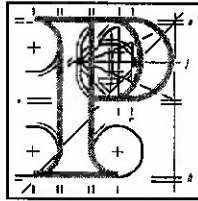


# An Bord Pleanála



## Inspector's Report

**Development:** Application under Section 37L of the Planning and Development Acts 2000-2015, for further quarrying of rock at Balcarrighill, Ballycanew, Gorey Co. Wexford.

### Planning Application to Board

Related Substitute Consent File : 26.SU0054

Applicant : Balcarrig Quarry Ltd.

Planning Authority : Wexford Co. Council

Type of Application : Further quarrying under section 37L

Observer(s) : John & S.J. Teahan  
: Hobbs Family  
: Anne Tighe and Others

**Date of site inspection** : 7<sup>th</sup> December 2016

**Inspector:** Michael Dillon

## 1.0 Introduction & Context

- 1.1 This application to the Board arises following the commencement of Section 37L of the Planning and Development Act 2000, which provides, *inter alia*, for the making of planning applications direct to the Board for continuation of quarrying, where an application for substitute consent for a quarry was with the Board before 15<sup>th</sup> July 2015, and where a decision had not issued in relation to the substitute consent application. The legislation provides for the two applications to be dealt with, in conjunction.
- 1.2 In the context of this application, SU0094 was recommended for a refusal of permission (Inspector's Report dated 17<sup>th</sup> September 2014). New Regulations were subsequently introduced by the Department of Environment, Community and Local Government which related to introduction of section 37L of the Act, and the applicant opted to pursue this new channel for expansion of the quarry operation.

## 2.0 Site Location & Description

- 2.1 The site with an overall area of 6.6592ha (within which there is a stated existing extraction/processing/access area of 3.349ha and a proposed extraction area of 0.7986ha, is as described within substitute consent application ref. SU0094, and it is not proposed to repeat it here. There is signage for the quarry erected on the entrance gates and to one side.
- 2.2 There does not appear to have been any substantial lateral quarrying carried out since this site was last inspected in August 2014. However, there has been some additional quarrying at the western end of the quarry pit with the water table breached and the void filled with rusty/red-coloured water. On the date of site inspection in December 2016, the quarry was open and operational, but at a low level – just one dumper truck moving aggregate around the quarry floor. No crushing/grading/washing plant was operational. Water is extracted from the quarry pond for washing of aggregate – but flows by gravity back into the main quarry pond. There does not seem to be any extraction of water from the newer quarry pond at the eastern end. Warning signage is in place in the vicinity of the two ponds on the quarry floor. The current application relates to extension of the existing quarry to the east into an area of rough pasture with some gorse/briars growing over it, and also into a portion of improved agricultural grassland. The existing berm on the southeastern boundary will have to be removed to facilitate expansion. There is a small wetland area to the southeast of the proposed quarry extension – indicated on the 1:2500 OS map submitted with the application. There is standing water in this wetland area and it would appear to be used for watering cattle – although there was no livestock on the land on the date of site inspection.

2.3 A site notice relating to this planning application was in place at the entrance on the date of site inspection by this Inspector.

### 3.0 Proposed Development

3.1 Permission was sought on 22<sup>nd</sup> January 2016, for quarrying development for a number of elements – all within the quarry lands in this area-

- Extension of rock extraction area by 0.7986ha, to a depth of 142.5m OD. The estimated extraction is 299,475 tonnes: with an extraction rate of 125,000 tonnes per annum. This would result in approximately 30 laden truck movements per day, and an extraction period of approximately 30 months.
- Use of existing processing/stockpiling area, plant, office/toilet/storage buildings, weighbridge, water/oil storage tanks, entrance/access road and ancillary works including new settlement ponds on the quarry floor.
- New series of three inter-linked, sedimentation ponds on the floor of the existing quarry.
- New portable chemical toilet cabin.
- New wheel-wash.
- Surface dressing of access road to quarry offices.

3.1.1 The application is accompanied by the following-

- Dust Monitoring Reports for the years 2013, 2014 and 2015.
- Noise Surveys (11<sup>th</sup> July 2013, 23<sup>rd</sup> July 2015 and 5<sup>th</sup> August 2015).
- Ecological Survey (2016).
- Landscape Report (undated).
- Hydrogeological and Geological Report (dated 22<sup>nd</sup> January 2016).
- Letter from John P. O'Malley & Co, Solicitors, indicating that Redrock Developments Ltd. (the applicant in the Substitute Consent case) is in voluntary liquidation. Belcarrig Quarries Ltd. is now the party carrying on the quarrying business.
- Letter of consent from the owner of the lands to the making of the application.

3.2 Details in relation to site notices was received by the Board on 26<sup>th</sup> & 27<sup>th</sup> January 2016.

### 4.0 Planning History

The planning history of the quarry, the subject of application for substitute consent SU0094, is set down within that respective file, and it is not proposed to repeat it here. There would not appear to have been any further planning applications on this site since 2014.

## **5.0 Planning Context**

### **5.1 Development Plan**

The relevant document is the Wexford County Development Plan 2013-2019. Sections 6.4.5 and 18.16 deal with extractive industry.

### **5.2 National & Regional Guidance**

Of relevance are the following-

- Quarries & Ancillary Activities: Guidelines for Planning Authorities, April 2004 – issued by the Department of Environment, Heritage and Local Government.
- Regional Planning Guidelines for the South East Region 2004.
- Section 261A of the Planning and Development Act 2000 and related provisions (January 2012) and Section 261A Supplementary Guidelines (July 2012) – issued by the Department of Environment, Community and Local Government.

## **6.0 Planning Authority Report**

The Board referred the application to Wexford County Council for comment, by letter dated 26<sup>th</sup> January 2016.

### **6.1 Wexford County Council**

The response of WCC, received by the Board on 21<sup>st</sup> March 2016, can be summarised in bullet point format as follows-

- Quarrying at the site has caused/accelerated the ARD issue. Until this problem has been comprehensively addressed, the PA do not consider that permission should be granted for further extension of the extraction area. The current application does not rule out the possibility of ARD issues associated with the extension.
- There is a lack of information in relation to the three new settlement ponds to be created.
- The surface water management system should be subject to Appropriate Assessment screening if discharges to surface water is to take place.
- Complaints in relation to dust have previously been received in relation to this quarry. Potentially contaminated water should not be used for dust suppression.
- The 0700 or 0800 starting time is too early and would create noise nuisance for residents.
- Mud, dust and stones have previously been carried onto the public road by vehicles exiting the quarry.

- The planning authority has no objection on visual grounds to the remediation proposals – provided they do not involve the importation of significant volumes of material to the site.
- Quarrying has been on-going at this quarry in 2015 and 2016. This continuation was unauthorised. Blasting was carried out in December 2015 and January 2016. The PA has had to take further enforcement action with regard to this and a warning letter was issued in September 2015 and an Enforcement Notice was issued in February 2016. The Board should, therefore, satisfy itself that the drawings submitted with the application accurately reflect the situation on the site.
- The Board will, no doubt, wish to screen this application to determine if it should be subject to EIA.
- The PA considers that the implementation of measures which are deemed necessary to deal with the ARD problem on this site should not be dependent on further extraction at the site being authorised.
- Should the Board be minded to grant planning permission for this extension, then a set of 11 no. conditions are suggested for inclusion in any such grant of permission.

## 6.2 Applicant's Response

6.2.1 The submission of Wexford County Council was referred to the applicant for comment. The response of PDLane Associates, agent on behalf of the applicant, Balcarrig Quarry Ltd, received by the Board on 19<sup>th</sup> April 2016, can be summarised in bullet point format as follows-

- The quarry is the sole means of livelihood of O'Leary & Goucher families.
- The area of sulphide-bearing stones has been isolated, and has not been worked since ARC was identified in 2012. Geological and hydrogeological surveys carried out do not show any significant variation or further deterioration in groundwater quality.
- The affected rock extends approximately 15m in width over a northern face of 320m.
- The application for substitute consent was lodged on 25<sup>th</sup> April 2014, prior to expiration of permission ref. 26.203600.
- The operators continue to engage with the PA and has done all that could be reasonably expected in order to comply with relevant legislation and environmental good practice.
- The on-going extraction at this quarry is the only conceivable way in which the sulphide-bearing mudstones can be sealed and settlement ponds constructed.
- It is not reasonable of the PA to required that no further quarrying should be carried out at this site.
- Cessation would result in loss of employment and a potential deterioration in the quality of the environment. The quarry operator

is fully committed to allocating resources from the ongoing operations of the quarry to fulfil its obligations in this regard.

- Water used for dust control is not dependent on any contaminated water.
- The quarry operators have been adhering to the daily starting times for operation as per permission ref. 26.203600 – Condition 4(a) – 0700-1800 hours Monday to Friday.
- Works to improve the area around the entrance to the quarry were suspended before the totality of the works were completed. The works can be completed quickly and without difficulty. The delay occurred because it would be more effective if WCC enabling works were completed in advance.

6.2.2 The response is accompanied by the following documentation of note-

- On-line article in relation to premium aggregates.
- OCSC letter (dated 19<sup>th</sup> April 2016) in relation to water issues. Only PW6 & PW7, of the 16 no. wells in the vicinity of the site which have been tested, have proved to exceed some of the values set down in relation to drinking water. These two wells are located some 120m southwest of the quarry boundary. The wells are no longer in use. There are not properly lined, and could be contaminated from shallow groundwater or else through intersecting sulphide-bearing rock as has occurred within the quarry. In the absence of detailed hydrogeological assessment of the private wells, it is not possible to definitively identify the source(s) of the poor-quality water. It is recommended that an alternative source of water be found – the cost to be borne by the quarry operator. Further sampling of two private wells in the southeast of the site – PW2 and PW13 – was undertaken by the quarry operator on 12<sup>th</sup> April 2016. The samples showed no exceedances of drinking water quality requirements. Whilst the presence of sulphide-bearing materials cannot be definitively ruled out from the proposed extension area, the recently-completed geophysical survey did not report any anomalies which could be definitively associated with mudstones in the area. Rock core drilling in advance of any bulk excavation would establish whether mudstones were present or not. A significant amount of information has already been submitted to the Board in relation to remediation of ARD. To date, periodic monitoring of groundwater and hydrogeological data collection and assessment is taking place. The final effluent discharge from the treatment system will require a Discharge Licence under the Water Pollutions Act 1977 (as amended). Waste generated will have to be managed in accordance with Waste Management Acts. Discharge will be subject to Appropriate Assessment screening if a surface water discharge is proposed (as opposed to groundwater discharge). The

period of extraction is estimated to take between 3-5 years. The letter is accompanied by the following

- Results from well tests PW1, PW2, PW3, PW4, PW5, PW6, PW7 & PW13.
- Outline Development Timeline Schedule of Tasks.
- A4 map showing location of wells in vicinity of quarry.
- Interim report in relation to two well tests carried out at two wells on 12<sup>th</sup> April 2016, (ALS Environmental).

## 7.0 Observations & Responses

### 7.1 Prescribed Bodies

By letters dated 16<sup>th</sup> February 2016, the Board invited the following Prescribed Bodies to comment on the application-

- Irish Water.
- National Environmental Health Office, HSE
- Department of Communications, Energy and Natural Resources.
- Inland Fisheries Ireland.
- Development Applications Unit of Department of Arts, Heritage and the Gaeltacht.
- The Heritage Council.
- An Taisce.
- An Chomhairle Ealaíon.
- Fáilte Ireland.

### 7.2 Responses from Prescribed Bodies

#### 7.2.1 Inland Fisheries Ireland

The response, received on 14<sup>th</sup> March 2016, can be summarised in bullet point format as follows-

- Of concern is the statement that extension of the quarry may add to the difficulties with ARD, if additional sulphide-bearing material is exposed and not managed properly. Recent geophysical survey did not definitively resolve the issue of whether additional sulphide material is or is not present within the extension area.
- Blasting may increase the likelihood of increase in ARD from the sulphide-bearing rock on this site.
- There is concern that increased activity on this site since IFI wrote to the Board in 2014 (to comment upon application for substitute consent SU0094) will have increased problems of ARD.
- ARD is promoted by exposure of rock to air and water.
- There is concern that sulphide bearing aggregate exported off this site has the potential to cause harm in water bodies wherever it is deposited within the southeast.

- The developer has not proved that future quarrying would not result in pollution of groundwater and surface waters in the area.

#### 7.2.2 Department of Arts, Heritage and the Gaeltacht

The response, received on 15<sup>th</sup> March 2016, can be summarised in bullet point format as follows-

- No archaeological impact assessment is submitted. The site is 200m north of Recorded Monument WX016-016. An archaeological assessment should be required of the applicant by way of additional information request.
- Flora & fauna surveys carried out in December would not have recorded nesting Peregrine – (in cliff faces of quarries)
- Breeding Yellowhammers are a red-listed species of high conservation concern in Ireland. Vegetation containing nests for this species should not be cleared during the nesting period 1<sup>st</sup> March to 31<sup>st</sup> August inclusive.

#### 7.2.3 Health Service Executive

The response, received by the Board on 13<sup>th</sup> March 2016, can be summarised in bullet point format as follows-

- A site visit was conducted on 14<sup>th</sup> March 2016, accompanied by one of the quarry operators.
- Planning permission has expired and Redrock Quarries Ltd. Has gone into liquidation. Belcarrig Quarries Ltd. Is owned by some of the same people as were involved with Redrock Quarries Ltd.
- There has been no remediation of the ARD problem since the site was last visited, and the pond on site is now larger.
- New treatment ponds will be relocated to the existing quarry floor, to allow for the expansion area.
- Treatment of acidified process and surface waters may require licensing.
- A new Hydrogeological and Geological report has been completed by OCSC.
- Consideration needs to be given to dewatering the acidified pond on the site without delay – without removing settled sediment. The pond and sump needs to be filled in with a suitable earth plug and/or lining. The affected rock face also needs to be sealed from water and air. Rainwater needs to be prevented from flowing into the existing pond. Process water should not be discharged to this pond. Process water would need to be treated, if it showed signs of acidification. Full details of surface water and process water collection from all sources within the quarry and its treatment and final discharge should be fully documented.
- Quarrying should not breach the water table. The water table is measured at between 138-142m OD, with the floor of the pond indicated at 126m OD.



- A time limit should be specified for remediation within any grant of planning permission – within 12 months of commencement of expansion. It is of concern that remediation promised when permission was last granted has not taken place.
- All wells within 500m of the quarry should be monitored on a quarterly basis.
- Details of an alternative water supply have not been indicated. Blasting could open up new fissures in the rhyolite which could allow acid water to access adjacent shale over time. Where there are two water catchments, it is important that both be monitored.
- The fact that the site is contaminated with hydrocarbons is worrying, where minimal infrastructure and good practice would control the problem.
- Dust monitoring results are produced for January to December 2015 – a period during which quarrying was not authorised. There is no metal analysis on the dust.
- No real noise monitoring has been indicated. No vibration reports are provided. A vibration report and blasting management report should be available for every blasting event.
- It is recommended that a 300m buffer zone be provided around quarries to prevent nuisance complaints from residents. Security fences and earth berms are required on site boundaries.
- The absence of a comprehensive and supervised Environmental Management Plan at this quarry is worrying. The quarry has been the subject of planning enforcement in the past.
- The threat to water supplies and groundwater inflow to surface waters in the area is a concern.
- Since neither the local authority or residents have confidence in the applicant, environmental monitoring should be carried out by the local authority and/or independent specialists appointed by the local authority, and at the developer's expense.
- A temporary permission tied to compliance should be considered for this site, arising from concern that extraction would be continued without compliance with conditions.
- Hours of operation should be 0800-1800 Monday to Friday and 0800-1400 on Saturdays.
- Since remediation of the quarry does not propose any amenity use afterwards, there is no long-term community gain. Road improvements in the area, at the developer's expense, might benefit the community into the future.
- There have been a number of complaints to the HSE from members of the public in relation to the operation of this quarry.

### 7.3 Observations from Individuals

7.3.1 Observations were received from the following-

- Mr. & Mrs. J. Teahan, "Froyle", Bolinready, Ballycanew, Gorey, on 24<sup>th</sup> February 2016.
- Ian Doyle, Planning Consultant, agent on behalf of the Hobbs Family, Balcarrighill, Ballycanew, Gorey, on 25<sup>th</sup> February 2016.
- Ann & Mick Tighe and Others, Balcarrig, Ballycanew, Gorey, on 25<sup>th</sup> February 2016.

7.3.2 The issues raised can be summarised in bullet point format as follows-

- Redrock Developments went into liquidation in 2012, before the application for substitute consent was made.
- The planning permission for this quarry has expired. Notwithstanding this, blasting occurred in December 2015 and January 2016. Permission to blast in October 2015 was withdrawn by Gorey Garda Station when it was discovered that the quarry had no planning permission.
- An Enforcement Notice has been issued by WCC in relation to operations at this quarry.
- The application contains contradictory information in relation to lifetime – in places three to five years and elsewhere two to two-and-a-half years.
- Noise surveys are not representative. This is a quiet rural area, and noise from traffic on roads is not significant.
- Dust monitoring results are from a time when this quarry should not have been operational.
- The well survey diagram is out of date. There is a house (built two or three years ago) opposite the quarry entrance, not shown.
- The owner of PW3 was not aware of testing of her well in either 2012 or in 2015/2016.
- There is no confidence that depth of extraction to 142.5m will be adhered to.
- Sixty HGV movements per day is too much for this rural area. Lately, most haul movements have been to the west – where the application states that 85% will travel east towards the R741.
- There is no indication of where wheel-wash water will discharge.
- The application refers to 7-8 staff. The application in 2004 referred to 5-7 staff.
- There is no indication of where waste from the chemical toilet is being discharged.
- The application refers to water recycled from the lagoon being used for dust suppression. This should not be the case where such waters may be contaminated with heavy metals.
- This quarry will never be reinstated if permission is continually granted for extensions.
- Blasting, carried out after the Hydrogeological Report was written, may have altered ground conditions.

- The quarry pond is still contaminated, and may be contaminating nearby wells. The 2004 application stated that wells would be monitored twice a year and results sent to the Council. This was never done.
- The type of rock which exists in the extension area has not been established, and could contain sulphide-bearing rock.
- Water from the contaminated pond on this site has been used for washing aggregate.
- The quarry pond on this site now appears to be a lake.
- New machinery has been imported to this site – indication of continued operation without planning permission.
- The quarry operator has a proven track record of regularly breaching rules and regulations.
- The Hobbs family own four one-off houses to the south of the quarry, and have permission to construct a fifth. Two of their wells are contaminated – and all houses are now served by one well which is in the path of groundwater flow from this quarry. There is no public water supply in the area.
- There is no new information contained within this new application – relying as it does on recycled information from the rEIS submitted with the application for substitute consent. Some limited additional water quality testing was undertaken.
- No timeframe is submitted for completion of remediation.
- Samples from wells PW6 & PW7 indicated low pH values consistent with dilute acid and elevated levels of iron and manganese. BH2 & BH3 within the quarry show even higher levels of pollution of groundwater. These boreholes are downgradient of the presumed groundwater flow of the quarry and indicate the impact which exposed contaminated water in the quarry pond is having on groundwater down-gradient. Whilst it is known that higher levels of iron and manganese can occur in Ordovician rock (such as exists at this quarry), the extremely elevated levels are indication of anthropogenic source. The fissured nature of the bedrock renders it highly likely that contamination will be spread in groundwater.
- Since November 2015, the floor of the quarry has been excavated a further 10m approximately.
- The proposed extraction area is located adjacent to an area where sulphide-bearing mudstone exists.
- Based on the information submitted, it is impossible to determine if additional quarrying will exacerbate the problem of ARD.
- Flooding in the quarry has cut off access to the toe of the sulphide-bearing mudstone – so that it is accessible now only from above.
- The erection of warning signage is the extent of compliance to date with the suggested measures outlined in the rEIS.

- If the Board is minded to grant planning permission, it should consider the following-
  - Establishment of hydraulic barriers to prevent migration of contaminated waters off the site.
  - Immediate treatment of contaminated waters in quarry pond.
  - Impermeable barrier on exposed sulphide-bearing mudstones.
  - Survey to establish if sulphide-bearing mudstones exist within the proposed expansion area.
  - Management Plan to link extraction with remedial works required.
  - Alternative drinking water supplies for houses on wells in the vicinity of the quarry.
  - Comprehensive monitoring for noise, dust and vibration.

7.3.3 The submissions were accompanied by the following documentation of note-

- Correspondence from WCC in relation to issuing of Enforcement Notice.
- Copies of Blast Notices sent to residents from Belcarrig Quarries – dated October & December 2015 and January 2016.
- Face-book page advertising delivery of new machinery to this quarry and confirming supply to Readymix.
- Website company details for Belcarrig Quarries Ltd, Belcarrig Concrete Ltd. and Ballynara Sand & Gravel Ltd.

## 8.0 Assessment

The principal issues of the proposed development relate to potential contamination of ground water and surface water, and likely impact on the wells of houses in the area; noise; dust; vibration; and traffic.

### 8.1 Development Plan & Guidance

The site is rented from the landowner. The Development Plan has not been altered since the previous report of this Inspector in relation to SU0094 in September 2014.

### 8.2 Extent of Site and of Permission

The extent of the site, relative to the substitute consent application, has been outlined in section 9.3 of the Inspector's report of 17<sup>th</sup> September 2014. It is proposed to extend the extraction area to the east by 0.8ha – quarrying into a rising hill on this side of the site. Planning permission ref. 26.203600 expired on 16<sup>th</sup> February 2014. The application for substitute consent was lodged with the Board on 25<sup>th</sup> April 2014. It would appear

from the details contained within the application and submissions from the PA and objectors, that this quarry has continued to operate since that time – the exact level at which it operated being unclear. The quarry was operating at a low level on 7<sup>th</sup> December 2016, during this Inspector's visit. Additional quarrying has been undertaken at the western end of the quarry with the excavation of a pit on the quarry floor, which has since flooded and was full of reddish/brown-coloured water on the date of site inspection.

### 8.3 Soils & Geology

- 8.3.1 Information in relation to geology is contained within an Hydrogeological and Geological Report submitted with the application. A non-invasive geophysical investigation was carried out, using targeted transect lines – indicated on the below-referenced Figure No. 10. [I note that Figure No. 10 within this Report indicates an expanded extraction area which includes the sulphide-bearing mudstone exposed within the existing quarry. This is at variance with other drawings and statements within the report which states that this area will not be disturbed by further quarrying. I further note that the survey areas extend considerably beyond the proposed expansion area, to encompass large areas to the northeast and southwest of the existing quarry – indicated on an aerial photograph at Figure 2.2]. The results of the testing have to be interpreted. The report states “However, the Chargeability response shows a distribution that is in some cases most probably perpendicular to the geological strike therefore the presence of possibly mineralised faults can be speculated. These speculations do not contradict previous investigations. However, drilling will be required to enable correlation between geophysical facies and lithologies”.
- 8.3.2 The proposed extension area is not immediately adjacent to the exposed sulphide-bearing mudstones. It is acknowledged that the proposed development has the potential to exacerbate the ARD problem, if further veins of sulphide-bearing mudstones are unearthed during expansion. The ARD problem is estimated to have commenced sometime between 2008-2010 when the sulphide-bearing mudstones were exposed. Recent geophysical survey work did not definitively resolve that additional sulphide-bearing rock is not present within the extension area. It is stated that the results of the survey will enable targeting of boreholes to more definitively investigate this issue. If sulphide-bearing material is encountered, it is claimed that it can be managed under an Extraction & Materials Management Plan. However, I would note that the ARD problem which has existed at this quarry since 2008-2010 has not been dealt with. I further note that quarrying at the western end of the quarry has breached the water table, with the former pit now filled with reddish/brown-coloured water.

8.3.3 As part of the application to extend the quarry, it is proposed to seal the exposed sulphide-bearing mudstones in the northeastern sector of the quarry. This is a key to remediation of the overall quarry. Just precisely how this is to be done, is not clear. The flooding of the eastern end of the quarry has resulted in inundation of the toe of the sulphide-bearing mudstones, so that water now cuts off access from below – access from above remaining a possibility. A number of potential solutions are put forward within the substitute consent planning application – varying from short-term to long-term, but no one solution is definitively proposed. A solution has not been put forward within this proposed planning application for extension. It is stated in the substitute consent application that additional quarrying in the extension area will fund the remediation measures necessary to deal with ARD.

#### **8.4 Surface & Ground Water**

8.4.1 Information in relation to hydrogeology is contained within an Hydrogeological and Geological Report submitted with the application. The issue of Acid Rock Drainage (ARD) is recorded in the substitute consent application (SU0094), and it is not proposed to repeat it here, other than to state that no quarrying has been carried out since that time in the exposed area of sulphide-bearing mudstones in the northeast portion of the quarry. It should be pointed out that neither has any remediation action been undertaken to deal with the identified problem.

8.4.2 Groundwater monitoring does not show any major variation or further deterioration in groundwater quality from previous monitoring carried out for the rEIS which accompanied the substitute consent application to the Board (SU0094). Groundwater quality in and around the quarry is poor and is characterised by unusually low pH and elevated concentrations of some metals and ions. It is possible that the groundwater quality may already have been poor prior to quarrying – owing to the properties of some bedrock. However, it is acknowledged that quarrying and processing of sulphide-bearing rock is likely to have accelerated any natural processes.

8.4.3 Since 2014, the quarry operator has erected warning signs around the quarry pond, worked away from the sulphide-bearing mudstones, assessed material for sale from stockpiles, and undertaken groundwater monitoring. Recommendations made in relation to dealing with the ARD issue within the rEIS remain valid, and no further solutions are put forward.

8.4.4 Since last visiting this site in August 2014, additional quarrying below the water table has been carried out at the western end of the quarry. This pit is now flooded with reddish/brown water. It does not appear on any of the

drawings submitted with this current application. There does not appear to be any extraction of processing water from this flooded area of the quarry.

- 8.4.5 Toilets on site are stated to be 'Portaloo' facilities – with no associated discharge to groundwater.
- 8.4.6 The quarry site is on the boundary of two Groundwater Bodies – Gorey and Cahore. Site investigation has not established with any certainty whether the site is within one or both of these Groundwater Bodies. Groundwater vulnerability is extreme, owing to exposure of the water table (now in two locations within the quarry).
- 8.4.7 There are a total of eight boreholes on site: BH1-BH4 which date to 2003 and BH6-BH9 which date to 2014. BH5 was lost due to being quarried out. It was not possible to locate BH3 on the date of site inspection – all others were visible. There are estimated to be 16 no. private wells within 500m of the quarry. Well sampling was undertaken in December 2015. The pH levels ranged from 2.0 - 4.5. The pH has increased since 2014 in all boreholes but BH9 – where it reduced from 4.8 to 3.7. The pH in BH1 at the quarry entrance remains within usual bounds at 7.9. Electrical conductivity rates are elevated since 2014. Sulphate, in particular, remains high in most wells. Similarly, a number of metals are at levels above the Groundwater Regulations standards and the Drinking Water standards – the levels not having changed significantly since 2014. Hydrocarbon contamination was again in evidence on the site. I note that plant on the quarry floor driven by diesel motors is not bunded (and neither are oil tanks). One grab sample from the large quarry pond, using an extended pole, revealed pH at 2.7 – from a level of 2.6 in 2014. Electrical conductivity is elevated, as are major ions. Metals also remained above normal concentrations. Sampling has also been carried out at private wells around the quarry. Within PW1, all levels are within expected range except sulphate and iron which are slightly elevated. PW2 & PW4 show levels within expected range. PW5 revealed iron and manganese levels above drinking water limits. PW6 & PW7 are stated to be southeast of the quarry [they are in fact southwest] and neither has been in use for some time, due to water quality issues. It was not possible to gain a sample from PW7 in December 2015, as the pump had been removed. PW6 had a pH of 4.2, and elevated metal and sulphate concentrations, (making it unfit for drinking purposes) but stated to be an improvement on when the well was last tested. It is not known if wells link shallow and deeper water-bearing strata – leading to upper level water potentially contaminating lower level water. Installation of additional lined wells which isolate upper and lower strata is stated to be required to further elucidate this issue. It is entirely possible that private wells have intersected an acid-generating horizon, as has occurred within the quarry. The absence of geological logs from private well-boring activities renders it impossible to establish if

this is or is not the case. This is a reasonable conclusion. There is no established connection between the ARD problem within the quarry and the contamination of nearby wells.

- 8.4.8 The quarry is located at the summit of a hill, so the only inflow of water is from direct precipitation – estimated at 1,060mm per annum. The quarry pond is stated not to be subject to dewatering, and there was no evidence of any dewatering during site visits by this Inspector. The base of the quarry pond is estimated at 126-128m OD. It is not clear why the depth of this pond has not been measured. It is further postulated that silt from aggregate washing may be acting as a plug at the bottom of the pond and preventing dissipation of water from the pond into groundwater. As there is no mention of the second pond on the floor of this quarry, there is obviously no information on how deep it is. The level of the main pond was stated to be at 144m OD in December 2015. Winter rainfall has flooded the eastern end of the quarry, and it is estimated to contain 55,000 – 60,000m<sup>3</sup> of water. The level of the pond is stated to vary by up to 5-6m during the year. Since 2014, quarry pond water is stated to be no longer used for washing aggregate. However, this is contradicted by what was observed during site inspection in December 2016, where an extraction pipe and pump is fitted to aggregate washing plant on the quarry floor – linking it directly to the main quarry pond. All drainage from the washing plant is back into the main quarry pond. This release of wash water back into the principal quarry pond could be resulting in acceleration in deterioration in water quality (as per p.18 of the OCSC Report which accompanies the application).
- 8.4.9 It is stated that extraction from the extension area will be to a floor of 142.5m OD. The level of the existing main quarry pond is stated to be 144m. Clearly there is a possibility of flooding of the extension works by up to 1.5m. This quarry is not de-watered, and there is no proposal to dewater it. The existing main quarry pond will, therefore, have to be shored-up or sealed above the lowest level of the workings – at least in winter. There is no information on the level of water in the second pond at the western end of the quarry. Cross-section drawings clearly show the level of the quarry pond above the finished extraction level of the overall quarry – 142.5m. It is likely, therefore, that the entire quarry will flood – at least in winter, when the water table is higher.
- 8.4.10 Mitigation measures put forward include the following-
- Hydrogeological assessment in area around PW6 & PW7 to identify causes of low pH. If the quarry is deemed responsible, then the quarry operator to provide an alternative source of drinking water for the houses served by these wells.
  - Quarterly monitoring of all wells and the quarry pond.



- Site security signage to keep members of the public away from the quarry pond.
- Covering over of the exposed sulphide-bearing mudstones within the quarry.
- Limiting of extraction to rhyolite only.
- Installation of additional monitoring wells to establish if plume of contaminated groundwater is moving away from the quarry.
- Assessment of exposed sulphide-bearing mudstones to calculate acidity load.
- Commence treatability trials on acidic water within the quarry pond.
- Rotary core drilling to establish rock type within the expansion area.
- Continuous measurement of quarry pond levels.
- Installation of test pumping well within quarry extension area and a monitoring well within the existing quarry, juxtaposed to the pond. Undertake a pumping test in the test pumping well monitoring impacts on all relevant monitoring boreholes, to ascertain the ability of the rock to resist the flow of water between the pond and the proposed extension.

8.4.11 There is insufficient information in relation to groundwater impacts, to allow of a recommendation to grant planning permission in this instance. The water table has been breached at the western end of this quarry – likely since drawings were submitted to the Board. There is no information in relation to the extent of the extraction in this area, the depth of the newly-flooded area, the constitution of the reddish/brown water within it, or any connection or impact this has had on the main quarry pond at the eastern end. In the absence of rotary core drilling samples, resistivity testing is inadequate to establish whether there are further seams of sulphide-bearing mudstones within the proposed expansion area. There can be no certainty that the proposed expansion will not exacerbate the existing ARD problem at this quarry, particularly where the composition/pollution levels of different strata of the main quarry pond are not known. The winter water level at the main quarry pond is indicated as being above the level of the proposed lowest level working, which would potentially necessitate the dewatering of the extension area, or the creation of further sump(s) within the quarry. It could also result in the accidental escape of existing polluted waters from the principal quarry pond into the extended working area, with consequential impacts for down-gradient wells and drinking area for farm animals to the southeast. There is concern also that blasting may result in creation of preferential pathways for the escape of water from the quarry pond – which already drains to groundwater, with consequent impacts for wells located down-gradient of the quarry. Extraction of water from the principal quarry pond for washing of aggregate could lead to public health problems in the form of fugitive dust blown from stockpiled aggregate. Permission should be refused for the above reasons.

## 8.5 Ecology

A short report which accompanies the application refers to a site visit in December 2016 (clearly a mistake, which should likely read December 2015). Habitats are identified, but not mapped. There are no nature designations either within or immediately abutting the site. The site originally comprised improved agricultural grassland and some rough/grazing and scrub at the eastern end – dominated by gorse/bracken/bramble/holly. There is no bat habitat within the expansion area. Linnet and Yellowhammer are likely to nest in the gorse. I have elsewhere in this report commented upon the potential impact of the development on European sites. The Department of Arts, Heritage and the Gaeltacht was concerned in relation to the impact of the development on Yellowhammer – a red-listed species in the Birds of Conservation Concern in Ireland (BoCCI) 2013 report. Clearing of ground which would be suitable nesting for this species should not take place between 1<sup>st</sup> March – 31<sup>st</sup> August inclusive. It would be possible to attach a condition to this effect, to any grant of planning permission issuing from the Board.

## 8.6 Air Quality

8.6.1 The application is accompanied by a short report of dust monitoring carried out in 2013, 2014 and 2015 – at three locations (not shown on any drawings). It is not clear what the operational status/level of the quarry was at the time the surveys were carried out. Measurements taken did not exceed 331mg/m<sup>2</sup>/day. I note that the original planning permission for this quarry (ref. 26.203600) had a dust deposition limit of 130mg/m<sup>2</sup>/day. However, this permission has expired. The principal impact of a quarry on air quality will relate to dust. There is no wheel-wash at the existing quarry, but the proposed development provides for one. Quarry faces and berms will act as barriers to migration of fugitive dust. Rock is to be extracted by drilling and blasting. An expansion of the scale proposed will not have any significant impact in relation to release of greenhouse gases from machinery and plant.

8.6.2 Objectors have complained of dust nuisance in the past from this quarry. A report from the HSE to the Board indicates concern that dust monitoring did not include analysis for metal content (Aluminium, Arsenic, Cadmium, Chromium, Lead, Mercury, Nickel or other metals). This concern arises from the identified ARD problem on the site, where the quarry pond is contaminated. Water extracted from this pond for washing aggregate could result in deposition of metals which could then become airborne when the stockpiled aggregate dried out. This potential hazard exists for quarry workers and for local residents where airborne dust may contain such metals and may also impact on agricultural lands in the vicinity of the

quarry where deposited dust may contaminate plants and soil. Dust suppression measures on the entrance road could result in contaminated dust being washed into roadside gullies on the public road at the quarry entrance. I note that water from the main quarry pond continues to be extracted for washing aggregate.

8.6.3 I would be concerned that the expansion of this quarry could result in fugitive dust (contaminated with metals) being carried off the site, which would be prejudicial to public health, arising from an identified ARD problem within the existing quarry. Aggregate from the expansion area would be treated within the existing quarry. It is likely that water from the main quarry pond will continue to be extracted to wash aggregate, resulting in a possibility of fugitive dust contaminated with metals being carried off the site when stock piles dry out. Permission should be refused for this reason.

## 8.7 Noise & Vibration

### 8.7.1 Noise

The application is accompanied by a series of noise surveys from 2013, 2014 and 2015. Two monitoring points were used to left and right of the entrance – shown on sketch drawings. It is not clear just what the level of quarrying was at the times of survey. The monitored periods were very short. LAeq varied from a low of 32.1 dB to a high of 55.0 dB. It is proposed to erect berms along the southeastern and northeastern boundaries of the expansion area – the boundaries closest to houses. These berms, together with the location of processing plant on the quarry floor will help to screen noise emissions. Control of working hours should limit the period during which noise nuisance might impact on nearby residents. The lifespan of the proposed quarry extension is limited to 30 months (elsewhere 3-5 years in the documentation submitted with the application). It would be possible to limit the permission to just 30 months by way of condition attached to any grant of planning permission. I would be satisfied that the separation distance of the quarry extension from houses in the area would result in noise nuisance from a quarry expansion of this nature not being significant. A condition could be attached to any grant of planning permission requiring that noise emissions be within the parameters set down within the Quarry Guidelines 2004 – 55dB(A) by day-time (LAeq 1 hour) and 45dB(A) by night-time (LAeq 15 minutes).

### 8.7.2 Vibration

Rock is currently extracted using drilling and blasting. The proposed quarry extension would not be any different. Blasting would not appear to have been frequent in the past year. The HSE is concerned that the notice of blasting to residents should be more precise in timing, in order to reduce the likelihood of sudden surprises where people forget the timing.

It is standard practice to require notice of blasting to be given in advance to residents within 500m of a quarry. The Quarry Guidelines 2004 set out blasting noise and vibration limits which should not be exceeded, and a condition could be attached to any grant of planning permission from the Board requiring adherence to the limitations set down in the Guidelines. I would not consider that blasting at this quarry extension would result in any significant impact on human beings in the area. The HSE points up further potential problems with blasting whereby it could impact on the fissured nature the rock where there is an identified ARD problem and where groundwater could be contaminated. This issue is addressed in the Surface & Groundwater section of this Inspector's report.

### **8.8 Landscape & Visual Impact**

The application is accompanied by a short visual impact report with colour photographs. The proposed extension of 0.8ha will not have any significant impact on the visual amenities of the area. It is proposed to construct earth berms along the northeastern and southeastern boundaries of the expansion area. Such berms will serve to screen the working quarry from view from the county road to the south – as do berms around the existing quarry at present. I note that there are no Views & Prospects listed in the Development Plan in this area.

### **8.9 Traffic**

The proposed extraction of approximately 300,000 tonnes of aggregate will take place over an estimated period of 30 months. It is further estimated that 20 HGV movements per day (outward) would be required to haul this quantity of aggregate. This figure would be based on a 5.5-day working week. Permission was granted for this quarry in 2004. The installation of a wheel-wash would certainly be an improvement on what exists at present whereby aggregate is carried out onto the public road or is washed down the access road onto the public road. The haul route is stated to be 85% to the east – towards the R741 at Ballycanew (approximately 4.0km). Objectors have stated that haulage is often to the west into a network of smaller county roads. I would be satisfied that the HGV traffic generated by an expansion of this order would not result in any significant impact on traffic in the area. I would note that there is extensive one-off housing lining the county roads in the area.

### **8.10 Reinstatement**

The application is accompanied by a drawing (R - 25 - 40) showing restoration of the quarry void. Buildings, the weighbridge and the wheel-wash will be removed. The void will be fenced to prevent trespass by animals. Restoration of the quarry void will involve filling in a good deal of

the existing quarry pond, decommissioning the proposed three siltation ponds – with only one to remain. Earthen berms will be bulldozed into the quarry void to create side slopes where cliffs currently exist. The quarry floor will be graded to approximately 142.5m OD. Woodland mix planting will be undertaken around the edges and on shallow mounds on the quarry floor. Phase 1 includes restoration of the western and northern boundaries of the quarry – particularly to deal with the ARD problem on the northern rock face. This phase will be carried out before extraction in the extension area commences. Phase 2 will include the southern and eastern boundaries of the quarry. WCC has recommended that permission be refused. However, in the event of a grant of permission, it is recommended that a bond condition be attached to cover restoration works. I would note that the breach in the water table at the western end of the quarry would seem to have occurred since the survey drawings for the application were submitted – as there is no reference made to this feature in any of the drawings submitted. There is a possibility that the entire quarry will flood – at least in winter.

## **8.11 Other Issues**

### **8.11.1 Fencing**

Access to the quarry extension area will be controlled by existing hedgerows, berms and post & wire fences. Warning signage has been erected around the quarry ponds. Barriers and gates control access to the quarry. Timber posts and a single strand of barbed wire prevents trespass by farm animals around most of the quarry boundaries. However, such fencing would not be sufficient barrier to children trespassing and coming into contact with quarry ponds.

### **8.11.2 Waste Materials**

All waste materials are stored at the quarry office area and on the quarry floor. A condition could be attached to any grant of planning permission requiring that such waste be removed, at least annually.

### **8.11.3 Floodlighting**

Demountable floodlighting is provided at the quarry floor in the vicinity of mobile plant. This is reasonable.

### **8.11.4 Archaeology**

There are no identified archaeological sites within the red line boundaries of the extension site. The Development Applications Unit of the Department of Arts Heritage & the Gaeltacht considered that an Archaeological Impact Assessment should be carried out prior to granting of planning permission. This would appear to be unduly onerous on the developer – regard being had to the setback of the development from the closest Recorded Monument. Having regard to the extent of soil stripping

proposed (0.8ha), it would be appropriate to attach an archaeological monitoring condition to any grant of planning permission which might issue from the Board. I would be satisfied that the proposed development will not have any significant impact on the archaeological heritage of the area.

#### 8.11.5 Protected Structures

There are no Protected Structures located either within or immediately abutting the quarry extension area site.

#### 8.11.6 Financial Contribution & Bond

The Report of WCC in relation to SU0094, indicates that the annual development contribution in relation to quarrying at this site has not been paid since 2006. The report in relation to this QD application does not contradict that statement. Whilst refusal is recommended, in the event that the Board is minded to grant planning permission, it is requested that a condition be attached requiring the developer to pay a contribution in accordance with the Development Contribution Scheme for Wexford County Council (amount unspecified). This would appear to be reasonable. It would be prudent to attach a condition requiring payment of a bond for the reinstatement of the site, should the Board be minded to grant planning permission for this development.

#### 8.11.7 Timeframe of Permission

The documentation submitted with the application variously indicates the extraction period as 2½ - 3 years or else 3-5 years. I would be concerned that this would introduce uncertainty into any future development at this quarry. Should the Board be minded to grant planning permission, I would recommend that the former be adhered to – 2½ - 3 years.

#### 8.11.8 Hours of Operation

Should the Board be minded to grant planning permission for this development, I recommend that hours of operation be restricted to those set down in the Quarry Guidelines 2004 – 0700-1800 hours Monday to Friday and 0700-1400 hours on Saturdays. I would not accept the argument put forward by WCC that because the quarry is remote from the Greater Dublin Area that morning starting times should be later. Whilst this is a rural area, it is also a working area for agriculture, forestry and quarrying.

#### 8.11.9 Signage

Signage has been erected at the quarry entrance. The application drawings do not indicate any signage drawings.

#### 8.11.10 Screening for Environmental Impact Assessment

This application to extend the quarry by 0.8ha is not accompanied by an EIS. An rEIS accompanied the application for substitute consent to the

Board – ref. SU0094. Having regard to the thresholds set down in Section 13 of Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended), in relation to increase in size of permitted developments by greater than 25%, I would not consider that an EIS is required in this instance. I would note the number of technical reports which accompany the application to deal with impacts on specific aspects of the environment.

#### 8.11.11 Environmental Management Plan

The HSE recommends that an Environmental Management Plan be put in place for any extension to quarrying at this site, and expresses concern that one was not in place for quarrying which has already taken place. Arising from mistrust between the PA/residents and the quarry operator, it is recommended that the monitoring aspect of such a Plan be carried out either by the PA or a by a suitably qualified independent expert – at the expense of the applicant. It is difficult to see how such a system would work, and the applicant has certainly not offered it. It would be necessary to get a financial contribution/bond from the applicant to support such a proposal.

### 9.0 **Appropriate Assessment**

9.1 The application is not accompanied by an NIS. Neither the existing quarry, nor the proposed 0.8ha extraction area, is located either within or immediately abutting any European site. The quarry is not currently being dewatered, and there is no proposal to dewater the extension area – the floor area of the extension area being set at 142.5m OD – above the existing water table. There is no map showing the location of the quarry in relation to the closest European sites. The Cahore Polders and Dunes SAC (Site code 000700) is located approximately 12.0km from the site as the crow flies. I calculate that the River Bann, which is a tributary of the River Slaney, and which forms part of the Slaney River Valley SAC (Site code 000781), is approximately 4.7km to the northwest of the quarry as the crow flies. I note that groundwater flow from the quarry is thought to be to the southwest.

9.2 The Cahore Polders and Dunes SAC (Site code 000700), I calculate to be 10.3km to the east of the quarry, as the crow flies. The Cahore Marshes SPA (Site code 004143) I calculate to be 10.2km to the east of the quarry, as the crow flies. Whilst drainage from the quarry is stated to be towards the Courtown Dunes and Glen proposed Natural Heritage Area (at the outfall of the Owenavorrhagh River to the sea), there is no direct surface water connection from the quarry. The quarry is some 8.0km as the crow flies from the this pNHA. There are no surface water features on the boundaries of the quarry – it being located at the summit of a ridge – the closest watercourse being indicated at 350m. I would be satisfied that the

separation distances involved would ensure that there will be no significant impact on any European site.

- 9.3 The Department of Arts Heritage and The Gaeltacht was concerned that no survey during the breeding period for Peregrine was carried out at the existing quarry, where this species is known to favour nesting. The reports accompanying the application did not refer to any records of sighting of this species. The rEIS carried out for the substitute consent application, similarly made no mention of this species being present. This is a working quarry. The extension of the quarry may provide extended cliff areas for potential nesting Peregrine. Peregrine is not listed as a species of conservation interest in the Cahore Marshes SPA.
- 9.4 I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects, would not be likely to have a significant effect on any European site, and a Stage 2 Appropriate Assessment is not, therefore, required.

## 10.0 Recommendation

I recommend that permission be refused for the Reasons and Considerations set out below.

## REASONS AND CONSIDERATIONS

The Board had regard, *inter alia*, to the following-


- (a) the provisions of the Planning and Development Acts, 2000 to 2015, as amended, and in particular Section 37L,
- (b) the Quarry and Ancillary Activities, Guidelines for Planning Authorities issued by the Department of the Environment, Heritage and Local Government in April, 2004,
- (c) the provisions of the Wexford County Development Plan 2013-2019,
- (d) the report and the opinion of the planning authority under section 37L(12)(a),
- (e) the submissions/observations made in accordance with regulations made under Article 270(1) of the Planning and Development (Amendment) (No. 2) Regulations 2015,



- (f) the planning history of the site,
- (g) the pattern of development in the area,
- (h) the details contained within application for substitute consent on the site ref. SU0094,
- (i) the nature and scale of the development the subject of this application, and
- (j) the Inspector's Report.
1. Geophysical survey work at this site has not determined, beyond reasonable doubt, that sulphide-bearing mudstone seams may lie within the proposed quarry extraction area. Rotary core drilling samples would be required to establish with some degree of certainty just what type of rock exists within the proposed extraction area. The excavation of such sulphide-bearing seams, should they occur, could result in exacerbation of the already existing Acid Rock Drainage (ARD) problem within this quarry, which would result in contamination of ground and surface waters, which would be prejudicial to public health and to the ecology of watercourses in the area.
  2. Blasting for rock within the proposed extension area could result in the creation of preferential flow paths within the fissured bedrock, which could hasten the dispersion of contaminated water (through groundwater) from the principal quarry pond which is contaminated by ARD. This in turn could impact on private wells located down-gradient of the groundwater flow direction, which would be prejudicial to public health.
  3. The drawings submitted with this application do not accurately reflect the level of quarrying at this site. In particular, the water table has been breached at the western end of the overall quarry and the excavated pit now filled with reddish/brown-coloured water. There is no information on the composition of this water body or how it connects (if at all) with the existing quarry pond wherein an ARD problem has been identified.
  4. Continued extraction of water from the principal quarry pond, which is contaminated by ARD, could result in the escape of fugitive dust from stockpiles of washed aggregate, which could negatively impact on the health of humans and farm animals. The proposed development would be prejudicial to public health and to animal health.
  5. It is proposed to extract rock to a level of 142.5m OD within the extension area. The principal quarry pond, contaminated by ARD, is currently at a

level of 144m OD. There is a danger that the proposed extension area could be inundated to a shallow level with contaminated waters from the principal quarry pond. This would result in contaminated waters being brought closer to down-gradient private wells to the southeast of the quarry, which would be prejudicial to public health.

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.



**Michael Dillon,  
Inspectorate.**

**9<sup>th</sup> December 2016.**

**DECISION QUASHED**