and extent of the proposed development;

(b) the environmental impact assessment report and associated documentation submitted in support of the planning application;

(c) the submissions from the planning authority, prescribed bodies, the appellants and the observers in the course of the application, and

(d) the Inspector's report.

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment.

The Board agreed with the examination, set out in the Inspector's report, of the information contained in the Environmental Impact Assessment Report and associated documentation submitted by the applicant and submissions made in the course of the application.

The Board considered, and agreed with the Inspector's reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment are as follows:

Population and Human Health - impacts arising from emissions of dust, noise and vibration during operation, with potential for nuisance to sensitive residential receptors proximate to the site. Such impacts are proposed to be mitigated by measures to reduce and control the emissions in the first instance and thereafter by the adoption of specific measures, including those forming part of the operation of the development including monitoring proposals.

Biodiversity – impacts arising from extraction activities including blasting on breeding pair of Peregrine Falcon and colony of Sand Martin. Such impacts are proposed to be mitigated by measures to avoid habitat loss, disturbance/displacement, controls in terms of timing and location of blasting and monitoring proposals.

Water – impacts on water levels and quality of the River Brouen arising from continuing dewatering and discharge. Such impacts are proposed to be mitigated by specific measures to control the levels and quality of the discharge including a water management system with all water pumped out of the quarry passing through a water attenuation/settlement system prior to discharge. To avoid bank flooding in the Brouen River where flows exceed Q_{med} the quarry will stop pumping to ensure flood risk is not increased downstream of the site. Surface water monitoring of the discharge waters will continue as per the discharge licence and any possible future amendment. Groundwater monitoring is to continue with data loggers installed in the wells to allow for continuous monitoring.

11.1.1. In conclusion, having regard to the above identified significant effects, I am satisfied that the proposed development would not have any unacceptable direct or indirect impacts on the environment, subject to the implementation of the mitigation measures and any conditions recommended in section 12 of this report.

The Board completed an Environmental Impact Assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures set out in the Environmental Impact Assessment Report, and subject to compliance with the conditions set out below, the effects on the environment of the proposed development, by itself and in combination with other development in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector. The Board is satisfied that this reasoned conclusion is up to date at the time of taking this decision.

Proper Planning and Sustainable Development:

Having regard to nature and extent of the development and to the acceptability of the environmental impacts as set out above, it is considered that, subject to compliance with the conditions set out below the proposed vertical extension of the existing extraction area would be in accordance with the provisions of the current Cork County Development Plan, would not seriously injure the visual or residential amenities of the area, would not be prejudicial to public health and would be acceptable in terms of traffic safety and convenience of road users. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

12.0 **Conditions**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application as amended by the further plans and particulars submitted the 16th day of December 2020, 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 proposed development shall comply with the terms and conditions of planning permission granted under planning reference number PL04.226347 (06/13499) except as may otherwise be required in order to comply with the following conditions.

   Reason: In the interest of clarity.

3. All mitigation and monitoring commitments identified in the Environmental Impact Assessment Report, the Natura Impact Statement and other particulars submitted with the application and as amended in the Further Information submitted on the 16the day of December 2020 shall be implemented in full as part of the proposed development, except as may otherwise be required in order to comply with the following conditions.

   Reason: In the interest of clarity and protection of the environment during the construction and operational phases of the proposed development.

4. This permission authorises the quarrying of material from the site until the 23rd day of July, 2033. The site shall be fully restored within two years of this date unless a fresh grant of planning permission has been made for continued operation.

Reason: To limit the impact of the development on the amenities of the area and to ensure coordination with the overall quarry of which the site forms part (approved under PL04. 226347).

5. A Dust Minimisation Plan shall be submitted for the written agreement of the planning authority within 3 months from the date of this order.

   Reason: In the interest of clarity and protection of amenities of adjoining property.

6. The following shall be carried out within 3 months from the date of this order:

   (a) The access closure on L6233 as delineated on drawing number 18100a-01 in Appendix 1a received by the planning authority on the 16th day of December, 2020.

   (b) Recommendations of the Road Safety Audit received by the planning authority on the 16th day of December, 2020.

   (c) Installation of the additional wheel washes detailed in the documentation received by the planning authority on the 16th day of December, 2020.

   Reason: In the interest of road safety.

7. Heavy Goods Vehicles (HGVs) associated with the quarry operation shall not be allowed to use Local Road L6233 except that to cross the public road at the eastern crossing point as delineated on the plans and particulars received by the planning authority on the 16th day of December, 2020.

   Reason: In the interest of traffic safety.

8. Within three months of the date of this order the timescale for the construction and planting of the berms along the northern boundaries of the extraction area shall be submitted to the planning authority for written agreement prior to commencement of development.

Reason: In the interest of clarity and visual amenities of the area.

9. The development shall be operated and managed in accordance with a revised Environmental Management System (EMS), which shall be submitted by the developer to, and agreed in writing with, the planning authority within three months of the date of this order. This shall include, inter alia, the following: Proposals for the suppression of on-site noise.

   (a) Proposals for the on-going monitoring of sound emissions at dwellings in the vicinity.

   (b) Proposals for the suppression of dust on site.

   (c) Proposals for the bunding of fuel and lubrication storage areas and details of emergency action in the event of accidental spillage.

   (d) management of all landscaping

   (e) Monitoring of ground and surface water quality, levels and discharges, noise and air emissions.

   (f) Details of site manager, contact numbers (including out of hours) and public information signs at the entrance to the facility.

Reason: In order to safeguard local amenities.

10. Within three months of this order details of a programme of monitoring of the vibration arising from the blasting at Castlemore Tower House (RMP CO084-009 01), Bawn (RMP CO084-009 03) and Limekiln (CO084-009-02)shall be submitted to the planning authority for written agreement.

Reason: In the interest of protection of cultural heritage.

11. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

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

12. The developer shall pay to the planning authority a financial contribution as a special contribution under section 48(2) (c) of the Planning and Development Act 2000, as amended, in respect of the proposed resurfacing works on regional road R585 between the N22 and Crookstown village. The amount of the contribution 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 for determination. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office.

    Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning

authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

Pauline Fitzpatrick
Senior Planning Inspector

August, 2021