



An
Bord
Pleanála

Inspector's Report ABP-310961-21

Development	To complete extraction of material granted within existing quarry envelope as per previously approved planning (ref. no. 05/1801).
Location	Ardkill More, Carrickaboy, Cavan, Co. Cavan.
Planning Authority	Cavan County Council
Planning Authority Reg. Ref.	20/222
Applicant(s)	John Nulty Ltd
Type of Application	Permission
Planning Authority Decision	Grant, subject to 21 conditions
Type of Appeal	Third Party -v- Decision
Appellant(s)	Sean Galligan
Observer(s)	An Taisce
Date of Site Inspection	17 th February 2022
Inspector	Hugh D. Morrison

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1.0 Site Location and Description

- 1.1. The site is located 7.3km south of Cavan town centre and 4.5km south of the junction between the N55 and the L2517. This site forms part of Nulty's Quarry, which is situated on the western side of Ardkill More Hill, the most south-westerly of a line of small hills, which run to the north-east as far as Slieve Glah and Derryglen. These hills have a pronounced presence within the surrounding lower-level undulating countryside. The site is accessed off the eastern side of the said local road.
- 1.2. The site lies in an elevated position to the east of the applicant's original quarry, which has an area of 5.84 hectares. This site, which was previously quarried, extends over an area of 3.37 hectares. It is connected to the original quarry by a haul road, which runs to the north and then to the east of this quarry. This road rises from the vicinity of a cluster of buildings and structures, which comprise an office, toilets, a storage shed, a weighbridge, and a series of lagoons. The applicant also owns an elongated area of land, which adjoins the site to the south-east and which runs to the south-west/north-east over an area of 10.27 hectares of which 1.04 hectares was the subject of a recent application for extraction.
- 1.3. The quarry yields a stone known as greywacke, which is used as an aggregate in the construction industry. Opposite the quarry entrance, there is a commercial building. Elsewhere, the surrounding agricultural land is punctuated by one-off dwelling houses, which are sited to the north and to the south along the L2517 and along other local roads in the wider area.

2.0 Proposed Development

- 2.1. The proposal is essentially to resume quarrying on the site to greater depths in the expectation that 500,000 tonnes of stone can be excavated over a 10-year period, i.e., 50,000 tonnes per annum.
- 2.2. Under the proposal, four phases are envisaged as follows:
 - Phase 1: Excavate from the existing level of 209/210m AOD to 206m AOD,
 - Phase 2: Continue excavating to 190m AOD,

- Phase 3: Continue excavating to 175m AOD, and
- Phase 4: Site restoration.

2.3. The applicant has submitted a site restoration plan for the wider quarry. The first phase under this plan would be in the south-western corner of the existing quarry and the second phase would be along its southern boundary. The third phase would coincide with Phase 4 for the current application site.

3.0 Planning Authority Decision

3.1. Decision

Following receipt of further information, permission was granted, subject to 21 conditions, which are summarised below:

1. Standard first condition.
2. Section 48 development contribution.
3. Sum to secure restoration under a default scenario.
4. (i) 10-year permission for operational development and further 2 years for restoration, and
(ii) Timetable for restoration under Phases 1 & 2.
5. Maximum extraction depth 175m AOD.
6. Mitigation and monitoring measures in EIAR to be carried out.
7. Archaeological monitoring of top-soil stripping.
8. Environmental Management System to be agreed with respect to:
 - Suppression of noise,
 - Sound monitoring at nearby dwellings,
 - Suppression of dust,
 - Safety measures for land above the extraction area,
 - Management of landscaping,
 - Monitoring of ground and surface water quality and quantity, and

- Public contact details signage.
9. Noise parameters for nearby noise sensitive locations.
 10. Noise and vibration parameters for blasting.
 11. Dust parameters and monthly survey and monitoring programme and annual review.
 12. Site security.
 13. Operating hours.
 14. (i) Monitoring/recording of ground water, surface water, noise, ground vibration, and dust deposits: Annual submission of results.
 - (ii) Annual Environmental Audit to include the following:
 - Tonnage of material leaving the quarry,
 - Topographical survey of excavated and restored areas,
 - Monthly record of ground water levels, and
 - Record of complaints and actions taken.
 - (iii) Quarterly records of ground water, surface water, noise, and dust deposits. Planning Authority to be advised of exceedances within 2 days and of water incidences immediately.
- Any written requirements on foot of (i), (ii) & (iii) to be complied with.
15. Top-soil and overburden to be stored separately and used in restoration.
 16. Departing HGVs to use wheel-wash.
 17. (i) Daily checks for uncontrolled water loss or contaminated discharges to water.
 - (ii) Settlement ponds to have impermeable liner.
 - (iii) Section 4 discharge licence requirements to be met.
 - (iv) Direct run-off from haul road to watercourses to be prevented.
 - (v) Contingencies against water pollution.
 - (vi) Records of total daily water flows into settlement ponds to be kept.

18. Quarry activities delineated, and relevant parameters cited.
19. Infrastructure and protocols to mitigate the risk of hydrocarbon spillages.
20. Site rehabilitation scheme to commence on cessation of operations or closure of quarry: Scheme's composition specified.
21. (i) Visibility splays for site entrance.
(ii) Regrading and surfacing of site entrance.
(iii) On foot of (i) & (ii), Stage 3 RSA.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The following further information was requested:

- Details required with respect to:
 - Extraction undertaken pursuant to permitted application 05/1801,
 - Extraction now proposed,
 - Expected environmental impacts, and
 - Envisaged time period of works and phasing plan.
- If 19/227 approved by the Board, then the timetable for works that would pertain.
- Operating hours of the proposed extraction area.
- On-going monitoring pursuant to permitted application 05/1801.
- Details of restoration, landscaping, and after-care of the proposed extraction area.
- Archaeological Assessment, including previous Archaeological Assessment carried out pursuant to Condition No. 24 attached to the permission granted to application 05/1801.
- Stage 1 Screening for Appropriate Assessment and Stage 2 Natura Impact Study, as appropriate.

3.2.2. Other Technical Reports

- Department of Culture, Heritage and the Gaeltacht: Advises that there are two Recorded Monuments near to the site, i.e. CV031-004, a linear earthwork known as “The Black Pig’s Dike”, and CV031-060, an enclosure. As sub-surface archaeological remains may exist, a thorough Archaeological Assessment of the entire development site should be undertaken and submitted to the Department’s National Monuments Service.
- Cavan County Council: Environment: Following receipt of further information, no objection, subject to conditions.

4.0 Planning History

- **7325:** Quarry production of stone, asphalt tarmacadam plant, storage and office accommodation, car park, and machinery repair workshop: Permitted in 1977.
- **97/166:** Erect offices, material testing laboratory, canteen, toilets, store and machinery workshop, and provision of weigh-bridge, wheel wash facility and 2 mobile crushers: Permitted.
- **QY7:** Quarry registration applied for on 11th February 2005: Subject of appeal **PL 02.QC.2013:** Board confirmed registration on 9th October 2007 and directed that a modified condition be attached as to the extent of the quarry to be conditioned. Otherwise, the Planning Authority’s conditions were confirmed with respect to landscaping and restoration, contour survey, discharge of water, settlement ponds, noise, storage of overburden material, installation of wheel wash, monitoring programme for noise, vibration and dust emissions, installation of effluent treatment plant, bunding of fuel tanks, areas for storage of fuel and storage details of fuel storage tanks, and details of rate of extraction and benching of quarry.
- **05/1801:** To extend the quarry eastwards over an area of 3.37 hectares within the existing site and the provision of a new entrance: Permitted at appeal

PL02.219928 on 27th April 2007 for a 12-year period plus an extra year for restoration.

- **11/62**: To retain and complete partially constructed structure, which will be used as a conveyor system to transfer crushed materials from the upper levels to the quarry floor, and all ancillary works: Permitted.
- **19/227**: To extend existing quarry to include an additional extraction area of 1.04 hectares to the south-east of the existing site. This extension would be to a maximum depth of 40m below AOD and it would have an excavation rate of c. 50,000 tonnes per annum: Planning Authority's permission overturned at appeal **ABP-306803-20** by the Board on 19th October 2020: The reasons for refusal were that the applicant had failed to demonstrate that arrangements for the management and discharge of water are adequate to cater for the proposal without giving rise to environmental pollution, and, given the proximity of features of archaeological interest, the proposal would be premature in the absence of a comprehensive archaeological survey and assessment.
- **20/222**: The current application was lodged on 17th June 2020.

5.0 Policy and Context

5.1. National planning policies, objectives, and advice

National Planning Framework (NPF)

Under the heading "Aggregates and Minerals" the following commentary is set out:

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

Furthermore, Objective 23 states the following:

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.

The Quarry and Ancillary Activities Guidelines advise on planning and environmental aspects of quarrying.

5.2. Development Plan

Under Map 7 of the Cavan County Development Plan 2014 – 2020 (CDP), the site is shown as lying within the Drumlin Belt and Uplands of East Cavan, which extends from Shercock in the north-east to Kilcogy in the south-west of the County.

The CDP addresses extractive industries as follows:

An Extractive Industry is any process that involves the extraction of raw materials from the earth to be used by consumers and includes the removal of metals, minerals and aggregates. These materials are a finite resource so while mineral extraction/quarrying is an important wealth and job creating industry this plan seeks to ensure that high amenity landscapes are protected and environmental disturbance is minimised in all parts of the County. Mineral extraction/quarrying proposals will, in addition to sustainable development principles, also be assessed on the basis of the scale of the development and the capacity of the road network in the area to accommodate associated traffic. The Planning Authority will require the payment of a contribution towards the cost of infrastructure and reinstatement works, where deemed necessary. The Planning Authority recognises the value of quarries as a national resource and as a valuable element of the rural economy and will, as far as is practicable, protect existing or potential quarries from incompatible developments locating in the immediate area that may threaten the proper realisation of this resource.

The particular locational requirements of mines and quarries are recognised, and the production of minerals is generally an acceptable form of development in rural areas and can be considered to be part of the rural economy. The nature of mining and quarrying necessitates a rigorous assessment of all new proposals and, where the proposals are acceptable, the application of conditions which would minimise environmental disturbance. New extractive industries will therefore be subject to strict design and locational

requirements in the interests of environmental protection and visual amenity. Conditions for the satisfactory rehabilitation of such sites will be imposed in order to avoid permanent damage to visual amenities in the rural landscape.

The Council concur with the principles of the Irish Concrete Federations' voluntary 'Code of Environmental Conduct' which was produced for their members in 1996 and was endorsed by the DECLG. The Council are also aware of the potential risk that extractive industries pose to important groundwater and aquifer sources in the County. The Council will actively encourage the sustainable extraction of locally sourced aggregates and/or minerals, to contribute to the local economy and to provide the essential raw materials, necessary for the construction industry.

In relation to National Roads, the policy of the planning authority is to avoid the creation of any additional access point from new development or the generation of increased traffic from existing accesses to National roads to which speed limits greater than 60kmh apply.

The following policies and objectives apply to extractive industries:

EDP6 To ensure the protection of our built and natural heritage including Protected Structures, National Monuments and other areas or sites of archaeological importance, the NATURA 2000 network, NHA's and pNHA's, the Global Geopark and any other sites and areas which are of biodiversity or amenity value.

EDP7 To ensure the protection of landscapes with important amenity and tourist value including the preservation of views and prospects and the amenities of places and features of natural beauty or interest.

EDP8 To conserve and protect areas adjacent to existing quarries with high mineral/extractive potential, for use as building/road making material for the future.

EDP9 To require an EIS, as part of a planning application, where the thresholds outlined in Schedule 5 of the 'Planning and Development Regulations 2000', as amended are met. The Planning Authority will also exercise its powers under Section 103 (1) to require an EIS for sub-threshold development where it is considered that the development would be likely to have significant effects on the environment or heritage. Where a development proposal is likely to have a significant effect on a European site, an Appropriate Assessment will be required. Appropriate mitigation measures and details of reinstatement after use must be included.

To require that development is phased and that each phase is rehabilitated to the highest possible standards before the next phase is commenced. The applicant has to submit a detailed restoration programme on the manner and timing of restoration to ensure that the

site is left in a satisfactory state for such beneficial amenity and recreation use as is agreed with the Council, with an input from an ecologist. This shall be carried out within 12 months of cessation. Old disused quarries, sand and gravel pits should be restored and landscaped. All buildings, plant, roads and paved areas should be removed unless otherwise agreed. In assessing an application for development, the record of past restoration by the developer will be taken into account. A detailed and progressive restoration/rehabilitation plan for after/reuse of the site, phased where possible and with input from an ecologist shall be submitted with proposals.

EPD10 *It is the policy of this Council to strictly apply the ‘precautionary principle’ to any oil/gas exploration and extraction projects/operations proposed within the County.*

EDO21 *Ensure that all proposed and existing quarry and extractive proposals have regard to ‘Quarry and Ancillary Facilities, Guidelines for Planning Authorities, 2004’.*

EDO22 *Carefully examine applications for extractive industries in areas designated as or adjacent to c/SACs, c/SPAs, p/NHAs, Water Framework Directive, Protected Areas and other designations. In this regard the following shall be taken into regard the requirements of the Habitats and EIA Directives and the EU guidance in relation to “Undertaking Non-Energy Extractive Activities in Accordance with Natura 2000 Requirements.”*

EDO23 *Extractive industry proposals shall not adversely impact upon the water environment, including surface water and groundwater quality and quantity, river corridors and associated wetlands.*

EDO24 *Recognise the need to protect valuable un-worked deposits for future extractive use, where they do not pose a significant threat upon visual amenities. Proposed developments within the vicinity of extractive industries will have to demonstrate how their proposal would not significantly impact upon the natural resource or the ability to extract it.*

EDO25 *Applications for new developments shall identify any existing rights of way and established walking routes which may be impacted or are adjacent to the development site. These shall be kept free from development and maintained as a Right of Way/Walking Route.*

EDO26 *Applications for new or extensions to existing quarries and mines shall submit a detailed landscape and visual assessment which shall identify the area of visual influence and include details of impacts on amenity areas designated in this plan.*

5.3. Natural Heritage Designations

- Lough Oughter and associated loughs SAC (000007)

- Lough Oughter and associated loughs SPA (004049)

5.4. EIA Screening

Under Item 2(b) of Part 2 of Schedule 10 to Article 93 of the Planning and Development Regulations, 2001 – 2021, EIA is required where the extraction of stone, gravel, sand or clay would be greater than 5 hectares.

Under Item 13(a), EIA is required where:

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

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

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

- 25 per cent, or

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

The applicant states that the area of its existing quarry is 5.84 hectares and so in excess of the above cited 5-hectare threshold. Under the proposal, the application site would be excavated as an extension to this quarry. It has an area of 3.37 hectares and so it would exceed the above cited 25% and 50% thresholds – hence the need for EIA.

6.0 The Appeal

6.1. Grounds of Appeal

Sean Galligan of Corlislea, Ballinagh, Co. Cavan

(a) Damage to water supply sources

- Serious damage and contamination of the bedrock aquifer has occurred in the last 2 years since blasting extended further up Ardkill More Hill. Consequently, silt has entered one domestic well in Largan Townland and another, in Ardkill Beg (Creamfield) Townland, has been destroyed.

- The EIAR incorrectly identifies lines on the GSI map as bedrock fault lines when they are bedrock aquifer faults, which lead to the numerous springs found in Ardkill More Hill. An aquifer fault junction lies underneath the summit of Ardkill More Hill and so its presence may explain why recent blasting has led to the above cited contamination.
- While the GSI categorises the aquifer as a Poor Bedrock Aquifer, locally it has produced many high yield springs, including the source of the Ardkill More Stream. The EIAR incorrectly states that this Stream is 700m from the site: It is 465.75m away.
- The GSI shows Ardkill More Hill as being at extreme vulnerability to ground water contamination. Evidence exists that such contamination is occurring and the damage from blasting to the bedrock aquifer faults cannot be rectified.
- Existing and proposed settlement ponds are/would be sited in the existing quarry floor close to the ground water table.
- With the destruction of water feeds in Ardkill More Hill, there is a risk that the level of the ground water table will fall. The bungalow opposite the quarry uses a bored ground well. Under Policy NHEP 26 of the CDP, the Planning Authority undertakes to protect water supplies, an undertaking that is gaining importance with climate change.

(b) Landscape impact

- Quarrying to date has already damaged the local landscape as is evident from view points to the south through to the west of Ardkill More Hill. The prominence of this Hill is such that the exposed quarry cliffs cannot be easily screened, e.g., trees and hedging would have little if any effect. Under the proposal, such exposure would increase with excavation to depths of 175m AOD.
- The EIAR's view points fail to show the true landscape impact, e.g. two are from the northern side of Ardkill More Hill from where the quarry is not visible. View points from over a wider area are needed to show this impact.
- The EIAR states that 480,000 tonnes have been extracted to date and that, under the proposal, a further 500,000 tonnes would be extracted. This figure

is questioned as, under 19/227, reserves were described as becoming exhausted and so there was no alternative to the extension then proposed.

- The site has been the subject of unauthorised top-soil stripping and blasting over the last 2 years. The Planning Authority's Enforcement has been advised accordingly without any satisfactory outcomes.
- Ardkill More Hill has unfulfilled amenity potential for walking and archaeology, e.g., the summit enclosure and the Black Pig's Race. Quarrying militates against the realisation of this potential and yet Policies NHFO 22 & 24 of the CDP undertake to protect and enhance the County's landscape and features within it of "special environmental, geological and geomorphological, archaeological, historic or cultural interest".

(c) Alternatives

- Under 19/227 to extend the existing quarry to the south-east, the EIAR stated that there was no alternative to this extension and yet the current application is for further excavation of the existing quarry.
- The current EIAR states that there is no alternative to the further excavation of the existing quarry. The appellant disagrees. He identifies the following two alternatives:
 - The applicant owns another quarry at Castletara, which has considerable reserves. While he states that this quarry contains a different type of stone to that at Ardkill More Hill, the appellant insists that this is not so and that it, too, contains greywacke. The GSI confirms this commonality.
 - An existing extensive quarry at Drumuck, Stradone is currently on the market. This quarry has an extant permission for a 4-hectare extension. It is set within landscape that is more suited to absorbing quarrying than Ardkill More Hill and it is conveniently placed for the Castletara Quarry and the N3.

(d) Compliance issues

The applicant has failed to comply with previous planning conditions, and he has undertaken unauthorised works. Instances of the same are summarised below:

- The EIAR does not indicate that any qualified archaeologist has been present during the removal of top-soil from the site, in contravention of Condition No. 24 attached to the permission granted to 05/1801 at appeal PL02.219928. This is a serious contravention, given the proximity of two National Monuments, i.e., the summit enclosure and the Black Pig's Race. (The OSI pre-Famine map also shows the presence of a building that was present on Ardkill More Hill). It has been perpetuated by the continued removal of top-soil over recent months.
- Condition No. 3 attached to the above cited permission requires restoration and landscaping works, none of which has materialised.
- Condition No. 11 requires that the quarry operator takes remedial action to restore/replace water supplies adversely affected by quarry operations. As delineated under (a) above, such adverse effects have arisen and yet no remedial action has been forthcoming.
- Dwellings to the north-east of the quarry in the Ardkill Beg Townland have experienced severe tremors during blasting since it resumed within the current application site.
- Satellite imagery indicates that quarry works have breached the 246m AOD contour.

6.2. Applicant Response

The applicant begins by summarising the planning history of his quarry at Ardkill More Hill. He highlights that his quarry is the subject of Section 261 registration (QY7 and PL02.QC. 2013) and a discharge licence. The existing quarry is thus authorised, and it has operated in accordance with conditions attached to planning permissions and without issue from neighbouring residents.

The applicant proceeds to respond to the appellant's grounds of appeal as set out below.

(a) Damage to water supply sources

- The applicant insists that no damage has occurred to the bedrock aquifer or domestic wells in the locality of his quarry. To this end, he has surveyed

residents within 800m of the quarry, 9 out of 11 of which testify in writing that neither their wells nor the dwellings have been affected in any way by quarrying activities. Attention is drawn to the testimony of the resident of a bungalow opposite the quarry (Location 6 in Figure 2 of the applicant's response). He uses a bored well and he has no problem with water. Attention is also drawn to the resident at Creamfield whose water supply is from a spring rather than a bored well. "Local knowledge" suggests that interruption to water supplied by this spring was caused by the construction of a forestry road nearby.

- The applicant draws attention to the fact that surface water from the quarry does not enter the Ardkill Stream, which lies 600m to the south-east, but the Ballinagh River, which lies 1.4km to the north-west. The quarry is the subject of a discharge licence (SS/W004/18), and it operates to the standards set out therein. (Table 2 of the applicant's response shows such compliance for 2020 and the first quarter of 2021).
- The applicant draws attention to the Geotechnical Reports for the quarry and the technical data concerning the bedrock and fault lines contained therein. He also draws attention to the EIAR's comprehensive assessment of hydrological and hydrogeological impacts and associated mitigation measures.
- The applicant concludes that the appellant's concerns over damage to water supplies is not accompanied by any evidence and so they should be set aside.
- The applicant highlights the following aspects of the proposed settlement pond, which is being provided on a precautionary basis following concerns raised in the refusal of the last application (20/222 and ABP-306803-20):
 - The pond would extend over an area of 2860 sqm to a depth of 0.65m. It would be sited at 148.82m OD, whereas the highest recorded water table level (on 15th January 2021) is 146.55m OD, i.e. a freeboard of 1.62m beneath the bottom of this pond.

- Under normal conditions, the pond would provide an additional 600 hours plus of settlement, and under extreme conditions (daily discharge of 4000 cubic metres) an additional 16 hours plus.

(b) Landscape impact

- The applicant draws attention to the submitted plans and cross-sections of the proposal, which clarify its extent, and to a summary of the visual and landscape impacts of the proposal prepared by his architect, which clarifies its depth, i.e., previous extraction under 05/1801 did not exceed the 250m AOD contour and the proposed extraction would not exceed the 221m AOD contour. Consequently, very limited additional visual impact would arise from public vantage points along the local road. The case planner's conclusion is cited to the effect that the EIAR assesses visual and landscape impacts satisfactorily and the proposal would be acceptable in its visual impacts.
- The appellant's suggested amenity use of Ardkill More Hill is not an aspiration that is shared by the applicant, who, in the light of the importance of aggregates to the economic development of the country, seeks permission to continue to quarry.

(c) Alternatives

- Given the established nature and planning history of the quarry, the most economic and sustainable way forward is to continue quarrying at Ardkill More Hill.
- The alternative quarries cited by the appellant would not yield either the type or quantity of stone to ensure viability.
- Accordingly, no equivalent alternatives to the site exist.

(d) Compliance issues

The applicant appears to have addressed these issues, only the text in his submission is indecipherable.

6.3. Planning Authority Response

(a) Damage to water supply resources

- Attention is drawn to the case planner's report in which hydrology was discussed in the light of the EIAR's assessment of impact upon the same and found to be acceptable.
- Neither the Environment nor the Planning Sections of Cavan County Council have any records of private well contamination arising from quarrying at Ardkill More Hill.

(b) Landscape impact

- Attention is drawn to the case planner's report in which landscape was discussed in the light of the EIAR's assessment of impact upon the same and found to be acceptable.

(c) Alternatives

- The quarry at Ardkill More Hill has been the subject of planning permissions since 1977 and the current application is effectively to continue extraction that was the subject of one of these permissions. Such continuation would accord with national and regional planning policies for the extractive industry.

(d) Compliance issues

- Noted.

6.4. Observations

An Taisce

- The observer has engaged with the Planning Authority and the applicant on the subject quarry over many years. Attention is drawn to the provisions of Section 35 of the Planning and Development Act, 2000 – 2021.
- Attention is drawn to the appellant's concerns over the potential impact of the proposal upon ground water: Contamination has occurred over the past 2 years and Ardkill More Hill is classified as being extremely vulnerable to ground water contamination.

The impact of the proposal on water quality needs to be assessed in the light of the EU Water Framework Directive. Streams within the vicinity of the site lie within the Erne Catchment, which is of moderate water quality status. Under

the River Basin Management Plan 2018 – 2021, this Catchment is a Prioritised Area for Action with a view to achieving good water quality status. Local ground water is currently of good water quality status, which must be maintained.

- The proposal would significantly impact upon the local landscape and its visual impact has not been sufficiently assessed in the EIAR potential, i.e., a wider selection of view points is needed.
- The appellant's critique of the applicant's discussion of alternatives has not been adequately assessed by the Planning Authority. The Board should ensure that it does so in line with the EU's EIA Directive.

6.5. Further Responses

None

7.0 Planning Assessment

7.1. The proposal needs to be the subject of Environmental Impact Assessment (EIA) and Stage 1 Screening for Appropriate Assessment (AA). I will undertake this Assessments and this Screening following my planning assessment.

7.2. I have reviewed the proposal in the light of the National Planning Framework (NPF), the Quarry and Ancillary Activities Guidelines, the Cavan County Development Plan 2014 – 2020 (CDP), relevant planning history, the submissions of the parties and the observer, and my own site visit. Accordingly, I consider that this application/appeal should be assessed for planning purposes under the following headings:

- (i) Land use, planning policies, and planning history, and
- (ii) Compliance issues.

Other subjects will be addressed under the EIA.

(i) Land use, planning policies, and planning history

7.3. The NPF and the CDP recognise quarries as a national resource that are of key importance in their provision of aggregates to the construction sector and in their provision of employment within the rural economy. They also recognise that

aggregates are a finite resource, which needs to be safeguarded. The Quarries and Ancillary Activities Guidelines recognise, too, the land use reality that “aggregates can only be worked where they occur” and the economic reality that in order to limit transportation costs quarries need to be excavated throughout the country.

- 7.4. The planning history of the site dates from 1977, when application 7325 for quarry production of stone, asphalt tarmacadam plant, storage and office accommodation, car park, and machinery repair workshop was permitted. The applicant’s quarry, which is known as Nulty’s Quarry, was the subject of registration (QY7) under Section 261 of the Planning and Development Act 2000, as amended (hereafter referred to as the Act). Registration was confirmed by the Board on 9th October 2007 (PL 02.QC. 2013) for the site, which included the quarry that was being excavated under 7325 and adjoining land to the south-east comprised in the current application site. The Planning Authority’s revised conditioning of the 7325 site was confirmed, subject to an amendment which clarified that it related to only this site, i.e., not the adjoining land to the south-east.
- 7.5. The land to the south-east was the subject of application 05/1801 for an extension (3.37 hectares) to the working quarry (5.84 hectares). This application was granted at appeal (PL02.219928) on 27th April 2007 for a 12-year period. The applicant expected that an annual excavation rate of c. 150,000 tonnes would ensue over a period of 20 – 25 years. In the event, this portion of the quarry was only partially excavated before the 12-year period elapsed and so the current application is to complete the excavation that was previously permitted. Under this application, 50,000 tonnes per annum would be excavated over a 10-year period, i.e., a total of 500,000 tonnes. At present, the original quarry continues to be excavated and its floor is the working surface for storing and grading the extracted greywacke stone.
- 7.6. Prior to the current application, the applicant applied to extend its quarry further to the south-east over lands that were not included within the QY7 Section 261 registration. This application 19/227 would have entailed an additional extraction area of 1.04 hectares, which would have been excavated to a maximum depth of 40m below AOD at a rate of c. 50,000 tonnes per annum. The Planning Authority’s permission was appealed (ABP-306803-20) and the Board refused the application on 19th October 2020. The current application was lodged in advance of this decision

on 17th June 2020. It represents a return by the applicant to the means of quarry expansion that was previously permitted under 05/1801 and PL02.219928.

- 7.7. I conclude that, in the light of land use considerations, relevant national and local planning policies, and the planning history of Nulty's Quarry, including the current application site, there is no in principle objection on planning grounds to the expansion of the existing quarry as proposed.

(ii) Compliance issues

- 7.8. The appellant sets out a number of issues, which it considers have to do with the failure of the applicant to comply with conditions attached to the permission granted to 05/1801 and PL02.219928. The applicant has responded. Regrettably, the presentation of this response is indecipherable. The Planning Authority notes the appellant's submission in this respect and the Observer draws the Board's attention to the provisions of Section 35 of the Planning and Development Act, 2000 – 2021.
- 7.9. I note that enforcement matters do not come within the remit of the Board. I note, too, that the provisions of Section 35 are for local planning authorities to operate, as appropriate, rather than the Board.
- 7.10. I conclude that the compliance issues raised do not prevent the Board proceeding to assess/determine the application/appeal in the normal manner.

8.0 Environmental Impact Assessment

8.1. Introduction

- 8.1.1. The applicant has submitted an Environmental Impact Assessment Report (EIAR) and a non-technical summary, which were prepared under the EIA Directive (2014/52/EU) and the corresponding provisions in the Planning and Development Act, 2000 – 2021 (hereafter referred to as "The Act"), and the Planning and Regulations, 2001 – 2021 (hereafter referred to as "The Regulations").
- 8.1.2. I have examined the information submitted by the applicant in its EIAR and the submissions made by the Planning Authority, internal and external consultees of the Planning Authority, i.e., the Environment Section and the Department of Culture, Heritage and the Gaeltacht, respectively, and submissions made by the public and

An Taisce. I have summarised them in Sections 3.0 & 6.0 of my report. The main emerging issue from these submissions is the safeguarding of water quality in surface and groundwaters. This issue is addressed under the heading of “Hydrology and hydrogeology” and in the reasoned conclusion and subsequent conditions.

8.1.3. The EIAR contains the information specified under Schedule 6 to Article 94 of the Planning and Development Regulations, 2001 – 2021 (hereafter referred to as the Regulations). It identifies, describes, and assesses the likely effects of the project on the environment, along with accompanying references, and it lists the experts and their qualifications who contributed to the EIAR.

8.1.4. The applicant reports that it encountered no difficulties in preparing its EIAR.

8.1.5. I conclude that the applicant’s EIAR complies with the provisions of Article 94.

8.2. Reasonable alternatives

8.2.1. The applicant states that there is no suitable alternative replacement quarry location available to it in County Cavan.

8.2.2. The applicant refers to the planning history of the site. Under 05/1801 and PL02.219928, it received permission to excavate the current application site to a depth of 175m AOD. This permission was partially implemented before its authorised time period elapsed. Initially, the applicant sought to expand its quarry further to the south-east, under 19/227 and ABP-306803-20. However, as this means of expansion was refused, it has applied to renew the earlier permission.

8.2.3. The applicant summarises the benefits of its current proposal in terms of the elimination of the following scenarios:

- The need for extraction at other quarries to increase by way of compensation for the exhaustion of Nulty’s Quarry,
- The possible need to develop a greenfield site elsewhere, and
- The potential lengthening of haul routes as other quarries are drawn from to a greater extent.

8.2.4. The appellant states that there are alternatives to the applicant’s proposal. He cites them as follows:

- The applicant owns another quarry at Castletara, which has considerable reserves. While he states that this quarry contains a different type of stone to that at Ardkill More Hill, the appellant insists that this is not so and that it, too, contains greywacke. The GSI confirms this commonality.
- An existing extensive quarry at Drumuck, Stradone is currently on the market. This quarry has an extant permission for a 4-hectare extension. It is set within landscape that is more suited to absorbing quarrying than Ardkill More Hill and it is conveniently placed for the Castletara Quarry and the N3.

8.2.5. The applicant states that the alternative quarries would have neither the type nor quantity of stone to ensure viability. It also states that the established nature and planning history of Nulty's Quarry are such that its expansion would represent the most economic and sustainable way forward. The Planning Authority concurs with the applicant's position. The Observer considers that the Planning Authority's assessment of reasonable alternatives is inadequate.

8.2.6. I note the prevalence of the rock known as greywacke in County Cavan. I note, too, that the type of rock excavated at Nulty's Quarry is described as "strong" to "very strong", under definitions cited in BS 5930: 1999, and that considerable reserves of it are available. It is unclear from the appellant's submission if the type and/or quantity of greywacke would be available at the alternative sites identified.

8.2.7. I, also, note the case presented by the applicant for its proposal, i.e., while under a "do-nothing" option quarrying would cease and the site would be restored, this option would risk the scenarios set out above with their attendant environmental impacts. It would also forfeit the opportunity to deepen an existing partially excavated quarry, which received planning permission for a 12-year period in 2007.

8.2.8. In all of the above circumstances, I conclude that the case for reasonable alternatives to the applicant's proposal has not been established by the appellant and that the applicant's case for its proposal is reasonable.

8.3. Assessment of the potential direct and indirect effects of the project

(a) Population and human health

- 8.3.1. The site lies within a rural area in which there are some sensitive receptors within the vicinity of the site, e.g., one-off dwelling houses to the west along the L-2517. Figure 4.2 of the EIAR identifies these sensitive receptors and their distances from the nearest of the site's boundaries. They would potentially be impacted upon by a range of factors discussed elsewhere in my EIA, i.e., hydrology, air quality, noise and vibration, landscape and visual, and traffic and transportation. I will discuss such impacts under each of these factors.
- 8.3.2. The applicant's quarry employs five people on a full-time basis. The project would afford continuity in their employment into the future.
- 8.3.3. Site health and safety is addressed in the EIAR. Under 19/227 and ABP-306803-20, a Geotechnical Assessment was submitted, which made recommendations on remedial measures that were needed to ensure the safety of the faces of the original quarry. The EIAR submitted under this application did not state whether these recommendations had been implemented. The EIAR accompanying the current application states that they have been implemented in the following commentary: "All remedial works have been carried out and mitigation measures put in place following recommendations of the previous geotechnical assessments carried out on the site."
- 8.3.4. Other health and safety measures are cited, i.e., protocols with respect to wearing/using PPE and the accompaniment of visitors to the quarry and measures to secure the site boundaries and the site entrance.
- 8.3.5. I conclude that the project would safeguard employment and it would be capable of being undertaken in a manner consistent with on-site health and safety.

(b) Biodiversity

- 8.3.6. The EIAR addresses biodiversity and in Appendix A it includes a landscaping and restoration plan for the site, i.e., the original quarry and the site of its proposed extension "the project". The applicant's ecologist undertook desk-based studies and site visits in September 2020 of the zone of influence, i.e., the site of the project and the surrounding area over which ecological features may be subject to significant effects. No seasonal constraints arose with the site visits.
- 8.3.7. Natura 2000 sites and pNHAs within 15km of the site are identified. The former are the subject of a Stage 1 Screening Report for Appropriate Assessment and my Appropriate Assessment under Section 9.0 of my report. The latter pNHAs lie at

considerable distances from the site and there is no ecological connectivity between them and this site.

8.3.8. The habitats of the project site are identified as are the habitats within its vicinity.

- Of the former habitats, only the Active Quarry (ED4) would be directly impacted upon by the project. Exposed Siliceous Rock (ER3) at the transition between worked areas of the quarry and the undisturbed areas is of some value to local populations of pollinating insects, such as bees and hoverflies, which inhabit surrounding heath lands. This habitat would be transient in nature and of relatively low value. Other habitats identified are of low ecological value.
- Of the latter habitats, two are of ecological value: Hedgerows (WL1) on the periphery of the site and Drainage Ditch (FW4) in the north-west corner of the original quarry. The first, while of poor quality, still affords nesting, commuting, and foraging opportunities to species and so it is of moderate value. The second affords shelter and sources of food to local populations of nesting birds and, as it forms a hydrological link with a Natura 2000 site, it is of moderate value. Other habitats identified are of low ecological value.

8.3.9. Flora and fauna, i.e., birds observed in the zone of influence, are listed. While the National Biodiversity Data Centre identifies 12 protected mammals within the 10 square kilometre grid that includes the site, none of these were detected in the zone of influence. While no amphibians, reptiles or invertebrates were observed during the site visits, the common frog is likely to be present, along with the common newt and the viviparous lizard.

8.3.10. Under a “do nothing” scenario, once the original quarry has ceased excavation, it and the project site would be restored in accordance with conditions attached to existing permissions. A moderate-to-significant positive change in ecological interest would ensue.

8.3.11. Likely impacts of the project can be summarised as follows:

- Habitat loss and fragmentation: The proposed deepening of the existing quarry on the site would entail effectively the lowering of its floor. Consequently, only the Active Quarry (ED4) habitat would be directly affected.

- Habitat disturbance: Undisturbed heathland surrounding the site could be used to store machinery or stone.
- Disturbance to local wildlife: Noise, traffic, and human activity on the site may disturb local wildlife. However, as the project would be an extension of the original quarry, local wildlife is likely to be habituated to such disturbance.
- Dust disposition: Prolonged exposure to large amounts of dust can reduce plant productivity with associated indirect effects upon habitats and fauna. In practise, such accumulations would be rare, as rain typically washes dust away. No protected plants lie within the zone of influence and so any impact upon such plants elsewhere would be negligible.
- Deterioration in water quality: Such deterioration can arise from hydrocarbon leakages/spillages and vegetation/soil stripping and subsequent improper storage. As the project is for the deepening of an existing quarry, such stripping and storage would not be necessary.

8.3.12. Cumulative impacts would not arise insofar as a nearby quarry at Pullabane is inactive and plans do not exist to reopen/extend this quarry.

8.3.13. The following mitigation measures are proposed:

- All works would be confined to the site of the project and the original quarry, i.e, surrounding heathlands would not be encroached upon.
- If the need for vegetation removal arises, then such removal would occur outside the bird nesting season. Compensatory planting would entail indigenous species.
- Best practice would be followed, e.g., with respect to dust suppression and storage and refuelling protocols.
- The landscaping and restoration plan for the site would be implemented on a phased basis to ensure that once quarrying ceases the site would be conducive to a high level of biodiversity.

8.3.14. The above cited impacts, once mitigated, would have a minor negative to neutral residual impact upon local ecology receptors throughout the operational phase of the project. As mitigation measures would be standard within quarry contexts, the need

to monitor them would not arise. Under the landscaping and restoration plan, a moderate-to-significant positive change in ecological interest would ensue.

8.3.15. I conclude that the applicant's assessment of ecological impacts arising from the project is reasonable and that these impacts would not lead to significant effects upon habitats or species.

(c) Land, soil, water, air and climate

Land, soils, and geology

8.3.16. The project site lies within the Section 261 registered Nulty's Quarry. This site was previously excavated under the partial implementation of 05/1801 and PL02.219928. Its excavation would be completed under the project.

- With respect to land, no additional land beyond the existing quarry site would be needed, i.e., the original quarry and the site of the aforementioned excavations.
- With respect to soil, as the project would entail the deepening of an existing quarry, the need to remove soil would be minimal and so of negligible impact.

8.3.17. The geology of the original quarry and the project site is depicted in Figure 6.2 of the applicant's EIAR. This Figure shows fault lines associated with the Orlock Bridge Fault, also known as the Slieve Glah Shear Zone, running along the western edge of the project site and running through the western portion of this site. It also shows the original quarry as lying within the Red Island Formation (Tract 3) and the project site as lying within the Slieve Glah Formation (Tract 4a). Accompanying Table 6.1, states that the former Formation comprises green to greenish grey greywackes with subordinate grey to black shales, while the latter Formation comprises blue to blueish grey siltstone turbidites, intercalated mudstones, sub-ordinate conglomerates, and green greywackes.

8.3.18. Under a "do-nothing" scenario, the project site would not undergo any further excavation and so no further impacts on its geology would arise.

8.3.19. Likely impacts of the project on geology can be summarised as follows:

- Blasting and excavation of greywacke bedrock:
Magnitude – adverse and large

Term – permanent

Significance – significant

- Slope blasting and excavation to form benches:

Magnitude – adverse and moderate

Term – permanent

Significance – slight

- Potential contamination of exposed bedrock as a result of hydrocarbon leakages/spillages:

Magnitude – adverse and moderate

Term – short to long term

Significance – moderate to significant

8.3.20. Cumulative impacts would not arise insofar as a nearby quarry at Pullabane is inactive and plans do not exist to reopen/extend this quarry.

8.3.21. The following mitigation measures are proposed:

- Blasting and excavation of greywacke bedrock: Blasting *per se* is capable of being mitigated under the measures identified under the noise and vibration factors. The permanent and significant impacts upon geology resulting from excavation should be weighed against the need for greywacke in the local construction industry, where it is widely used as an aggregate. Clearly, such inputs represent positive impacts elsewhere in the County and beyond.
- Slope blasting and excavation to form benches: Blasting *per se* is capable of being mitigated under the measures identified under the noise and vibration factors. The permanent and slight impacts upon geology resulting from the formation of benches should be weighed against the need to ensure a safe working environment for site operatives.
- Potential contamination of exposed bedrock as a result of hydrocarbon leakages/spillages: Best practice would be followed with respect to storage and refuelling protocols.

- 8.3.22. The above cited impacts, insofar as they are capable of being mitigated, would have a long term and negligible impact upon geology.
- 8.3.23. I conclude that the applicant's assessment of geological impacts arising from the project is reasonable. I also conclude that the main geological impact arising from excavation of greywacke would essentially be permanent and significant. This impact is inherent to the activity of quarrying, and it needs to be weighed against the positive impact of the supply of aggregates to the construction industry.

Hydrology and hydrogeology

- 8.3.24. The EIAR addresses hydrology. It begins by addressing a critique of the adequacy of the surface water drainage arrangements that contributed to the refusal of 19/227 and ABP-306803-20 for an extension to the quarry site, which was the subject of QY7, a Section 261 registration. The original quarry and the project site drain to the lowest point in the floor of the original quarry, where there is a lagoon. Under the project, this lagoon would be replaced by a new settlement pond with dimensions of 110m length x 40m breadth x 0.65m depth = 2860 cubic metres. This pond would be installed on a precautionary basis. It would add over 600 hours of settlement time under average conditions and over 16 hours under the maximum daily discharge of 4000 cubic metres allowable under the discharge licence. The applicant predicts that it would result in a reduction in suspended solids from 35 mg/l to 30 mg/l.
- 8.3.25. The proposed new settlement pond would be the applicant's solution to the problem of stormwater flows, which was first identified in Condition 7(i) attached to the permission granted to 05/1801 and PL02.219928. This condition required "Evidence of the capacity of the re-habilitated settlement pond to cater for storm flows." In effect, it referenced the need for stormwater flows to be quantified so that the adequacy or otherwise of the re-habilitated pond could be verified. Condition 7(ii) also required details on the disposal of settled solids from this pond, so that its on-going efficiency could be assured.
- 8.3.26. The provisions of Condition 7 re-emerge as being salient to the proposed new settlement pond. In their absence, the adequacy and efficiency of this pond remain unanswered questions.
- 8.3.27. The lagoon is presently supplemented on-site by three small settlement ponds, which appear to have been formed since the site inspection on 8th July 2020

undertaken by the inspector who reported on ABP-306803-20. It is unclear if these ponds are intended to be in aggregate the proposed new settlement pond cited above. Insofar as the submitted plans consistently state that the new settlement pond will be formed following the decision on the current project, I have not assumed that this would be the case.

- 8.3.28. The lagoon discharges via a pipe under the on-site haul road to further settlement ponds from which there is a discharge point into a wet ditch adjacent to the north-west corner of the site. This ditch in turn discharges to the Ballinagh River, which is a tributary of the River Erne. The former River was monitored between 1971 and 1989, when it consistently had a good water quality status. Its current status is unassigned. The latter River presently has a moderate water quality status, and An Taisce advises that it lies within a Prioritised Area for Action with a view to achieving good water quality status. The applicant reports that the winter flow of discharge from the site into the ditch observed during site visits in November 2020 and January 2021 was minimal.
- 8.3.29. In Table 7.3 the applicant sets out the results of surface water tests conducted in December 2020 on samples taken from the primary pond outfall and downgradient of the site boundary. These results show that, with the exception of Arsenic, the samples were within all the relevant parameters cited by the Surface Water Regulations, 2009 – 2015. Table 7.1 of the EIAR submitted under 19/227 and ABP-306803-20 showed similar results from samples gathered on 17th January 2018.
- 8.3.30. The OPW flood maps indicate that the original quarry and the project site are not the subject of any identified flood risk.
- 8.3.31. The EIAR also addresses hydrogeology. GSI mapping indicates that the aquifer underneath the original quarry and the project site consists of bedrock which is generally unproductive except for local zones (PI). Within this type of aquifer, groundwater movement tends to be restricted to the uppermost weathered bedrock zone from where it may discharge to streams, springs, and seeps. Due to the presence of rock at the surface or underneath moderately permeable sub-soils at depths of between 2.5 and 4m, the vulnerability of the acquirer in question is extreme. Aquifer recharge rates are low with an estimated volume of 1729 cubic metres per annum for the whole site.

- 8.3.32. The applicant abstracts water from an on-site well for use in wheel-washing and dust suppression. Potable water is drawn from a group water scheme. The view is expressed that this scheme supplies households in the area surrounding the site, although at least some of these households are supplied by private wells, as exchanges between the appellant and the applicant make clear and as the applicant acknowledges in Table 7.7 of its EIAR. The appellant alleges that unauthorised blasting over the last 2 years has adversely affected two wells. The applicant has responded by surveying 11 local households, 9 of which testify in writing that their wells have not been affected in any way by quarrying activities. These 9 households include the nearest one to the quarry. The applicant also brings forward an alternative explanation for the damage suffered by one of the wells that the appellant cites. The Planning Authority advises that it has no record of private well contamination arising from quarrying at Ardkill More Hill.
- 8.3.33. The appellant challenges the applicant's reading of the GSI maps, which indicate that bedrock fault lines occur in Ardmore Kill. He considers that these fault lines should be read as aquifer faults, too. He links blasting and these fault lines to the above cited contamination of wells. While the applicant has not addressed the possible link between blasting and groundwater quality, the recorded groundwater levels within the well in the original quarry are at least 26.45m below the proposed level of the fully excavated project site at 175 AOD, and so *prima facie* a generous freeboard exists.
- 8.3.34. Table 7.5 of the EIAR sets out the groundwater chemistry of samples taken from the applicant's well on 17th January 2018, 16th January 2019, 6th January 2020, and 11th January 2021. (The equivalent Table 7.1 in the EIAR, which accompanied 19/227 and ABP-306803-20, only covered the first of these dates). Parameters set by the Groundwater Regulations 2010 – 2016 would be met, except for coliforms where zero is cited as the parameter. Nevertheless, coliform levels are considered to be low and consistent with the satisfactory operation of the applicant's on-site septic tank and percolation area.
- 8.3.35. The groundwater level recorded in the well on 15th January 2021 was 146.55m OD, whereas on 17th January 2018 it was 148.55m AOD (cf. Paragraph 7.79 of Chapter 7 of the earlier EIAR). The well is in the vicinity of where the new settlement pond would be sited. A spot height on drawing no. PL 17-169-02 adjacent to this siting

displays a level of 149.06m AOD. This pond would have a depth of 0.65m and so if the more recent figure is used, a freeboard of 2.51m exists. However, if the earlier figure is used, a freeboard of 0.51m exists, i.e., it would be inadequate to avert contact between the water in the new settlement pond and groundwater. The applicant has not accounted for this significant difference in groundwater levels. However, Table 9.4 of the EIAR's climate chapter records that the rainfall at the nearest weather station to the site in Ballyhaise was particularly high for January 2018, at 171.3mm, i.e., in 2016 and 2017, it was 106.7mm and 32.8mm, respectively. Higher ground water levels may become more prevalent as a result of severe weather events arising from climate change in the future.

- 8.3.36. The volume and depth of the existing lagoon and three accompanying settlement ponds on-site has not been stated. The volume of the existing settlement ponds on the northern side of the on-site haul road is stated as being 64 cubic metres. Their depths are not stated. The applicant has observed that only a minimal flow of surface water discharges from these ponds to the adjacent ditch, which prompts the concern that contact may be occurring between some or all of these facilities and groundwater.
- 8.3.37. Advice from the Planning Authority's Environment consultee prompted it to condition the use of an impermeable liner in each of the settlement ponds (cf. Condition 17(ii) attached to the Planning Authority's permission). While I recognise that the use of these liners would potentially ensure that surface water and groundwater remain separate, I am concerned that their use should be part of a comprehensive design of and management regime for the settlement pond, which would consider other factors, e.g., the possible displacement of groundwater, as a result of the pond's presence, and the periodic disposal of sediment from the pond.
- 8.3.38. While I acknowledge that the above cited existing facilities presently serve the applicant's quarry, under the project, a major expansion in excavation is proposed and this needs to be undertaken in accordance with contemporary standards. Accordingly, given the key objective of the EU Water Framework Directive to protect and improve water quality, the applicant has not demonstrated that the proposed means of handling the surface water run-off from the original quarry and the project site would be capable of consistently fulfilling this key objective.

- 8.3.39. Apart from the above cited considerations, Table 7.11 of the EIAR sets out the potential impacts of the project upon surface and groundwaters. The most serious of these impacts would be upon water quality resulting from leakages/spillages of hydrocarbons. The significance of this potential impact is deemed to be “moderate”. Likewise, an increased incidence of suspended solids is cited as having a similar impact, although its significance is deemed to be “slight”. The former impact would be mitigated by the adoption of best practice with respect to storage and refuelling protocols and the latter would be mitigated by the increased volume afforded by the new settlement pond. No residual impacts are identified.
- 8.3.40. In the light of my discussion of (a) the absence of any quantification of stormwater flows needed to verify the adequacy or otherwise of the proposed new settlement pond and (b) the possible contact between both the proposed new settlement pond and the existing settlement ponds on the northern side of the on-site haul road with groundwater and the corresponding need for a comprehensive design/management regime to counteract such contact in a full-proof manner, I conclude that the submitted EIAR is insufficiently comprehensive in its commentary upon, and assessment of, stormwater flows and water quality. Accordingly, the applicant has not demonstrated that the proposed new settlement pond, in conjunction with the existing settlement ponds, would be capable of operating in a satisfactory manner with respect to stormwater flows and water quality. The Board may wish to request, under further information, that the applicant addresses these issues.

Air quality

- 8.3.41. The EIAR addresses air quality. It acknowledges that air quality would potentially be impacted upon by dust generated by activities undertaken during the operational phase of the project and by vehicle emissions. The applicant’s quarry lies within a rural area and so it is within the Air Quality Zone D for rural Ireland.
- 8.3.42. The applicant has undertaken dust monitoring of the original quarry and the project site from when it was active under its former planning permission (05/1801 and PL02.219928). The Bergerhoff method was used as it allows dust deposition to be measured in conjunction with a threshold of less than 350mg per square metre per day for determining dust nuisance. Dust monitoring locations were established in each of the four corners of the original quarry (denoted as lower section) and the

project site (denoted as upper section). Monitoring was undertaken for month long periods in 2017, 2018, and 2019. Monitoring continued in the original quarry in 2020. The results were all below the aforementioned threshold.

- 8.3.43. The applicant predicts that the proposed resumption of blasting and excavating in the project site would be likely to lead to similar dust emissions to those already recorded. It also predicts that with increasing depth these emissions may be allayed, insofar as the quarry sides would attenuate windblown dust.
- 8.3.44. Figure 8.5 of the EIAR shows the location of sensitive (residential) receptors in the vicinity of the site. These receptors are concentrated to the west of the applicant's quarry. As the prevailing wind is from the south-west, any windblown dust would tend to fall within the vicinity of the site to its north-east, where there are no sensitive (residential) receptors.
- 8.3.45. Table 8.14 sets out mitigation measures for dust suppression, which relate to work practices, especially during windy conditions and extended dry periods. They are all considered to be highly effective.
- 8.3.46. Under Section 8.12.2, mitigation measures with respect to vehicle emissions are also cited, i.e., the avoidance of unnecessary engine idling and the regular maintenance and servicing of vehicles.
- 8.3.47. Table 8.15 of the EIAR sets out the effects of mitigation measures on vehicle emissions and dust. Typically, slight impacts, following mitigation, become imperceptible ones. Residual impacts would therefore be imperceptible. Insofar as the vast majority of dust particles would fall within 100m of their source, cumulative impacts would not result. The conclusion reached is that the risk of elevated dust impacts at sensitive (residential) receptors would be negligible and so dust nuisance would be unlikely.
- 8.3.48. I conclude that the applicant's assessment of air quality impacts arising from the project is reasonable. I also conclude that these impacts would not be significant.

Climate

- 8.3.49. The EIAR recognises that, in the light of climate change trajectories, the vulnerability of the project to future weather events needs to be assessed, as does its contribution to greenhouse gas emissions.

- With respect to vulnerability, mitigation measures to improve the project's resilience against extreme rainfall, flood, flash flood, storms, and winds are required. Table 9.5 indicates that the high threat posed by increased precipitation needs to be mitigated by designing drainage arrangements that are able to cope with surface water surges and higher groundwater levels. Likewise, the medium threat posed by stronger winds needs to be mitigated in the work methods pursued and the choice of equipment used on-site.
- With respect to greenhouse gases, energy efficient plant and machinery should be used, unnecessary trips should be avoided, and vehicles should not be left idling.

8.3.50. I conclude that the applicant's assessment of climate impacts arising from the project is reasonable. I also conclude that the mitigation measures identified would be appropriate.

Noise and vibration

8.3.51. The EIAR addresses noise and vibration. Under the project description, it states that the working hours of the applicant's quarry are as follows:

- 07.00 to 18.00 on weekdays,
- 07.00 to 14.00 on Saturdays,
- Closed on Sundays and public holidays, and
- Trucks do not exit the site before 08.00.

Accordingly, for the purpose of assessing noise and vibration impacts on sensitive (residential) receptors, daytime hours only needed to be examined.

8.3.52. The applicant has undertaken noise monitoring on an annual basis at its quarry in recent years. Locations adjacent to the north-west and the south-west corners of the original quarry and to the east of the project site have been used. Table 10.2 sets out noise levels for 2018 – 2021. They are expressed over 30-minute periods. If it is assumed that these readings would be representative of 1-hour periods, too, then they come within the EPA's daytime parameter of 55 dB(A) LAeq (1 h).

8.3.53. The applicant has, also, undertaken vibration monitoring at its site office when blasting occurs. Table 10.3 records the results for blasting in 2017 – 2019. These

come within the parameters set out in the Quarries and Ancillary Activities Guidelines, i.e., peak particle velocity of 12 mm per second and air overpressure of 125 dB (linear maximum peak value).

8.3.54. The applicant has modelled the noise environment of the applicant's quarry and its surrounding area for the purpose of predicting noise levels at sensitive (residential and commercial) receptors arising from normal operations on site and blasting. These predictions are for the following scenarios:

- Table 10.5: Normal future operations in the project site,
- Table 10.6: When blasting is occurring in the project site,
- Table 10.7: Normal historic operations in the project site, and
- Table 10.8: When quarrying has ceased.

They are also illustrated by noise contour maps in the appendices to the chapter on noise and vibrations.

8.3.55. As might be expected, Tables 10.5 and 10.7 show only nominal differences at the nearest noise sensitive locations (NSLs). Interestingly, Table 10.8 shows only nominal differences with these Tables, too, indicating that traffic noise for those NSLs with roadside locations is, consistently, the major contributor to noise. Table 10.6 shows increases of between c. 0 to 7 dB resulting from blasting. However, the parameter of 55 dB(A) is not shown as being breached, except where NSLs have roadside locations.

8.3.56. The applicant concludes that, under the project, future noise and vibration levels would be similar to historic ones when the project site was last in use. Post-project noise levels at NSLs would be similar to future and historic levels, except when compared with the blasting scenario, when a noticeable improvement would be experienced.

8.3.57. I conclude that the applicant's assessment of noise and vibration impacts arising from the project is reasonable. I also conclude that these impacts would not be significant.

(d) Material assets, cultural heritage and the landscape

Material assets

- 8.3.58. Material assets are effectively addressed as part of other factors in my EIA, i.e., population and human health, land, soils, and geology, cultural heritage, landscape and visual, and traffic and transportation.
- 8.3.59. The applicant's original quarry remains operative. It is serviced by public utilities, i.e., mains electricity supply and potable water from a group water scheme. Under the project, these services would continue to be availed of.

Cultural heritage

- 8.3.60. The EIAR addresses cultural heritage. Desktop studies of archaeological sources were undertaken, along with a site visit on 31st December 2020. While EISs/EIARs accompanied previous applications for the applicant's quarry at Ardkill More Hill addressed archaeology and recommended that archaeological monitoring take place, no record of archaeological monitoring at this quarry was discovered. An archaeological investigation in the vicinity of the quarry in 1997 of the linear earthworks, known locally as the "Worm's Ditch" and regionally as "The Black Pig's Dyke" (Recorded Monument CV031-004), revealed that, while no surface remains of these earthworks exists immediately to the north of the original quarry, sub-surface remains were discovered. The line of the earthworks was severed by earlier excavations. However, it remains in-situ to the south of the original quarry and passes within 50m of the project site.
- 8.3.61. The project would have no direct impacts upon the aforementioned linear earthworks or any other cultural heritage features within the vicinity of its site. Insofar as this project would entail the deepening of an existing quarry, it would not affect the setting of these earthworks. Concern is expressed that where the original quarry abuts the linear earthworks, nothing should be done to encroach further upon them. Their historic presence to the north and their legibility to the south of the quarry should be acknowledged by the omission of hedge planting that would otherwise take place to the perimeter of the applicant's quarry. Thus, 5m on either side of the linear earthworks should be kept free from such planting. This would also ensure that roots do not interfere with any sub-surface remains.
- 8.3.62. Elsewhere, the nature of the project is such that the removal of top-soil and sub-soil would tend only to arise between the top of the quarry face and the site boundary. Insofar as these narrow strips may be disturbed, they should be the subject of

licenced archaeological monitoring by a qualified archaeologist, as they have a high potential for sub-surface remains of archaeological interest. The Department of Culture, Heritage and the Gaeltacht advise that a condition be attached to any permission in this respect.

- 8.3.63. I conclude that the applicant's assessment of cultural heritage impacts arising from the project is reasonable. I also conclude that these impacts, subject to the mitigation measures proposed, would not be significant.

Landscape and visual

- 8.3.64. The EIAR addresses landscape and visual impacts. Under the CDP, the project site is shown as lying within the Drumlin Belt and Uplands of East Cavan, which extends from Shercock in the north-east to Kilcogy in the south-west of the County. This site forms part of Nulty's Quarry, which is situated on the western side of Ardkill More Hill, the most south-westerly of a line of small hills, which run to the north-east as far as Slieve Glah and Derryglen. These hills have a pronounced presence within the surrounding lower-level undulating countryside. The landscape value of this general area is considered to be moderate.
- 8.3.65. The existing landscape has already been impacted by the applicant's quarry, i.e., both the original quarry on the lower western slopes and the existing quarry, which is elevated above it, and which is the subject of the project. The original quarry is exposed to the west, while the existing quarry is screened to an appreciable extent by the retention of a portion of the higher western slopes. Consequently, only the highest portions of the northern and eastern faces of this quarry are visible from the west and the south-west within medium to long range views. Under the project, the existing quarry would be deepened behind the aforementioned higher western slopes and so the additional impact upon the landscape would be largely concealed.
- 8.3.66. The applicant has undertaken a visual impact assessment (VIA) of the project. This VIA utilises 6 viewpoints along the L-2517 to the west of the site and the side road to the north-west. Each of the viewpoints lies within 1km of the project site. Those from the L2517 would be from residential properties on the eastern side of the local road (Nos. 1 & 2) and from this road itself (Nos. 3 & 4). Those from the side road would be from this road (No. 5) and a community centre and church on its northern side (No. 6). Residents, as visual receptors, are deemed to be highly susceptible to change,

road users are deemed to be moderately susceptible, and those attending community facilities are deemed to have a low susceptibility.

- 8.3.67. Viewpoints Nos. 1, 2, 4 & 5 would all experience a small magnitude of change resulting from the proposed hedgerow planting on the site's boundaries. Insofar as this planting would enhance the character of the local landscape, it would yield a slightly beneficial change. Viewpoint No. 3 would experience a medium magnitude of change arising from tree planting adjacent to the entrance to the original quarry from the L2517, which would be in the foreground of this viewpoint. This planting would, in time, partially screen the original and existing quarries, and so it would be a beneficial change. From Viewpoint No. 6 the project site would not be visible.
- 8.3.68. The appellant has critiqued the choice of viewpoints insofar as they do not include any further to the west of the project site, where the greater horizontality of views results in the original and existing quarries having a greater visibility within the landscape. Ordinarily I would accept this critique. However, as outlined above, the project would entail the deepening of the existing quarry and so its visibility within the landscape would be virtually unchanged from that which persists at present. In these circumstances, the selection of more distant viewpoints would serve no useful purpose.
- 8.3.69. Under the project, a landscape and restoration plan would be rolled out on a phased basis (cf. drawing no. PP-17-169-05). Under this plan, the site would be progressively restored with corresponding benefits to the character of the landscape and visual amenity. The first and second phases would pertain to the original quarry, and they would be capable of being undertaken during the life of the project. The third phase, i.e., the final one, would pertain to the project site. Insofar as it would affect only benches and the quarry floor, it would have no visible affect upon the character of the landscape and visual amenity.
- 8.3.70. I conclude that the applicant's assessment of landscape and visual impacts arising from the project is reasonable. I also conclude that these impacts would not be significant.

Traffic and transportation

- 8.3.71. The EIAR addresses traffic and transportation. The applicant examined traffic movements at the junction between the L2517 and the site entrance. As an input to

this examination, a traffic count at this junction was undertaken on Friday 22nd January 2021. Based on this count, the am and pm peaks were delineated and the annual average daily traffic numbers on the L2517 were estimated.

- 8.3.72. During the period 2016 – 2018, 40,000 tonnes of material were extracted from the applicant's quarry annually. This tonnage equates to 2000 lorry loads or c. 6.5 loads daily, although this figure is subject to seasonal variation. It assumes that this amount of extraction is continuing.
- 8.3.73. Under the project, the rate of extraction would increase by 25% to 50,000 tonnes per annum, and so the applicant applies this factor to HGVs entering and exiting the applicant's quarry in its count. It also allows for traffic growth on the L2517 for the years examined, i.e., 2021, the assumed opening year, 2025, and 2031, the assumed completion year. A PICADY analysis was run, and it was concluded that the junction would function with a RFC of 0.01. No congestion and no queueing would therefore arise.
- 8.3.74. The site entrance was also examined. It occurs on a portion of the L2517, which dips downwards in a northerly direction and, immediately to the north, curves to the left for northbound drivers. The local road is subject to a continuous white centre line. The presence of a generous grass verge on the inside of the curve ensures that forward visibility for drivers turning right into the site entrance is good.
- 8.3.75. Under 05/1801 and PL02.219928, the existing site entrance was proposed for re-siting further to the south. Such re-siting was not conditioned in the permission granted and it was not implemented "on the ground". This re-siting is not now proposed.
- 8.3.76. The applicant acknowledges that, whereas the northern sightline available to drivers exiting the site is good, the one to the south is restricted by a roadside bund. It, therefore, proposes to reduce the height of this bund to improve this sightline. It also proposes the regrading of the site entrance.
- 8.3.77. The Planning Authority's Condition No. 21(i) attached to its permission requires that the aforementioned bund be reduced to road level, to secure x and y distances of 3m and 120m, respectively. Furthermore, Condition 21(ii) requires the regrading of the initial portion of the site access road to a gradient of 2% for the first 7m and 5% for

the following 20m, and Condition 21(iii) requires that the works thus conditioned be the subject of a Stage 3 RSA.

8.3.78. I conclude that the applicant's assessment of traffic and transportation impacts arising from the project is reasonable. I also conclude that these impacts would, subject to the mitigation measures proposed and, subsequently, conditioned by the Planning Authority, not be significant.

Risk management

8.3.79. The EIAR addresses risk management. For the purposes of EIA, the two key considerations cited by the applicant with respect to it are as follows:

- *The potential of the project to cause accidents and/or disasters, including implications for human health, cultural heritage, and the environment, and*
- *The vulnerability of the project to potential disasters/accidents, including the risk to the project of both natural disasters (e.g. flooding) and man-made disasters (e.g. technological disasters).*

8.3.80. Under a "do-nothing" scenario, the project site would remain as it is at present, a quarry within which excavation has ceased. Consequently, the risks posed by a working quarry would not arise.

8.3.81. While the applicant acknowledges that Ireland's geographical location means that it is less prone to natural disasters than other countries, the increasing incidence of severe storm events is recognised. Cavan has no Seveso II sites and so the risk posed by such sites does not arise.

8.3.82. Table 15.7 presents a risk matrix of the project: Extreme weather events and vehicle collisions/ignition of fuel/hydrocarbon leakages/spillages to surface/groundwater are identified as low risk scenarios during the extraction/operational phases of the project site in conjunction with the original quarry. These risks would be mitigated by means of Best Practice protocols and no significant residual risks are predicted as remaining.

8.3.83. I conclude that the applicant's assessment of risk management arising from the project is reasonable. I also conclude that these risks would, subject to the mitigation measures proposed, not be significant.

(e) The interaction between the factors

- 8.3.84. The EIAR addresses interaction between the factors. These interactions are presented in Table 16.1. An accompanying commentary signals that they would not prompt the need for any additional mitigation measures beyond the ones outlined under the assessment of each individual factor.

Reasoned conclusion

- 8.3.85. Having regard to the examination of environmental information contained above, and in particular to the EIAR, the submissions of the Planning Authority, the appellant, and the observer, I consider that the main significant direct and indirect effects of the proposal on the environment are:

Hydrology and hydrogeology: There is a risk of significant negative effects on surface and groundwaters having regard to limited information on the water environment within Nulty's Quarry and, in particular, the volume of storm flows, the adequacy of settlement ponds to handle such flows, the likely contact between surface and groundwater when the water table is high, and the efficacy of any arrangements to ensure separation between the same.

- 8.3.86. I am not, therefore, satisfied that the environmental effects of the proposal have been satisfactorily identified, described and assessed or that this proposal would not have any unacceptable direct or indirect effects on the environment.

9.0 Appropriate Assessment

- 9.1. The applicant has submitted a Statement of Screening for Appropriate Assessment of the project. I will draw upon this Statement and the NPWS website in undertaking my own Stage 1 Screening of this project for Appropriate Assessment.
- 9.2. The test for Stage 1 Screening is whether the project is likely to have a significant effect either individually or in combination with other plans and projects on a European Site(s).
- 9.3. The project would entail the resumption of extraction of stone from an existing quarry, which lies to the east and at a higher level than the applicant's original quarry at Ardkill More Hill. This quarry extends over an area of 3.37 hectares. It would be

deepened to a depth of 175m AOD and it is estimated that 500,000 tonnes of stone would be capable of being excavated thereby.

9.4. Within 15km of the site lie the following European Sites:

- Lough Oughter and Associated Loughs SAC (000007) – 9 km to the north-west,
- Lough Oughter Complex SPA (004049) – 9 km to the north-west,
- Lough Sheelin SPA (004065) – 10.5 km to the south, and
- Moneybeg and Claire Island Bog SAC (002340) – 14.5 km to the south.

9.5. While there is no hydrological source/pathway/receptor route between the project site and the latter two sites, there is one between the site and the former two sites, i.e., surface water discharges from the north-western corner of the site to a wet ditch, which in turn discharges to the Ballinagh River, which is a tributary of the River Erne, which flows through Lough Oughter. I am not aware of any other source/pathway/receptor routes between the project site and these European Sites.

9.6. The Qualifying Interests and Conservation Objectives of Lough Oughter and Associated Loughs SAC are set out below:

- Natural eutrophic lakes with Magnopotamion or Hydrocharition: To restore their favourable conservation condition.
- Bog woodland: To maintain its favourable conservation condition.
- *Lutra lutra* (Otter): To maintain its favourable conservation condition.

9.7. The Qualifying Interests of Lough Complex SPA (004049) are set out below:

- Great Crested Grebe (*Podiceps cristatus*),
- Whooper Swan (*Cygnus cygnus*),
- Wigeon (*Anas penelope*), and
- Wetland and Waterbirds.

Their Conservation Objective is “To maintain or restore the favourable conservation condition of the wetland habitat at Lough Oughter Complex SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.”

- 9.8. Surface water from the project site could lead to a deterioration in water quality, which could potentially adversely affect some or all of the Qualifying Interests for the above cited SAC and SPA. However, the distance between the project site and these European Sites is 9 km “as the crow flies”, but considerably longer, as a result of the meandering route of the Balinagh and Erne Rivers. Over this distance, the limited discharge of surface water from the project site would be diluted and any potential pollutants would be likely to settle on the riverbeds well in advance of the European Sites. Any significant effects on these Sites would thus be highly unlikely.
- 9.9. There are no other active quarries in the surrounding area of the project site. In-combination effects, as a result of waters discharging from other quarries into the source/ pathway/receptor route, would not, therefore, arise.
- 9.10. The proposal was considered in the light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment, it has been concluded that the proposal individually or in combination with other plans or projects would not be likely to have a significant effect on European Sites 000007 and 004049, or any other European site, in view of the Sites’ Conservation Objectives, and Appropriate Assessment (and submission of a NIS) is not therefore required.

This determination is based on the following:

- The distance between the project site and the European Sites, and
- The processes of dilution and settlement within the river system between the project site and the European sites.

In making this determination, no account has been taken of any measures intended to avoid or reduce potentially harmful effects of the project on the European Sites.

10.0 Recommendation

That permission be refused.

11.0 Reasons and Considerations

Having regard to Objective EDO23 of the Cavan County Development Plan 2014 – 2020 and the information submitted with the application and the appeal, it is considered that the applicant has not demonstrated that the arrangements for the management of water, under its proposal, would be capable of either coping satisfactorily with stormwater flows or ensuring that both surface and groundwater quality is safeguarded. In these circumstances, it would be premature to grant permission for the proposal as to do so would risk adverse impacts upon the water environment, which would contravene Objective EDO23 of the Development Plan and be prejudicial to public health. Accordingly, the proposal would be contrary to the proper planning and sustainable development of the area.

Hugh D. Morrison
Planning Inspector

6th April 2022