Inspector's Report
PL07.246241

Development	Permission sought for extension to existing quarry.
Planning Authority	Galway County Council.
Planning Authority Reg. Ref.	Reg.ref.15/729
Applicant(s)	Ballinakill Quarries Ltd.
Type of Appeal	Third party
Planning Authority Decision	GRANT with conditions.
Appellant(s)	1. An Taisce
Observer(s)	None
Date of Site Inspection	30/06/16
Inspector	John Desmond

Contents

1.0 Site Location and Description

1.1. The site is located in the townland of Cregg, in southeast County Galway, c.14km west of Portumna, c.14km southeast of Loughrea and 25km east of Gort. The site fronts onto the R353 (to Gort) to the north, c.385m west of the staggered junction with the R351 (to Loughrea) and the R353 (to Portumana).

1.2. The area is characterised by rolling agricultural lands rising up to Slieve Aughty mountains to the west. The small rural village of Abbey is c.2.8km to the east, however the area is characterised by dispersed one-off housing throughout much of the road network.

1.3. The application site has a stated area of 16.8ha. It includes the existing quarry (the works footprint, including extraction pit and surrounding ancillary areas), which had a stated area of 4.93ha under the application for substitute consent, and the remaining area is agricultural lands (some long fallow and overgrown, some active) to the west, south and east. The extraction pit is in the region of 4ha. There was activity in the quarry on the day of inspection, but I did not witness extraction taking place. Overall the quarry gives the appearance of being well run.

1.4. Site access is directly onto the R353 via a wide recessed entrance. The R353 is of unfavourable horizontal and vertical alignment, is relatively narrow and without hard-shoulder. The entrance is onto the inside of a convex bend on the road. There are warning signs in the vicinity to alert drivers to the location of the entrance.

1.5. The nearest residential dwellings are c.65m to the north, c.80m and c.145m to the northeast, c.100m to the west, a cluster of five dwellings between 100m-280m to the northwest and c.200m to the north.

2.0 **Proposed Development**

2.1. The main details of the proposed development are as follows:

- Extend existing quarry to adjacent lands to east, south and west measuring c.13ha.
- The total additional extraction area of 10.81ha, carried out in three phases:
  - Phase 1: extension of 3.85ha, extending c.150m to the east and c.60m to the south from current indicated pit face;
  - Phase 2: extension of 3.68ha, extending c.285m east and c.130m south of the existing indicated pit face;
  - Phase 3: extension of 3.28ha[1], extending c.180m south and c.170m west of the existing indicated pit face.
- 20m perimeter along R353 and 15m along all other boundaries to allow for landscaping and reinstatement works:
  - berms of 3 to 4m in height (indicated on 'Phased Extraction Drawing', appendix 3-1 of EIS, but not on drawing of same name submitted with application) on all boundaries bar along R353;
  - No berm to be provided along R353, but a tree line planted instead to provide screening.
- No estimated time period is indicated for phases of development, or for the life period of the proposed extended quarry.
- The site sections indicate a finished floor level of 102m, from an existing 121.5m

3.0 **Planning Authority Decision**

3.1. **Decision**

GRANT permission subject to seven conditions.

[1] Reference to 32.8ha on page 3-4 of the EIS is accepted as an error.

Condition no.2 requires implementation of all environmental mitigation areas identified in the remedial EIS, and the appointment of an Environmental Manager to report on environmental compliance.

Condition no.3 is a standard archaeological heritage condition.

Condition no.4 requires submission of dust, vibration, air overpressure, groundwater and surface water monitoring programme for approval storage; addresses hydrocarbons and refuelling; sets dust limits; requires submission of methodology for public notification of blasts, limits timing of blasts and vibration and overpressure; discharge limits for surface water to be set subsequent to receipt of monitoring programme details.

Condition no.5 requires implementation of site restoration plan.

Condition no.6 requires financial contribution of €150,000 under section 49.

Condition no.7 requires €195,000 security for site restoration.

3.2. **Planning Authority Reports**

Three reports issued from the area planner as follows:

The first two are dated 10/08/16. In the order presented on the appeal file, the first report recommended further information be sought requesting the applicant to detail any unauthorised quarrying carried out and informs that such works would require a retention application and would affect the validity of the current application; and requiring an Archaeological Impact Assessment to be carried out and a AIA Report to be submitted. This report incorrectly states the wording of condition no.1 attached to the Board's decision 07.SU0038 to material affect. The planner's assessment considered the EIS to be compliant and unlikely to result in significant adverse effects; and that the Planning Authority is satisfied that Appropriate Assessment can be screened out.

The second report recommending that permission be refused for three reasons relating to material contravention of condition no.1 of Board decision 07.SU0038 due

to unauthorised works, likely significant adverse impact on the integrity of a European Site and inadequate EIS. The report directly quotes condition no.1 attached to the aforementioned Board's decision, indicated that the Planning Authority had concern the EIS and that the Planning Authority was not satisfied that Appropriate Assessment had been screened out.

The reports indicate that the existing splayed entrance has been designed and constructed to accommodate the level of traffic normally generated, but noted that the regional road in the vicinity was of poor horizontal and vertical alignment. The second report was counter signed by the Senior Planner.

The final report dated 09/02/16 comprises the second of the initial planner's reports (i.e. the report recommending refusal). It indicates that the application was subject of time extension for 6 months, with unsolicited further information received 04/12/15. The Planning Authority considered the EIA received 17/07/15, in addition additional information received were adequate to identify and describe direct, indirect and cumulative effects, alone or in combination, on the receiving environment. The Planning Authority stated that it completed an EIA and considered the residual effects (taking account of proposed mitigation) to be acceptable subject to compliance with mitigation measures required by the Council's Environment Section. In addition, the Planning Officer considered the proposal would not seriously injure the visual amenities or landscape character and would be acceptable in terms of traffic safety and convenience. The report is counter signed by the Senior Planner.

3.3. **Other Referral Reports**

Environment – No objection subject to conditions (04/08/15).

DAHG (DAU) – Further information required regarding archaeological impact assessment (17/07/15). Note, two reports are indicated as received in the Planning Officer's report, but only one is on file.

3.4. **Third Party Observations**

An observation was received from An Taisce (02/07/15). A single issue was raised as follows:

- Substitute consent does not confer any entitlement or presumption of new or extended quarry development on this site and development requires 'de novo' consideration.

4.0 Planning History

4.1. **07.SU0038:** Substitute consent **GRANTED** in respect of the existing quarry, comprising 4.93ha working footprint, inclusive of extraction pit and all ancillary areas (cleared areas, berms, access roads, etc.) and access.

5.0 Policy Context

5.1. Galway County Development Plan 2015-2021

Section 6.20 Mineral Extraction and Quarries

Section 6.21 Mineral Extraction and Quarry Policies and Objectives

DM Standard 37: Extractive Development

6.0 Natural Heritage Designations

There is a large number of Natura 2000 sites within 15km of the appeal site, as follows:

The Slieve Aughty Mountain SPA (site ref.004168) is a large Natura 2000 site extending to the north, west, south and southeast of the appeal site (within 1.62km at the nearest point to southwest). Note, there are a number of fractures NHA and pNHA sites (e.g. Slieve Aughty Bog NHA, site ref.001229) contained within the Natura 2000 site).

Lough Derg Shannon SPA (site ref.004058) c.8.5km east-southeast

Lough Rea SPA (site ref.004134) c.12km to northwest

Lough Rea SAC (site ref.000304) c.12km to northwest

Pollinaknockaun Wood Nature Reserve SAC (site ref.000319) is located c.4km to the southeast.

Derrycrag Wood Nature Reserve SAC (site ref.000261) is located c.5.8km to the southeast.

Cloonmoylan Bog SAC (site ref.000248) c.6.3km to the southeast.

Barroughter Bog SAC (site ref.000231) c.7.3km to the east-southeast

Lough Derg Northeast Shore SAC (site ref.00) c.8.9km to the east-southeast

River Shannon Callows SAC (site ref.000216) 14.6km to the northeast

Middle Shannon Callows SPA (site ref.004096) c.14.5km to the east.

Ardraigue Bog SAC (site ref.002356) c.14.7km to the northeast

Sonnagh Bog SAC (site ref.001913) c.12km to the west-northwest

Rosturra Wood SAC (site ref.001313) c.5km to the southeast

Loughatorick South Bog SAC (site ref.000308) c.10.3km to the south

Pollagoona Bog SAC (site ref.002126) c.9.8km to the southwest

7.0 **The Appeal**

7.1. **Grounds of Appeal**

An Taisce - The grounds of appeal can be summarised as follows:

- Unauthorised development

  - S.261 registration does not provide any legal basis to establish planning status or continuity of pre 1963 use.
  - A Warning Letter EN15/039 issued serving notice of non-compliance with conditions nos.1, 3, 5 & 6 of substitute consent permission SU0037 and the photographs submitted with the application show continuing unauthorised activity (e.g. plate 6.1).

- Deficient information on archaeological impact
  - No request for further information request was made for an AIA as was requested by DAHG (DAU) on 17/07/15.
  - Condition no.3 requiring test excavation does not satisfy the requirements of the EIA Directive in requiring prior assessment of environmental impacts before granting consent.
- Deficient consideration of application by Galway County Council
  - No consideration was given to the issues of Appropriate Assessment under the Habitats Directive, or the effect of a grant of permission in allowing the retention of unauthorised works, including the associated public notice deficiency and fee issue arising.
- Legal issues
  - The making and determination of this application is ultra vires as there is no entitlement to extend a development site, structure or activity that has been carried out in breach of the EIA Directive and the requirement for AA.
  - Constitutes an extension of an unauthorised development and non-compliant quarry by reason of non-compliance with SU0037.
  - Would allow retention of unauthorised works that have not been subject of EIA or AA.

7.2. **Planning Authority Response**

None.

7.3. **Other Party Responses**

First party (01/04/16) – The main points of the response may be summarised as follows:

- It is alleged that the quarry is non-compliant with condition nos.3 and 6 of the substitute consent (ref.QSP6) granted by the Board, relating to site restoration and payment of a bond, respectively.
- A detailed site restoration plan for the quarry, up to the issuing of substitute consent, was submitted to Galway County Council, for past works, on 22nd September 2015 (copy of restoration plan and cover letter appended to response). The requirement of condition no.3 has therefore been met.
- The EIS accompanying this current application included a site restoration scheme for existing and future works (Ch.10, sn 10.7, and drawings no. 0816a-08) as agreed with Galway County Council.
- The applicant has no issue paying a bond in relation to quarry development, but there is significant difficulty in raising a bond in the current financial climate and is virtually impossible for past works.
- Requests that a single bond be paid for both past works and proposed works combined.
- The applicant is awaiting the outcome of the current application under appeal before putting a bond in place for past and/or future works.
- The applicant has at all times complied with the relevant legislation and guidance from Galway County Council and An Bord Pleanála and it is contended that the applicant has complied with all conditions under QSP6.

7.4. **Observations**

No valid observations received.

7.5. **Further Responses**

None received.

8.0 **Assessment**

8.0.1 I consider the key issues in determining this appeal are as follows:

- Policy issues
- Non-compliance with substitute consent permission
- Traffic issues (and road network as material asset)
- Landscape and visual impacts
- Human beings
- Air and climate
- Noise and vibration
- Cultural heritage (archaeology)
- Flora & fauna
- Soils and geology
- Water
- EIA conclusion
- Appropriate Assessment

8.1. **Policy issues**

8.1.1. It is the policy of the Council (EQ 2) to ensure adequate supplies of aggregate resources to meet future growth needs within the County Galway, to facilitate

extraction where there is a proven need and market opportunity for such extracted materials and to ensure the exploitation of resources does not adversely affect the environment or adjoining existing land uses. In general, the development of quarries may be considered acceptable in principle under the plan.

8.1.2. Although not set out as a formal point of policy, section 6.20 indicates that in considering applications relating to existing (or proposed) quarries, DECLG quarry guidelines will be taken into full account and that the Council will have regard to the protection of residential and natural amenities, the prevention of pollution and the safeguarding of aquifers and groundwater.

8.1.3. That section also provides that the development of new quarries will be strictly controlled in areas of high landscape value, in areas of significant archaeological potential, on European Sites and on other such areas of importance for the conservation of flora and fauna. Given that the existing quarry has been granted substitute consent authorisation to regularise the status or works already carried out and the restoration of the site, but which does not authorise ongoing operations, the proposed development may be regarded as a new quarry.

8.1.4. In this regard, I note that the site is within an area identified as being of medium landscape value in map LCM 1 and is outside of any Natura 2000 Site or other area of environmental designation for the protection of flora or fauna; that the site does contain an enclosure structure (NMS ref.GA125-042) identified as possibly of archaeological significance, with a significant number of other archaeological structures (e.g. megalithic tomb – wedge tomb, NMS ref.GA125-045 located immediately north of the R353) within the vicinity; that there is a residential population in the vicinity; and that the site is adjacent to and will discharge into the surface water network in the vicinity but is not intended to breach the water table.

8.2. **Non-compliance with substitute consent permission**

8.2.1. The report of the Council's Planning Officer indicates that the development on site is non-compliant with conditions nos.1 (standard condition no.1), 3 (site restoration plan), 5 (bond to ensure site restoration), 6 (financial contribution) of the Board's decision to grant substitute consent for the quarry under SU0037[2].

8.2.2. An Taisce alleges that unauthorised activity has continued. The Board's decision to grant substitute consent on 2nd October 2014 regularises the planning status of development carried out to that date. There was activity on site on the day of inspection but I cannot determine whether extraction or quarry development was carried out subsequent to the Board's decision on SU0037.

8.2.3. I note the First Party's response to these issues. However, I consider these to be matters for the Galway County Council's enforcement section.

8.3. **Traffic issues (and road network as material asset)**

8.3.1. The existing site entrance to the R353 is on the inside of a convex bend. Whilst the existing entrance is a wide recessed entrance, there is very poor line of sight along the public road in either direction and it is vastly deficient of the requirements of DMRB TD41/42-11 Visibility Standards which require sight distance of 160m within the 80kph speed limit (85kph design speed) applicable to regional roads. There are warning signs on the R353 to alert drivers on approach to the junction, but the public road is narrow, without hard shoulders to enable drivers to take evasive action and with negligible soft margins to act as a refuge for pedestrians. The road is also of poor vertical and horizontal alignment in the vicinity of the entrance, with poor forward visibility.

8.3.2. There is no report from the Council's Area Engineer or Roads and Transportation Department, although a report was requested. The Planner's Report states:

[2] The Planning Officer's report refers incorrectly to ref.SU0038.

The existing splayed entrance has been designed and constructed to accommodate the level of traffic normally generated by quarry development. However, the regional road in the vicinity of the site entrance has poor horizontal and vertical alignment.'

The Board's Inspector on SU0037 noted the restricted sightlines at the existing entrance but considered the then existing development acceptable in terms of traffic and road safety and the Board granted substitute consent without any condition concerning the site entrance, sightlines or the roadside boundary. This may be considered reasonable in the context of substitute consent authorisation.

8.3.3. The EIS submitted with the application addresses traffic and transport (see chapter 12), with the assessment of traffic impact carried out by Alan Lipscombe of Alan Lipscombe Traffic and Transportation Consultants, Galway. The restricted visibility is noted at 20m in either direction from a 3m setback. Taking into account relaxation (section 7.11 of TD 41/42) in the sight distance standard permissible (to the left hand side only) it is submitted that a sight distance of 33m is available to the left hand side[3]. It is further submitted that the poor road geometry results in local speeds being less than the designated speed limit and, on the assumption that local speeds are closer to 60kph a sight distance of 90m would be required. I would accept that the road geometry would be likely to reduce average vehicular speed, however the applicant has not demonstrated, empirically, the average vehicular speed on the subject road[4] to justify reduced sightline distance based on the actual design speed of the road. Regardless, the sight distance is seriously substandard even for the lowest design speed provided for in the DMRB standards (50m for 42kph design speed).

[3] Note the relaxation in standard provided under section 7.11 refers to '*junctions onto regional and local urban roads*', which would suggest that the relaxation does not apply in this rural road context.
[4] An NRSA survey of road speed in 2013 reports that on regional roads, 62% of cars travelled at less than 80km/h with 35% of cars travelling between 80km/h to 100km/h and 3% travelling between 100km/h to 120km/h. http://www.rsa.ie/Documents/Road%20Safety/Speed/Free%20speeds%20survey%202013%20RSA%20Format.pdf (accessed 15/09/16).

8.3.4. The consultants recommend that alterations be made to the access to provide 3m X 90m visibility splays required to provide safe access for all vehicles, as shown in figure 12.2 of the EIS. Whilst sufficient land to the right hand side (east) of the entrance are under the applicant's control to provide sightlines up to 160m, the applicant controls insufficient land to the left hand side (west) of the entrance to improve sightline distance to approach even to the standard (90m) applicable for the 60kph design speed.

8.3.5. It is indicated that the existing quarry development generates eight loads (20-22 tonnes per load) per day in low demand periods and up to 40 per day during the few busiest days of the year[5] (daily production of between 160 – 800 tonnes per day), plus 6 car movements per day (based on 3 employees), based on the information provided by the applicant. An hour long traffic count was carried out on the R351 and R353 between 13.00 and 14.00 hours on an unspecified Monday in April 2013, with expansion factors (15.8) applied to calculate AADT[6], which is acceptable for the purposes of this application. The consultant concludes that the R353, which has a capacity of less than 5000 vehicles per day[7] based on 4.2-4.5m carriageway width, is sufficient to accommodate the maximum existing flow of 727 vehicles per day.

8.3.6. It is apparent that these are the same details as provided in the substitute consent application submitted 05/06/13 (in the depth of the economic recession) and it is not obvious over what period the figures are based, or whether they take account of the loads generated when the existing facility was operating at peak output, as opposed to the peak operations in 2012/2013. The consultants do not compare the capacity of the network during operational hours to the traffic generated by the development, or explain the impact of peak hour traffic generation on the network. Most importantly, there is no assessment of the *potential* traffic generation and

[5] EIS Chapter 9 Noise and Vibration estimates a maximum of 50 HGV truck movements during peak operation, but does not make clear if this is based on the existing or proposed quarry extent.
[6] The approach appears consistent with NRA/TII PAG Unit 16.2 Expansion Factors for Short Period Traffic Counts (August, 2012).
[7] The likely capacity of this road is not estimated. Note, 5000vpd capacity is for Type 3 single carriageway of 6.0m with 0.5m hard strips.

consequential impact of the proposed *extended* facility. I consider it unlikely that the proposed development will generate such traffic as to exceed the daily capacity of the R353, such as to significantly affect the public road as a material asset. However, an accurate estimate of potential traffic generation from the proposed extended development is required to assess the impact of HGV traffic on the safe operation of the R353, having regard to the unsafe vehicular entrance, the unfavourable alignment of the R353 and the likely level of general traffic using this route.

8.3.7. The proposed expansion of this quarry would endanger public safety by reason of a traffic hazard generated by the nature and quantity of traffic movements, comprising mainly of HGVs, at an existing seriously substandard entrance onto a regional road that it is of unfavourable horizontal and vertical alignment.

8.4. Landscape and visual impacts

8.4.1. It should be noted that the grant of substitute consent regularised the planning status of that development carried out by the date of the Board's decision (02/10/14), not continuing operations or further extraction, and required (under condition no.3) the restoration of the site[8]. It is in this context that the potential adverse visual impacts and impacts on landscape character should be viewed.

8.4.2. The visual impact of the proposed development is addressed in the EIS under chapter 10 Landscape, which includes a detailed visual impact assessment. The landscape is rates as of medium landscape value (map LCM1) and of class 2 moderate sensitivity (map LCM2, class 1 is least sensitive, class 5 is most) under the development plan. There are two designated focal points or views in the wider vicinity of the site - view no.10 Kilnaleckin Friary c.2.7km east on the R353 (at Abbey) and view no.11 views of Slieve Aughty Mountains from R351 north of Woodford. The assessment is reasonably comprehensive and concludes that the

[8] Details to be agreed within 3 months of the Board's decision and provide for the immediate revegetation of the site.

proposed development will have a long term slight negative impact on the character of the landscape.

8.4.3. The existing quarry pit is relatively small and enclosed. It has not been subject of any obvious site restoration works or screen planting and appears to be an operating quarry. The visual impact of the existing quarry on the surrounding area is constrained by the contour levels of the hill into which it has progressed, with only the upper levels of the pit exposed from certain directions. The proposed increase in the extraction area will remove the existing high contour lands and expose the pit and pit-faces to view over a far wider area with significant near distance visual impacts, in particular. It will also have a significant adverse visual impact on surrounding residential properties. Whilst this may be mitigated to a degree by the provisions of berms and / or planting, the level of detail regarding same is inadequate[9] and I am not satisfied that the proposals are sufficient to mitigate the visual impact on the nearest sensitive receptors.

8.4.4. Chapter 10 suggests berms will be provided at the end of each phase rather than at the outset and therefore they will not mitigate the visual impact until a late into the development. Note – there is no indication of the length and timing of phasing. In chapter 3 it is indicated that perimeter berms of 3-4m in height are proposed, except along the R353 where roadside tree planting is proposed (on file). No planting is proposed on the berms which will be left to self-colonise with plants. Given the mounded contours and height of the hill landform proposed to be extracted, the provision of berms around the perimeter at lowest contour levels, without planting, will be ineffective to mitigate significant visual impact on the surrounding locality. There is conflict between the drawing appended to the EIS which shows the location of perimeter berms and the drawing submitted with the application which does not. It is not explained why no berm is proposed along the roadside boundary – in my view

[9] See section 3.4.3 Proposed Screening, section 3.5.1 Overburden Removal, drawing no.0816a-05 and sections in Appendix 3-1 of the EIS and attached separately.

it would be essential to run a planted berm parallel to and in the vicinity of the R353 to protect visual amenities in addition to reducing other impacts (dust, noise).

8.4.5. The EIS has not considered as to how extraction could best be phased, or how individual phases might be progressed, so to minimise visual impacts on the surrounding area, including on individual residential properties (and to minimise impact on the nearest sensitive receptors). Retaining lands around the perimeter of the site to a specified contour level, whilst completing excavation to floor level within the more central pit area, and delaying excavation of the outer sections of the site would reduce visual impact on the surrounding area, protecting landscape character and protecting the visual amenities[10] of the nearest sensitive receptors (say nearest residences to the northeast and southeast and west, but also the R353 and R351). This approach would also enable the provision of appropriately planted perimeter berms well in advance, enabling vegetation thereon to mature in advance of the progression of extraction in the direction of the nearest sensitive receptors.

8.4.6. In the long term, I am satisfied that the visual impact of the quarry on completion will be acceptable subject to relatively minor site restoration works and accommodation of natural regeneration through recolonization by flora and fauna, as proposed by the applicant (drawings 0816a-08)

8.4.7. The proposed development will have significant adverse visual impacts on the near distant surrounding landscape, including on sensitive receptors such as the nearest residential properties and the public road network. The proposed mitigation measures are inadequate to reduce the significance of the impact to a reasonable level due to the contours of the landform proposed to be extracted. The visual impact could be reduced to an acceptable level through a well-considered phasing scheme, in addition to a well-considered progression of extraction within each phase. I would advise that higher lands need to be retained along the northern, northeast, east and southeast corner until the final stages of quarrying operations on this site.

[10] This approach may also reduce noise and dust impacts on the surrounding area also.

In addition, the provision of appropriated planted and designed berms along all boundaries, including along the boundary with the R353 to the north, at the earliest reasonable stage would further mitigate the impact. Fast growing native or naturalised tree species, such as birch or sycamore would be appropriate screening. Should the Board decide to grant permission, it may consider it appropriate to address this issue by condition.

8.5. **Human beings**

8.5.1. Chapter 4 of the EIS addresses human beings but almost entirely in terms of socio-economic impacts which are, in my professional opinion, outside the remit of EIA, except where they relate to material assets (tourist assets and land-take).

8.5.2. The chapter briefly addresses health and safety, but only in the context of compliance with health and safety regulations in the carrying on of quarry operations. Health is not an environmental factor for consideration under the current EIA Directive. The EIS does not address post operation quarry safety and risk. The quarry restoration plan does not provide for grading or stepping of cliff faces and will present a vertical cliff face of at least 18m, which will present a permanent risk to the public. This is a significant permanent impact.

8.5.3. It is not feasible to permanently mitigate the risk through fencing and warning signage and, in my professional opinion, this can only be addressed by providing a graded or benched slope. I note that EPA guidelines[11] on site restoration for quarries provides for restoration of quarry faces which would address these concerns (Figure 3.10, and section 3.6 of the guidelines refer). I therefore would advise that the proposed perimeter quarry faces be benched and subject to regrading face treatment in accordance the said EPA guidance, in the interest of safety. I am satisfied that, should the Board decide to grant permission, this issue can be adequately addressed by condition requiring the submission of revised final

[11] '*Environmental Management in the Extractive Industry (Non-Scheduled Minerals)*' (EP, 2006).

extraction pit and site restoration details consistent with EPA guidance, for the agreement of the planning authority.

8.5.4. Other impacts arising on human beings may be addressed under the headings of the other factors of the environment, below.

8.6. **Air and climate:**

8.6.1. It should be noted that the quarry is covered by a grant of substitute consent which regularises the planning status of the works carried out prior to the date of the Board's decision and does not authorise ongoing operations other than site restoration and the significance of potential adverse dust impacts should be viewed in this baseline context. The EIS addresses the issue under chapter 8 Air and Climate.

8.6.2. **Air** – The main potential for significant impact from the proposed development is dust. The assessment reviewed dust monitoring carried out at and surrounding the quarry over a 28 period between 4th and 31st March 2015. Monitoring found dust levels to be well below 350mg/m^2/day, the standard that is usually applied, with the highest levels found at the site entrance (256mg/m^2/day). The EIS provides no assessment of potential dust impact of the proposed development, which will result the more than tripling in size of the existing extraction pit. The extended pit can be expected to have a greater operating capacity in response to market demand, and therefore would appear to have potential to generate significantly greater quantities of dust.

8.6.3. Given that monitoring took place most likely during a low operating period, dust emissions may not be representative of dust generating potential of the existing quarrying operations that have been carried out on site. The assessment purports to take account of the weather over the survey period, indicating that there were unsettled conditions throughout the monitoring period but that rainfall was low in comparison to other months (this is meaningless). This is contradicted by Met

Eireann information that rainfall was 100-125% of the long term average for the area of the site, which would have reduced the level of airborne dust. I therefore am not satisfied that the existing dust levels can be considered representative of the potential dust generation of the proposed development.

8.6.4. The assessment does not identify any sensitive receptors in the vicinity, the two closest of which will be within c.65m to the north and another c.80m to the northeast (this is in the control of the applicant), with another c.150m to the northeast. Prevailing wind direction in Ireland is generally from the southwest, which will carry dust in the direction of the said nearest sensitive receptors and they will therefore be at risk of adverse impact on residential amenities from dust. This will also be affected by the proposed phasing of the development having regard to the contours of the site which will render the pit exposed to the surrounding lands, thereby increasing the risk of significant dust impact. The EIS does not address this potential impact, or the significance of same and is therefore deficient. The EIS does not address the risk of impact potential dust emissions from the extended quarry on the local road.

8.6.5. The measures for mitigation of dust emissions are set out under section 8.7.1.5. Some of the mitigation measures are integrated into the existing design – e.g. the road surfaces at the entrance to the quarry are in fixed concrete. Some measures relating to operational matters are stated reasonably clearly – e.g. it is indicated that water spraying of conveyors, stockpiles and roads will be carried out when necessary to reduce production of dust. Others are somewhat vague and / or non-committal – e.g. the proposals that whenever vehicles leave the site, loads will be covered where possible.

8.6.6. Particular mitigation measures, including extraction phasing and location of final quarry faces, the provision of berms and tree planting and the siting of ongoing dust monitoring points may be required to reduce potential significant adverse impact of

dust on dust sensitive receptors including the surrounding residential properties and the public road network.

8.6.7. The EIS does not assess the potential impacts of dust arising from the proposed development on relevant nearest sensitive receptors (including the R353), in itself or relative to the baseline situation in the context of the grant of substitute consent. The EIS is therefore seriously deficient and does not enable the Board carry out a full EIA prior to the making of its decision. On the basis of the proposed phasing of the development and the proposed mitigation, I consider the proposed development likely to have significant adverse impacts on dust sensitive receptors in the vicinity. Should the Board decide to grant permission, the impact of dust can be addressed by condition, including standard conditions on dust monitoring and limit compliance, and a condition addressing quarry phasing, provision of berms and planting.

8.6.8. **Climate** – The EIS predicts not significant impacts on climate. I am satisfied that the proposed development will not have a significant impact on climate.

8.7. Noise & vibration

8.7.1. As noted above, the proposed development should be viewed in the context of the baseline noise character of the area having regard to the grant of substitute consent which regularises the planning status of the works carried out prior to the date of the Board's decision and does not authorise ongoing operations other than site restoration. Chapter 9 of the EIS addresses noise and vibration.

8.7.2. **Noise (quarry extraction operations)** – The EIS refers to a noise survey carried out on Saturday 6th April 2013 between 11:09-13.57 hours, at three noise monitoring locations, including two noise sensitive locations and a third from with the application site adjacent the R353. The time period was selected in order to provide a typical snapshot of the background noise and climate during normal operating hours for the quarry. The quarry was not operating but the operator carried out some activities in order to simulate noise generating activity typical of the site. The survey results

presented included two 15-minute periods for noise NML 1 and 3 and a single 15-minute period for NML 2. I have serious reservations that such short duration noise surveys can be considered representative of the background noise environment. I have reservations about the survey taking place on a Saturday in terms of it being a representative day. I do not accept that simulated operations, however carried out, can be considered representative of typical operations, but in any case the carrying out of the operations will have contaminated background noise levels – the grant of substitute consent merely regularised the development already carried out and did not authorise the carrying out of further quarry activity other than site restoration. The noise assessment is therefore inadequate.

8.7.3. Regarding predicted noise impact, the assessment includes NML 1 and 3, and two other noise sensitive locations (NSLs) for which baseline noise context was not provided. The EIS does not demonstrate how the baseline noise data may be considered representative at NSL 3 and 4, or how it was taken into account.

8.7.4. As already noted, the baseline noise data includes the impact of simulated operations (stone screening - 85dB L_{Aeq} at 10m; and wheelwash - 81dB L_{Aeq}). The predicted noise generation is purported to be based on BS 5228 -1:2009(+A1 2014) *Code of Practice for Noise and Vibration Control on Construction and Open Sites: Noise*. It takes account of additional noise sources (dB L_{Aeq} at 10m) including excavator mounted rock breaker (85dB), tracked crusher, wheel washer (81dB) and stone screener (85dB) and assumes all items operated simultaneously and continuously during working hours. The predicted noise impact is based on all plant being located within the centre of the extraction area for each phase, except for the wheel washer permanently located near the site entrance. I do not consider this approach to constitute the worst case scenario and it may actually represent much lower noise emissions than may result. I would assume the tracked excavator and excavated mounted rock breaker, both being mobile, will be located closer to the most recent excavated (blasted) rock face, not centrally located within the pit, and

will therefore be far closer to the nearest NSLs, with potentially far higher noise levels received at those NSLs in the worst case scenario.

8.7.5. The EIS predicts that the noise levels at the nearest NSLs will not exceed 55dB L_{Aeq} and that the predicted levels are lower than the existing baseline noise environment which is dominated by traffic noise from the road network. It expects quarry operations not to have a significant impact. As noted, above, the baseline noise levels are contaminated. It is also based on an incorrect distance between the site and the nearest NSL, which the EIS states is 250m from the northern boundary[12] when it is actually in the region of 60m (Location 2[13]). No mitigation is provided for operational noise under section 9.7 Mitigation which states '*the site layout itself provides a significant degree of natural acoustic screening to the nearest residential dwellings*' and that '*the quarry is not expected to have any significant noise…impact on the nearest sensitive location*'. The noise assessment takes no account of the proposed changes in site layout and the resulting changes in acoustic screening and reflection as the site phasing progresses and how this will affect the noise levels likely to be experienced at different NSLs, having regard to the contours of the surrounding landscape and the hill landform proposed to be extracted. I consider this to be another serious failing in the assessment.

8.7.6. Based on the information available to be, I consider the proposed development likely to have a significant adverse impact on the noise environment experienced by the nearest noise sensitive receptors. In particular, I consider the proposed phasing of the quarry will exacerbate noise impacts on noise sensitive properties, resulting in unnecessary noise impacts which may be significant and that may seriously injure the amenities of the residential property in the vicinity.

8.7.7. **Noise (quarry traffic)** - In terms of traffic noise impact the applicant estimates that typical peak hour traffic generation will be 10 HGV movements (five in and five out), with a very small number of staff car movements. The EIS indicates that an increase

[12] EIS p.9-7.
[13] EIS p.9-8, Figure 9.3

in road noise levels of 1dB would require an increase in traffic volumes in the order of 25% along on the local road network. It is submitted that the additional traffic movements introduced to the network during peak quarry operation will not result in a significant increase in overall local road volumes and, hence, noise levels from passing site vehicles are not considered to be significant. However, there is insufficient information in the EIS to enable the assessor to make this determination. It would seem to assume that quarry operations will continue as they had previously, regardless of the increase in the area of extraction. No information has been provided to confirm previous peak operations and no predicted (and appropriately supported) operating capacity has been provided for the proposed extended quarry and I could find no estimated life for the extraction of the quarry.

8.7.8. The traffic noise impact assessment is facile and focusses on unsupported basic figures and does not address the qualitative noise impact of the resultant traffic. It also ignores the cumulative impact of noise from HGV traffic and the overall quarry operations which may be significant at certain NSLs. Five HGV movements to and five HGV movements from the quarry, per hour, along the R353 could have a significant noise (and possibly vibration) impact on residential properties along the regional road, given the quality of the traffic movements concerned, particularly if such movements are consistent over a period of time. The EIS examines the noise impact of traffic on the internal access road, indicating that the mean SEL for HGV at low speeds is c.87dB L_{Ax}[14] at a distance of 5m from the edge of the road, with a 5dB penalty for unfinished nature of the site access road, resulting in 29dB $L_{Aeq\ 1hr}$ based on a worst case scenario of five HGV movements per hour at the nearest NSL 200m distant. It is not clear why the worst case scenario used was set at half that of the HGV movements in the overall traffic noise assessment (probably on assumption of 50:50 split in traffic west and east from entrance). The EIS uses an incorrect distance for the nearest NSL, stated as 200m north of the site entrance, whereas it is c.120m northeast, but less than 60m from the R353).

[14] L_{Ax} is the A-weighted SEL.

8.7.9. I am not satisfied based on the noise assessment carried out by the applicant in the EIS that significant adverse noise impact will not result on the nearest noise sensitive properties arising from quarry traffic, particularly when taken cumulatively with the potential noise impact arising from quarry operations. No noise mitigation measures are included in chapter 9. The noise impact assessment is seriously deficient and it is not possible for the Board to carry out EIA on the proposed development.

8.7.10. **Vibration and overpressure** - The EIS includes a selection of monitored vibration and air overpressure levels measured at the nearest dwellings to the quarry during peak extraction in 2008. These indicate that the resulting vibrations were below the 12mm/s criteria recommended by the EPA in its 2004 guidance[15] and air overpressure was below the 125dB linear maximum value. This information would suggest that blasting at the quarry can be carried out without exceeding the limits, although the EIS does not indicate where the blasting took place, the location of the named dwellings or whether there are records of the relevant limits having been exceeded during blasting operations at this site.

8.7.11. The EIS states '*the site layout itself provides a significant degree of natural acoustic screening to the nearest residential dwellings* (p.9-11)', yet the EIS takes no account of how the screening will change over the course of the progression of extraction. In particular, I note that phase 1 will open up the pit to properties to the north (within as little as 60m from the site boundary) which are currently reasonably well screened. I am not satisfied that the proposed phasing will provide the optimum mitigation of adverse noise (and other) impacts on residential properties in the vicinity and, depending on how each phase is commenced, the potential adverse impacts on property in the vicinity could be greatly and unnecessarily exacerbated and may be significant. I note the mitigation measures for vibration and air overpressure under section 9.7, which are appropriate. However, in the absence of consideration of the phasing and intra-phasing extraction and blasting proposed under the development, I

[15] These apply for vibration with a frequency of less than 40Hz.

am not satisfied that the proposed development will not seriously injure the amenities of the nearest sensitive properties.

8.8. **Cultural Heritage (archaeology)**

8.8.1. Archaeology is addressed under chapter 11 of the EIS, prepared by Frank Coyne of Aegis Archaeology Ltd. A detailed review of the available databases and field inspection were conducted. Three items of cultural heritage are identified (CHF1-CHF3 in Figure 11.3 of EIS) within the site, all located to the east of the extraction pit's southern end: CHF1 is a ruinous shed structure, constructed of concrete and is not of archaeological or cultural heritage interest; CHF2 is a Recorded Monument (Enclosure SMR GA125-042), which is visible on the site directly adjacent the perimeter berms to the pit; CHF 3, located within an area that has been cleared and at least partly excavated, is indicated as a redundant record RMP (disused gravel pit GA125-043), presumably for that reason. The EIS refers to a possible iron working feature (1-sq.m of remains of iron smelting) identified by Tierney (2014) in an area that had recently been stripped of topsoil to allow access to the top of the quarry face. The Department's Historic Environment Viewer places the said RMP to the northeast of CHF 2 Enclosure, in the vicinity of CHF 1 (shed) but confirms it is not scheduled for inclusion in the next revision to the RMP. The EIS notes the presence of 65 Recorded Monuments within 2km of the site. No previously unrecorded archaeological monuments were discovered in the filed inspection.

8.8.2. No structures of architectural and cultural heritage value, including protected structures, structures included on the NIAH, or vernacular structures are located within the site. It notes that there are no protected structures in the vicinity of the site, but does not refer to the presence (or not) of vernacular structures in the locality. I note that the nearest structure included on the NIAH is located c.1.2km to the west, but there are a number of vernacular residential buildings a short distance to the west of the site.

8.8.3. In terms of impact, the proposed quarry extension will entail the removal of Enclosure SMR GA125-042 (CHF 2), which the EIS classifies as a permanent, fairly significant impact. A possible iron working furnace, if extant, would also be removed through the development. The EIS fails to classify the significance of this impact, however the impact will be permanent. It recommends that should these features, if proven to be of archaeological merit, they should be archaeologically excavated and preserved by record as mitigation. The EIS also notes that it is the National Monuments Service, in consultation with the planning authority who will formulate and ratify any archaeological mitigation, should it be required.

8.8.4. The EIS indicates that the proposed development will have a moderate visual impact on the character of the landscape having regard to the 65no. recorded monuments within 2km. It submits that the topography of the site and the proposed boundary berms and landscaping will minimise any potential impacts and comprise mitigation.

8.8.5. The DAU report of 17/07/15 requested further information be sought regarding archaeological impact statement to enable the planning authority and the Department to formulate an informed decision on the application. The information required included further archaeological assessment of the site by a suitably qualified archaeologist; a programme of test excavation of GA125-042 by an archaeologist licensed under the National Monuments Acts 1930-2004; and written report stating recommendations to the planning authority and the National Monuments Service of the DAHG. In the event that significant archaeological remains are found, the DAU indicate that a refusal of permission may be recommended. Despite that the application went on time extension for a period of 6 months, no further archaeological assessment appears to have been carried out by the applicant.

8.8.6. Based on the report of the DAU, it is apparent that there is inadequate information submitted on file regarding archaeological remains on site, and the significance of same, to make a decision on the proposals in view of potential archaeological

impact. Given that the proposed development will be permanently remove all archaeological remains from the site, it is not reasonable to permit the proposed development in the absence of required assessment of the significance of same contrary to the recommendation of the DAU. In the absence of this information it is not possible for the Board to complete an informed EIA on archaeological impacts.

8.9. **Flora & Fauna**

8.9.1. Impacts on flora and fauna are addressed under chapter 5, based on published literature and field visits made by ecologists Pat Roberts (B.Sc(Env)) and John Hynes (B.Sc.(Env)., M.Sc(Ecol)). The survey was limited by reason of the time of year it was completed (March 4th, 2015), with summer being the optimum time, however the assessors considered it unnecessary to carry out surveys in different seasons as the habitats were identifiable and a thorough assessment of baseline environmental conditions on site could be achieved.

8.9.2. The site is not covered by any environmental designations, including Natura 2000 sites, etc. The floral habitats of ecological significance on site were found to be the area of Gorse, Bramble and Hawthorn Scrub dominating the western side of the site, and the stream and low lying field of Wet Grassland that form the western boundary of the site and which (the stream and its potential floodplain) has the potential to carry pollution to a wider area that the site itself (see figure 5.2, Habitat Map). It should be noted that the Wet Grassland (abutting a watercourse) within the western perimeter of the landholding falls outside of the redline boundary and is not proposed as part of the extraction area or as part of the quarry. No rare or protected habitats during the site visit and no habitats listed in Annex I of the EU Habitats Directive were recorded on site or in the immediate vicinity.

8.9.3. The ecologists recorded any bird species seen or heard during the site visit, but no formal dedicated bird survey appears to have been carried out. The survey data was supplemented by data from surveys carried out in the vicinity in January 2013. Only common non-threatened species were evident in the survey of 2015, however

peregrine (Falco peregrinus) an Annex I EU Birds Directive Species was observed during the visit of 2013, which is a species known to nest on cliffs such as those in the existing quarry.

8.9.4. Evidence of fox (Vulpes vulpes) was found on site which provides habitat suitable for its prey, including Pygmy Shrew (Sorex minutus), Wood Mouse (Apodemus sylvaticus), Bank Vole (Myodes glareolus), Hare (Lepus timidus hibernicus) and Rabbit (Oryctolagus cunniculus), although the latter two species are noted as not recorded within the site. No trees of suitable size or age were on site to act as significant bat roosts, and no caves were found within the site, or are known to the landowner, that might accommodate such roosts. However, the site is likely to accommodate bat foraging, especially within the scrub and around hedges and tree lines. No signs indicative of an active Badger (Meles meles) set were found on site in 2015, but feeding signs of Badger were noted in 2013. Evidence of Fallow Deer (Dama dama) was recorded, presumably on site, but the EIS does not make this clear. No evidence of Pine Martin (Martes martes) or Otter (Lutra lutra), although suitable habitat exists on the western side of the site and sections of same were inaccessible. It should be noted that the Wet Grassland area and watercourse are outside the redline boundary of the proposed extraction area and quarry.

8.9.5. In terms of significance, the species of ecological significance that potentially use the site include Otter (Annex II of Habitats Directive) and Badger (Protected under the Wildlife Act, 1976; Wildlife (amendment) Act 2000). The watercourse adjacent the west of the site flows into a larger catchment likely to support Otter populations, as well as White Clawed Crayfish (Austropotamobius pallipes) and occasional Atlantic Salmon (Salmo salari), which are listed under Annex II of the Habitats Directive. Eel, which are critically endangered in both Irish and global contexts could potentially be impacted by pollution of the stream. Peregrine, Annex I of Birds Directive was recorded on site in 2013 but not 2015 (nest in cliff faces). No other habitats are considered of particular ecological significance.

8.9.6. In terms of impacts on flora and habitats, the EIS submits that the proposed development will result in the loss of habitats of relatively low ecological significance in an area where they are widespread and that, post quarrying, it is likely that habitat and species diversity on site will be increased, with a long term minor negative impact. Potential for long term negative indirect impacts from contaminated runoff from the development is noted, but given the existing mitigation measures evident on site, and proposal to continue same, the potential was considered negligible.

8.9.7. In terms of impacts on fauna, the removal of faunal habitat is limited to grassland and dense scrub, which is plentiful in the surrounding area, and does not include watercourses or woodland that may support high quality faunal habitat. The main species to be adversely affected are passerine species, such as Blackbird, Song Thrush, Robin, Dunnock and Wren, which are common in Galway and Ireland. The EIS neglects to describe the potential impact on peregrine, but suggests that breeding habitat may be created for Sand Martin. The main mitigation measure proposed is phasing, with no removal of bushes to be carried out between 1st March to 31st August inclusive to avoid disturbance of birds. Pre commencement surveys will be carried out at new extraction sites and, if Badger setts are identified, Badger will be excluded[16] using best practice under license.

8.9.8. On balance, I am satisfied that the level of impacts arising on flora and fauna are acceptable within the context of the development and the wider area, excluding potential impacts on Natura 2000 sites which I have addressed separately, below under Appropriate Assessment. It should be noted that the Wet Grassland and watercourse at the western side of the landholding are outside the redline boundary and are not proposed as part of the extraction area or quarry. This area will be separated from the extraction area and active quarry by a berm which should provide additional protection from direct and indirect disturbance of habitat and species and will provide additional protection from potential pollution from contaminated runoff.

[16] I assume this means removed from the site.

This area will also ensure that a wildlife corridor will be maintained along the river and through the site.

8.9.9. Regarding potential impact on Peregrine Falcon, an Annex I species that is likely present and nesting on site, but which I consider not to have been satisfactorily addressed in the EIS, I note that the existing cliff habitat is artificial and would not exist without extraction having been carried out and, it is my experience that Peregrine commonly nest in active quarries. With some consideration it may be possible to minimise disturbance to nesting Peregrine through phasing of blasting operations. Cliff faces retained in the exhausted extraction pit would likely provide suitable permanent nesting habitat and result in a significant long term impact on the Annex I species, although a balance would have to be struck between provision of habitat for the Annex I species and human safety concerns outlined elsewhere in my report. This issue may be addressed by condition.

8.10. **Soils and geology**

8.10.1. Geology and soils are addressed under chapter 6 of the EIS. The chapter was prepared by McCarthy Keville O'Sullivan Ltd, based on a desk study, the Remedial EIS completed for the quarry in 2013 and a site investigation of the proposed extension area carried out on March 4th 2015 by an unnamed McCarthy Keville O'Sullivan Professional Geologist (PGeo). None of EIS project team have a geology qualification or expertise according to information on the consultant's website.

8.10.2. The soils on the site are indicated as not being good for cultivation and are not rare. The EIS rates the impact on soils as permanent but imperceptible as the soil is proposed to retain a useful function within the site boundary. In terms of mitigation, it is proposed to retain soils and subsoils on site for landscape works and future restoration of the site. The quantity of soils and subsoils that will need to be removed to accommodate extraction does not appear in the EIS. The depth of soil varies from 0.3m to 2.1m within the area subject of trial holes, which were limited to the east of the existing pit, with no information on soils to the west and southern

sides. It is therefore uncertain whether it is possible to retain all overburden can be usefully as berms given their limited scale proposed. No other soil storage area is identified pending site restoration. It may be possible to address this issue by condition. I consider the impact to be locally significant but acceptable and that the proposed mitigation measures are generally acceptable.

8.10.3. The bedrock material to be removed is purported to be of low intrinsic value and is widespread throughout the area and this part of County Galway and the EIS submits that the impact is therefore neutral to slight and will be confined to the area of the site. No mitigation is proposed in this regard. A permanent slight positive effect will arise in that the exposure of new cliff faces have the potential to be examined by experts to enhance geological understanding of the area. On balance I consider the impact to be reasonable in the context.

8.10.4. The EIS considered there to be a risk to soils from hydrocarbon spillage, but that the potential impact is imperceptible as the potential sources are limited and small in scale and there is no evidence of previous soil contamination. This risk can be addressed by standard condition.

8.11. **Water**

8.11.1. Hydrology and hydrological issues are addressed in chapter 7 of the EIS. The assessment was carried out by McCarthy Keville O'Sullivan Ltd, but the name and qualifications of the person who undertook the assessment is not stated in support.

8.11.2. According to the information in the EIS the existing extraction, with a quarry floor of 102mOD, has not breached the water table and the proposed extraction will not progress beyond 102mOD of the existing quarry. It is further stated that the existing extraction activity has had no impact on the productivity of wells in the vicinity. There are no third party objections in this regard. This issue can be addressed by standard condition.

8.11.3. There is a very small stream adjacent the landholding's western boundary. The EIS indicates that the said stream, which is not monitored, is reported under the Water Framework Directive to be of 'high' status, as is the Ballinlough River into which it flows. This river discharges to the Cappagh River c.6.7km to the east of the site, at which juncture the EIS confirms is of 'good' status, but which declines to 'moderate' status in advance of its discharging to Lough Derg. I have confirmed this information from EPA data[17]. It should be noted that the site is located on the boundary of two waterbodies: Drumkeary (tributary of Shannon Lower) referred to as Ballinlough River in the EIS and by the EPA; and Cappagh (tributary of Shannon Lower) to east and north, into which the Drumkeary River discharges but that all discharge is proposed to Ballinlough watercourse system. The EIS reports Lough Derg as being of WFD quality rating 'poor' status, however WFD Report indicate the quality of the lake as 'moderate' and at risk of not meeting the standard (July, 2010) and current EPA surface water quality data indicates that it is of oligotrophic / mesotrophic[18] quality.

8.11.4. EIS reports that the surface water quality in the stream adjacent the western boundary of the landholding was tested at two points, effectively upstream and downstream of the landholding. The samples were analysed, using (it is submitted) ISO/CEN approved or equivalent methodologies, for a range of parameters considered indicative of potential emissions associated with quarry operation. The EIS indicates the results show the quality of the surface water to be good and not impacted by the existing quarry activities.

8.11.5. The results show the pH of the watercourse at the upstream sample location (SW1) to be 4.5, outside the EQS range of 5.5 - 9pH. The EIS posits that this is likely a

[17] http://gis.epa.ie/Envision (accessed 21/09/16)

[18] **Oligotrophic** lakes have low primary productivity, as a result of low nutrient content. These lakes have low algal production, and consequently, often have very clear waters, with high drinking-water quality and typically have ample oxygen and often support many fish species. **Mesotrophic** lakes have an intermediate level of productivity. These lakes are commonly clear water lakes and ponds with beds of submerged aquatic plants and medium levels of nutrients. https://en.wikipedia.org/wiki/Trophic_state_index#Oligotrophic (accessed 26/09/16)

result of soil conditions and agricultural activities and runoff. I am not entirely satisfied that the EIS addresses this issue sufficiently. The pH level was found to have moderated to within the EQS range over the relatively short distance (220m), suggesting that it poses only very localised impacts on a very small watercourse. But this would also seem to indicate that the issue arises from discharges from the site, which will grow in line with the proposed extension of the quarry. It may be reasonable to address this by condition.

8.11.6. The level of hydrocarbons at 31ug/l and 86ug/l at SW1 and SW2, respectively, appear high compared to, for example, the maximum allowable concentration for benzo(a)pyrene of 0.1ug/l[19]. However, the EIS does not comment on the result or their significance, which raises some concern. The chapter does not refer to discharges from the site to the said stream, other than Photo 7.2 '*View of Gravel Filter for pumped water at western site boundary*', although the existing and proposed discharge of water (but not quantities) to the surface water system is described under chapter 3 of the EIS.

8.11.7. The EIS reports the groundwater vulnerability rating to be high or extreme based on GSI data; that there are a number of boreholes providing domestic water supply in the vicinity; and that the groundwater aquifer is not expected to achieve 'good' status by the 2015 deadline. The EPA data indicates the aquifer is of 'good' status (2007-2012).

8.11.8. Groundwater quality testing was carried out on a borehole on site (with the extraction pit) and the results included in the EIS. The EIS does not explain why the testing was carried out for the selected 10 parameters and which parameters were excluded. Of particular note is the level of '*extractable hydrocarbons water (C8-C40, Diesel Range and Lube Oil) by GC-FID*' found to be 426ug/l and which the EIS refers to as '*slightly elevated*'. No context is given for that results in terms of limits for same in terms of maximum allowable concentration level in ground water. I can only draw

[19] S.I. S.I. No. 272/2009 - European Communities Environmental Objectives (Surface Waters) Regulations 2009.

attention to the Board, again, to the MAC for benzo(a)pyrene (which is also a hydrocarbon) of 0.1ug/l as a comparison to the result for C8-C40, which is more than 4000 times above same. Under EU Groundwater Directive 80/68/EEC (on the protection of groundwater against pollution caused by certain dangerous substances) Member States are required to take the necessary steps to prevent the introduction into groundwater of substances in list I which includes mineral oils and hydrocarbons.

8.11.9. Having regard to the foregoing, I have serious concern about the levels of hydrocarbons found in sampling of adjacent watercourse and in groundwater beneath the site and the failure of the EIS to address the possible significance of same. This concern is exacerbated by the failure of the EIS to support its assessment with the name and qualifications of the hydrologist / hydrogeologist who carried out the assessment. The pollution of surface waters and ground water by dangerous substances pose a threat to human and environmental health. I consider the information provided to be insufficient to enable the Board to carry out a full EIA on water. The Board may consider it appropriate to seek further information to clarify these issues prior to any decision to grant permission.

8.12. **EIA conclusion**

8.12.1. Having regard to the requirements under Article 94 of the Planning and Development Regulations, 2001, that an EIS shall contain the information set out under paragraphs 1 and 2 of Schedule 6, I have been unable to locate reference to the '*An outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking into account the effects on the environment'*[20]*.* The EIS would therefore appear to be technically non-compliant. In this instance, a number of alternatives may be appropriate to consider, including the extent and depth of extraction, the phasing of extraction and access, or indeed the 'do nothing' alternative.

[20] Schedule 6(1)(d).

8.12.2. The EIS may be otherwise considered technically compliant with the requirements of A.94, however, as detailed above, I consider there to be deficient information and/or inadequate assessment in a number of respects, including in respect of impacts on human beings (noise, vibration, dust and safety) soils, water, traffic.

8.13. **Appropriate Assessment**

8.13.1. I note the stage 1 appropriate assessment screening report (AASR) submitted with the application which concluded that in view of best scientific knowledge and on the basis of objective information, either individually or in combination with other plans or projects, it not likely to have impact on the conservation objectives of any European Site, that it can be objectively concluded that there are unlikely to be significant effects on any European Sites and therefore further assessment is not considered necessary. The planning authority concurred with the screening report.

8.13.2. The proposed development is located outside any Natura 2000 site and will not result in direct impacts in terms of land-take or removal of habitat concerned. There are 16no. Natura 2000 sites within 15km of the proposed development site. Slieve Aughty SPA (site ref.4168) is within 1.6km. There is hydrological source-pathway connecting the proposed development to the Lough Derg Northeast Shore SAC (site ref.002241) and the Lough Derg (Shannon) SPA (site ref.004058) c.8.5km to the east, as the crow flies, and to Barroughter Bod SAC (site ref.000231). I do not consider any other Nature 2000 sites to be of concern given the scale, nature and location of the proposed development site and the absence of direct or indirect impact source-receptor pathways and the distance of the proposed development from other Natura 2000 sites in the absence of obvious source-receptor pathways.

8.13.3. The Special Conservation Interests for Slieve Aughty SPA (site ref.4168) comprise Hen Harrier (*Circus cyaneus*) and Merlin (*Falco columbarius*) and the conservation objective for same is '*to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*'. According to

the Natura 2000 Data Standard Data Form for the site, the main threats and pressures to the SCI's relate to those occurring within the site, with no external threats identified. Therefore, given the proposed development it located outside and at a distance to the site, I am satisfied that potential for significant effects arising on the said Natura 2000 site, alone or taken in combination, may be ruled out.

8.13.4. The Special Conservation Interests for Barroughter Bod SAC (site ref.000231) comprise Active raised bogs, degraded raised bogs still capable of natural regeneration and depressions on peat substrates of the Rhynchosporion. The conservation objectives for the site is *'to restore the favourable conservation condition of Active raised bogs in Barroughter Bog SAC, which is defined by the… list of attributes and targets*' set out under the conservation objective and which I have noted and attached to this report. According to the Natura 2000 Data Standard Data Form for the site, the external main threats and pressures on the site comprise forest planting on open ground(H[21]) and human induced changes in hydraulic conditions(L). The proposed development is not intended to breach the water table and therefore, notwithstanding the diversion of surface water runoff to the existing stream to the west of the landholding, I am satisfied that the proposed development will not impact on the hydraulic conditions on the said Natura 2000 site.

8.13.5. The Special Conservation Interests for Lough Derg Northeast Shore SAC (site ref.002241) comprise Juniperus communis formations on heaths or calcareous grasslands, Calcareous fens with Cladium mariscus and species of the Caricion davallianae*, Alkaline fens', Limestone pavements*, Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* and Taxus baccata woods of the British Isles* (*denotes priority habitat). The conservation objective for the site is '*to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected'*. According to the Natura 2000 Data Standard Data

[21] H – high; M – medium, L – low rank risk.

Form for the site, the external main threats and pressures on the site comprise invasive non-native species (H), pollution to surface waters (limnic, terrestrial, marine & brackish) (H) and fertilisation (M). Given that pollution to surface waters outside of the SAC have been identified as a high risk to the site and there is evidence of existing pollution by hydrocarbons[22] of the water course adjacent to the landholding and into which the existing development discharges, and of groundwater within the site, I have concern about the likelihood of effects on the integrity of the said Natura 2000 site arising from the proposed development. The significance of the said evident pollutants, in terms of significance of its implications for the environment and Natura 2000 sites, in particular, has not been adequately addressed by the applicant in the AASR or in the EIS and, in addition, there is inadequate information about the scale and nature of discharges that will take place to the surface waters from the proposed development. The significant length and small scale of the source-receptor pathway (watercourse) between the proposed development and the SAC can be expected to mitigate the potential impact; the proposal is to divert surface water runoff, not groundwater, and therefore the quantity or discharge can be expected to be fairly limited; and the existing oligotrophic / mesotrophic rating applying to Lough Derg (a large waterbody) which suggests that potential for in combination effects are not likely. However, I am cognisant that risk from pollution of surface waters is identified as a high ranking risk to the SAC, that there is inadequate information on file and that risk of such pollution has not been addressed in the AASR. I therefore consider there to be reasonable scientific doubt that likelihood of significant effects exists and, in view of the precautionary principle, I would advise the Board that a Stage 2 Appropriate Assessment is required.

8.13.6. The Special Conservation Interests for Lough Derg (Shannon) SPA (site ref.004058) comprise Cormorant (Phalacrocorax carbo), Tufted Duck (Aythya fuligula), Goldeneye (Bucephala clangula), Common Tern (Sterna hirundo) and it is the

[22] Chapter 7 of the EIS referring to sampling in 2015.

conservation objective *'to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*'. It is also the conservation objective '*to maintain or restore the favourable conservation condition of the wetland habitat at Lough Derg (Shannon) SPA as a resource for the regularly-occurring migratory waterbirds that utilise it'*. According to the Natura 2000 Data Standard Data Form for the site, the external main threats and pressures on the site comprise fertilisation (H). Given the evidence of existing pollution by hydrocarbons (a hazardous substance) of the water course adjacent to the landholding and into which the existing development discharges, and of groundwater within the site, I have some concern about the likelihood of effects on the integrity of the said Natura 2000 site arising from the proposed development. The significant length and small scale of the source-receptor pathway (watercourse) between the proposed development and the SPA can be expected to mitigate the potential impact; the proposal is to divert surface water runoff, not groundwater, and therefore the quantity or discharge can be expected to be fairly limited; and the existing oligotrophic / mesotrophic rating applying to Lough Derg (a large waterbody) which suggests that potential for in combination effects are not likely. Given that that such pollution external to the SPA has not been specifically identified as a threat thereto, notwithstanding that there is inadequate information on file and that risk of such pollution has not been addressed in the AASR, it would seem unlikely that the proposed development would have a significant effect on the integrity of the SPA.

8.13.7. Having regard to the foregoing, I consider the likelihood of significant effects on the integrity of Lough Derg Northeast Shore SAC (site ref.002241), a Natura 2000 site, from the proposed development, either individually or in combination with other plans or projects, to be uncertain and I would advise the Board that a Stage 2 Appropriate Assessment is therefore required.

9.0 **Recommendation**

9.1. I recommend that planning permission should be **REFUSED** for the reasons and considerations as set out below.

10.0 **Reasons and Considerations/ Reasons**

1. The proposed quarry development, by reason of the nature and frequency of vehicular movements likely to be generated at the existing vehicular entrance to the application site, which is seriously substandard (having regard to the standards for same set out in the Design Manual for Roads and Bridges TD 41-42/11 '*Geometric Design of Major/Minor Priority Junctions and Vehicular Access to National Roads*'), and which provides access to a regional road (R353) that is of unfavourable horizontal and vertical alignment, would endanger public safety by reason of a traffic hazard.

2. The information contained in the Environmental Impact Statement submitted with the application is deficient and is insufficient to enable the Board to carry out an environmental impact assessment of the proposed development in respect of the likely significant impacts on human beings (arising from noise, vibration, dust and safety), water, soils, cultural heritage (archaeology) and on material assets (traffic network).

John Desmond
Planning Inspector

26 September 2016