An Bord Pleanála

Inspector's Report

Development: Limestone Quarry at Ballynacarrick, Ballintra, Co. Donegal

Application for Substitute Consent under Section 177E

Planning Authority : Donegal County Council

Owner/Operator : Northstone (NI) Ltd.

Review under Section 261A

: None

Parties

Observers : None

Date of site inspection : 4th June 2014

Inspector: **Michael Dillon**

1.0 PLANNING HISTORY

1.1 Section 261A

On 20th August 2012, Donegal County Council determined that a remedial Environmental Impact Statement (rEIS) and a remedial Natura Impact Statement (rNIS) were required in relation to this quarry. The quarry had been visited on 23rd May 2012, and was operational at that date. A concrete-batching plant and concrete block-manufacturing plant on the site were not operational on that date. The Council determined that the quarry had expanded by 9ha. approximately, between 1995 and 2010 – something that could not have been envisaged on 1st October 1964 (on which date it was deemed that the quarry had been operational). The Council calculated the overall extraction area to be 23.0ha – based on 2010 aerial photography. The determination/decision of the Council in relation to Section 261A was not referred to the Board for Review.

1.2 Section 261

The Section 261 Quarry Registration documentation referred to a quarry of 50.78ha, with an extraction area of 38.73ha. The registration no. was QY/02, and the quarry was registered to Roadstone Provinces Ltd. It was stated that the quarry was operational pre-1st October 1964 – having opened in the 1950's.

1.3 Planning Permission

Permission was granted to Roadstone Provinces Ltd. (**ref. T.1610/93**) on 24th June 1994, for concrete batching plant and asphalt plant at this quarry.

1.4 Extent of Quarrying

The extent of this quarry is to be gleaned from various sources. It would appear that the overall landholding of the quarry owner was 50.78ha – as per the section 261 Registration documentation. That documentation stated that within the landholding, quarrying extended to 38.73ha. This latter figure is unlikely to be correct as up to 28ha of the area outlined was within an SAC – to the east of the quarry. The quarry, as then outlined, included areas which had been quarried out and on which quarrying facilities had been constructed, such as block yard, agricultural lime plant, asphalt plant, precast concrete fabrication and batching plant – but not all marshalling areas. The overall area of the quarry included agricultural lands to the south – outside of the SAC. I note that the area of the quarry was given as approximately 40ha on the application form for permission to construct a concrete batching plant and asphalt plant in 1993 – although

there is no map of the overall landholding included in the history documents submitted by Donegal County Council to the Board. The red line area of the quarry which forms the basis of this current application for substitute consent to the Board is 12.57ha – as per the application form. This 12.57ha is stated to be part of a larger 25ha worked area of quarry at this location. The wider blue line ownership of the quarry operator now extends west as far as the N15 but interestingly excludes the SAC lands to the east (which had been part of the quarry as registered under section 261). I would estimate that the wider blue line ownership extends to approximately 50ha (as measured from Myplan website) – but this is not the same 50.78ha as shown on the section 261 Registration maps.

2.0 APPLICATION FOR SUBSTITUTE CONSENT

2.1 An application for substitute consent was made on 30th July 2013, by Quarryplan Ltd, agent on behalf of the quarry owner, Northstone (Northern Ireland) Ltd. The application was accompanied by an rEIS and an rNIS. The site area was stated to be 12.57ha – the area by which the quarry had expanded post-1990. However, the rEIS and rNIS considered the impact of the entire quarry – extending to some 24ha. The site area does not cover processing or manufacturing operations. This application is within a wider land ownership of approximately 50ha.

2.2 A CD with application details was received by the Board on 20th August 2013 – this CD included a Site Location Map to scale 1:10560, as requested by the Board.

3.0 SITE LOCATION AND DESCRIPTION

3.1 This limestone quarry, with a stated area of 12.57ha (within a larger quarry), is located approximately 0.75km south of the village of Ballintra in County Donegal. The area is characterised by a drumlin-dominated landscape with fields separated by dry-stone walls. There is a substantial amount of one-off housing on narrow twisting country roads in the vicinity. The site entrance from the N15 is located at approximately 60m OD. The high point of the quarry is 85m OD, with the quarry floor being 45m OD.

3.2 Access to the site is from the N15 National Primary Route (a relatively recently-constructed, off-line section of the original Sligo to Donegal road) at a point where the 100kph speed restriction applies. There is no public lighting in the area and there are no public footpaths. There are hard shoulders on either side of the road at this location, but no acceleration/deceleration or right-turning lanes. The road is broad and straight, and sight lines are good in either direction. The entrance is wide and recessed, with a small traffic island to separate arriving and departing traffic. There is modest signage for 'Northstone' flanking the entrance.

Entrance gates are set back a considerable distance from the edge of the carriageway. A site notice was erected at this entrance on the date of site inspection. The entrance, and the road leading to the weighbridge, is sealed with tarmacadam. Notwithstanding this, some dust is being carried out onto the N15 carriageway on the wheels of vehicles leaving the quarry.

3.3 Approximately 200m from the site gates there is a wheel-wash and spray bar – together with a weighbridge and single-storey office building with associated small car-park. A septic tank to serve the office building is located in a marshy field to the west. Hard by is a bunded fuel storage area and machinery repair shed. Some waste is stored in this area also. To the northeast of this area is an agricultural lime plant (with dust suppression measures at entrances) and further northeast a concrete batching plant and block manufacturing facility. Further northeast again is an asphalt plant. All of these facilities were operational on the date of site inspection.

3.4 Rock is obtained by drilling and blasting. Primary rock crushing takes place at the quarry face using mobile crushers, with materials transported to the semi-mobile crushing and screening plant for secondary and tertiary treatment. There was no quarrying of rock or further treatment on the date of site inspection. Stockpiles of aggregate are stored in various places throughout the quarry, but principally on the quarry floor in large mounds. These mounds are formed by tipping aggregate from the first and only bench level of the quarry. There are exposed rock faces on all sides of the quarry – with no evidence of water ingress from quarry walls. Re-vegetation has not taken place due to the active nature of the entire quarry area. There is some shallow surface water ponding on the quarry floor. There was very little by way of quarry-generated traffic on the date of site inspection. A large front-loading articulated shovel vehicle was in use, emptying water onto haul roads, on what was a dry warm day.

3.5 The quarry can be divided into two principal portions – those lands to the north and east within which extraction is currently taking place and which form the basis of the application for substitute consent; and lands to the south and west which occupy the historic quarrying area, concrete block manufacturing, concrete batching, precast concrete manufacturing, agricultural lime plant, asphalt plant and associated facilities. Waste concrete is deposited within the southern sector of the quarry. Water management for the site comprises a sump on the quarry floor from which water is pumped to an open channel above the quarry face where it flows by gravity into a series of small lagoons and channels (flush with vegetation) – ultimately discharging to a pair of rectangular settlement lagoons just to the north of the quarry entrance on the N15. These two lagoons contained floating vegetation. Along the way, water is abstracted for washing aggregate, concrete block plant, agricultural lime plant,

asphalt plant, wheel-wash and dust suppression measures. There is an hydrocarbon interceptor on the final outfall to the New Stream at the point where it is culverted beneath the N15 in a 2m diameter pipe. The discharge from the quarry to the New Stream was flowing clear on the date of site inspection. The New Stream itself flows through karstic limestone – entering the quarry site in the southeast corner – and appearing above ground and disappearing below ground along its course. It has been channelled into a new course along the southern boundary of the site on its route to the aforementioned 2m diameter culvert beneath the N15. The flow in the New Stream was negligible on the date of site inspection – with parts of the channel heavily overgrown with vegetation.

3.6 Not all of the blue line quarry site is used for quarrying. There is a large area between the quarry proper and the N15 which is used for grazing purposes – fields being divided by dry-stone walls and fences. There is an agricultural access to these lands from the N15. There is a second substantial area in the southeast which is similarly used for grazing – divided by some fine examples of dry-stone walls. The site is traversed north/south by 110kV power lines – with two sets of twin timber support poles being located within the quarry. The entire quarry is surrounded by a stout timber post and barbed wire fence (with four strands of barbed wire on top of ordinary wire mesh). Warning signs are in place. In addition, water bodies are further fenced-off.

3.7 To the north, the quarry abuts agricultural land and scrub – the boundary with which is dry-stone wall and hedgerow. To the east, the quarry abuts scrub/scrub grazing land on pulverised limestone pavement – the boundary with which is a dry-stone wall (collapsed in places). Lands to the northeast and east form part of an SAC. There is the remains of a cashel/ringfort close to the eastern boundary (not visible due to excessive vegetation growth). To the south, the quarry abuts agricultural land – the boundary with which is dry-stone wall. To the west, the quarry abuts N15 National Primary Route – the boundary with which is a mature landscaped berm and hedgerow – completely screening the quarry from view from the N15, which is slightly elevated at this point. The quarry is visible from the N15 – approaching from the direction of Sligo. The quarry is completely screened from county roads to the north and east. To the south, where the land is higher, the quarry is visible from country roads. The quarry is also visible from just one location on a county road on the opposite side of the N15.

4.0 REPORT OF DONEGAL COUNTY COUNCIL

The Report of Donegal County Council, received by the Board on 11th October 2013, can be summarised in bullet point format as follows-

- The planning history of the quarry is set out.
- The quarry is not affected by any special amenity designations within the County Donegal Development Plan 2012-2018.
- The quarry abuts Ballintra SAC and pNHA to the northeast and east.
- The quarry is not particularly visible from surrounding countryside.
- There is a wheel-wash at the exit, and dust control is in operation.
- A traffic survey indicates 40-60 loads per day exiting the site – c.300,000 tonnes per annum.
- There is a Discharge Licence for dewatering this quarry – 8,600m^3 per day – suppressing the water table at 45m OD.
- The quarry is not located within a floodplain, and does not give rise to flooding concerns.
- The cashel/ringfort on this site has been destroyed by quarrying. As there will be no further soil-stripping, there is no further threat to the remains of the cashel/ringfort.
- The application is not accompanied by a restoration plan.
- It is considered reasonable that the existing entrance arrangements shall be conditioned to meet current technical standards, insofar as is reasonably possible.
- The planning authority has no objection, in principle, to the Board granting substitute consent for this application – subject to the attachment of a list of suggested conditions (16 in total).

5.0 PRESCRIBED BODIES

5.1 The application was referred by the Board to a number of Prescribed Bodies, on 6th August 2013, as follows-

- Development Applications Unit of Department of Arts, Heritage & the Gaeltacht.
- An Taisce.
- Bord Fáilte.
- The Heritage Council.
- An Chomhairle Ealaíon.
- Inland Fisheries Ireland.
- Department of Communications, Energy & Natural Resources.
- National Roads Authority.
- Health Service Executive.

5.2 Responses were received from the National Roads Authority, the Geological Survey of Ireland, An Taisce, and DoA,H&G.

5.2.1 <u>National Roads Authority</u>
The response, received on 14th August 2013, can be summarised in bullet point format as follows-

- The access to the quarry is from the N15 at a point where the 100kph speed restriction applies.
- Documentation accompanying the application is deficient. A Traffic & Transport Assessment and a Road Safety Audit are required.
- These studies should be funded by the quarry owner/operator.
- Any grant of permission should require that there be no intensification of traffic volumes using this entrance/exit.

5.2.2 Geological Survey of Ireland

The response of the GSI, received by the Board on 27th August 2013, indicated that it had no comment to make. [An annotated aerial photograph accompanying this submission would seem to refer to a different site].

5.2.3 An Taisce

The response of An Taisce, received by the Board on 6th September 2013, states that there is no planning permission for a rock quarry at this location. Whilst there is good documentary evidence of quarrying in the 1960's, the Council determined that there was major expansion post-1995 which could not have been anticipated in October 1964. There are no grounds for seeking consent for a development which should have been the subject of a planning application at the appropriate stage. Planning permissions granted by the Council for one-off houses in the vicinity are irreconcilable with a quarry.

5.2.4 Department of Arts, Heritage & the Gaeltacht

The response of DoA,H&G, received by the Board on 9th September 2013, can be summarised as follows. A Recorded Monument (DG103-019), Cashel has been directly impacted by this quarry. An archaeological assessment (including geophysical survey) of the entire area of the remaining Recorded Monument should be carried out. Based on findings, a programme of targeted archaeological test-trenching may be required.

6.0 Response Submissions

6.1 The observation of the National Roads Authority was referred by the Board to the applicant and to Donegal County Council for comment.

6.1.1 The response of Quarryplan Ltd, agent on behalf of the applicant, Northstone (Northern Ireland) Ltd, received by the Board on 30th September 2013, can be summarised in bullet point format as follows-

- The application for substitute consent does not relate to future development. The application does not seek substitute consent for the existing access – and it is not included within the red line of the application.
- The access to the quarry has not altered since 1995.

- The N15 was constructed on its present line by Donegal County Council c.1984 – pre-dating the Roads Act of 1993. Materials from the quarry were used for the road construction. The access was designed by, and agreed with, Donegal County Council at that time.
- The access would have been considered when a planning application was made for a concrete batching plant and asphalt plant in the mid-1990s. This application was granted permission by the Council.
- Impacts in relation to traffic were considered in the rEIS submitted with the application for substitute consent. There was no readily available baseline data back to 1990. Traffic movements since 2005 have been outlined. The N15 accommodated a level of traffic associated with an extraction rate of 550,000 tonnes per annum in 2005. That peak has not been repeated – the extraction rate in 2012 was only 100,000 tonnes.
- The assessments required by the NRA are for future development – and are not relevant for the assessment which the Board is carrying out in relation to impacts on the environment and on European sites in the past.

6.2 The Report of Donegal County Council was referred to the applicant for comment.

6.2.1 The response of Quarryplan, received by the Board on 1st November 2013, can be summarised in bullet point format as follows-

- With regard to suggested condition 2a, it is considered that restoration of the site would constitute future development.
- With regard to suggested condition 2b, there is no plant, buildings or surface equipment proposed as part of the application. The buildings on site are outside the red line boundary and have been in existence for more than 7 years.
- With regard to suggested conditions 3a & 3b, the entrance does not form part of the application site.
- With regard to suggested conditions 4a & 4b, it is not understood why warning signage is required for a quarry which has been in existence for over 50 years.
- With regard to suggested condition 5, a condition relating to winning and working of materials only would be appropriate.
- With regard to suggested condition 6, the entire perimeter is already fenced. Locked gates are provided at the entrance.
- With regard to suggested condition 7a, this noise condition would suggest that future development is being considered. The EPA has produced suggested noise guidelines for quarries.
- With regard to suggested condition 7b, noise is not considered for future development.

- With regard to suggested condition 8a, dust is not considered for future development.
- With regard to suggested condition 9a, a wheel-wash and sprinkler system is already in place. With regard to the other sections of suggested condition 9; they would imply future development which is not considered to be part of this application.
- With regard to suggested condition 13, it is considered unnecessary.
- With regard to suggested condition 14, it is considered unnecessary.
- With regard to suggested condition 15, it is considered unnecessary and ambiguous. No scrap metal is proposed for storage on this site.
- With regard to suggested condition 16, it is considered to be *ultra vires*. No future development is proposed for which a bond would be needed. Any number of remedial measures such as planting, berm construction, alteration to benches etc. could in themselves require planning permission and EIA.

7.0 ASSESSMENT – General Comments

7.1 Temporary Cessation if Necessary

It is open to the Board to consider issuance of a temporary cessation notice under section 177J. Having regard to the information presented in the application and the rEIS and rNIS, and to what was observed at the time of inspection of the site, it is my opinion that no aspect of the development is clearly giving rise to a very significant current adverse effect on the environment or to adverse effects on the integrity of a European Site. There has been a significant negative impact on a cashel in the recent past – but the impact is not continuing, as there is no quarrying in this part of the site at present. I do not, therefore, consider that a temporary cessation notice is warranted in this instance.

7.2 Inspection of Site under Section 261A

The determination/decision of Donegal County Council under Section 261A was not the subject of a Review to the Board, and the site was not, therefore, inspected.

7.3 Extent of Site

This application for substitute consent relates to a site, as outlined in red, being a portion only of the quarry and the access to it. There are other quarry lands and lands which have not been subjected to quarrying within the blue line ownership of the quarry owner/operator. This application

relates to 12.57ha of an overall worked area of an estimated 24.0ha. This quarried area lies within a larger landholding of 50.78ha. Irish Cement were stated to have acquired the lands in 1967. Roadstone purchased the lands in the late 1980's. There is a black & white OS aerial photograph from 1989 – detailing the extent of the quarry at that time (p.36 of the rEIS).

7.4 County Development Plan

It has been accepted that a pre-1964 quarry operation existed on this site. Planning permission was granted for a concrete batching plant and a tarmacadam plant in 1994 – developments which were clearly ancillary to the principal quarrying use at this site. The current Plan is the Donegal County Development Plan 2012-2018. There are no designated landscapes, protected areas or protected views/prospects within or immediately abutting this site. I have elsewhere in this report commented on the cashel on the eastern boundary of the quarry.

7.5 Bonds & Financial Contributions

7.5.1 Donegal County Council suggested a number of conditions which the Board might attach to any grant of substitute consent. The final condition (no. 16) related to a bond for future restoration. The quarry owner has argued that such a condition would be *ultra vires*, should the Board be minded to attach it. In practice, the Board has been attaching such conditions to grants of substitute consent, and I see no reason why one should not be attached in this instance, notwithstanding the arguments of the applicant. In the normal course of events, where planning permission for extension of quarrying was sought, a condition would be attached requiring payment of a bond for remediation of the site. There is no guarantee that quarrying would continue into the future – even if planning permission was granted for such future quarrying. It is desirable that the planning authority have the necessary funding to remediate this quarry, in the event that quarrying is abandoned.

7.5.2 The Council has not recommended that a Development Contribution condition be attached to any grant of substitute consent. The Development Contribution Scheme for Donegal County Council 2008-2012 would seem to be the most recent, and the one currently in operation. This Scheme does not include a contribution requirement for quarry developments. There is reference to payment of Special Development Contributions as follows- 'Examples of Special Development Contributions would be bridge or road improvements relating to quarries, wind farms…' It would seem that the Council was satisfied that the expansion of this quarry would not have resulted in a requirement to pay a Special Development Contribution.

7.6 Reinstatement

I note that it has been the practice of the Board to attach a condition relating to restoration of quarries, in previous decisions to grant substitute consent. It would be appropriate, in this instance, to attach a condition to any grant of substitute consent, requiring the remediation of this quarry site.

8.0 ASSESSMENT – Environmental Impact Assessment

8.1 General Comments

The quarry was registered under Section 261. The Board requested Donegal County Council to forward a copy of the conditions attached to the future continuance of quarrying at this site under section 261, but no such set has been sent. Instead, the Council has included a set of conditions, which it is suggested be attached by the Board to any grant of substitute consent. No comment is made on whether these suggested conditions are either the same or similar to conditions (if any) attached under section 261. The applicant has not made any reference to conditions which may or may not have been attached under section 261. Hours of operation are stated to be 0800-1800 Monday to Friday and 0800-1500 on Saturdays.

8.2 Consideration of Alternatives

Having regard to the nature of the application, consideration of alternative sites is not relevant. Again, consideration of alternative means/methods of extraction is not relevant. The quarry void is as it is. Section 2.0 of the rEIS deals with the issue of alternative quarries within the wider area, but I do not consider that this is of any relevance. The applicant concludes that given the ownership of the site, and the value of the resource, there are no alternatives to the continued operation of this quarry. This would appear to be reasonable.

8.3 Structure of remedial Environmental Impact Statement

The rEIS document (Volume II) is accompanied by a separate Non-Technical Summary (Volume I). The rEIS submitted examines the impart of the development undertaken on the site under a grouped format approach, with each of the impact areas, as set out in Article 3 of the EIA Directive, being addressed for potential impacts, proposed mitigation measures and residual post-mitigation effects. The rEIS does not consider the impact on Human Beings under a separate heading, but instead considers the impact under other headings such as water, noise,

dust, landscape, traffic etc. There are separate chapters covering geology, water, air quality & climate, noise & vibration, landscape, waste management, ecology, traffic, natural resources, socio-economic impacts, cultural heritage, and the interaction of the foregoing. The rEIS addresses the main likely significant direct and indirect effects that the development has had on the environment.

8.4 Historical/Current Operating Level

In terms of impacts, and having regard to the retrospective nature of the application and assessment, it is noted that the site, which forms the basis of the analysis contained within the rEIS (and rNIS), is operating at an historically low output level relative to the height of the economic boom, when the quarry was registered under Section 261.

8.5 Trans-boundary Impacts

The quarry is located 7km from the boundary with Northern Ireland. I would be satisfied that there were no significant environmental impacts on another member state arising from past operation of this quarry.

8.6 Geology

8.6.1 Section 5 and Appendix 3 of the rEIS deal with the issue of geology. The site is located within the Ballyshannon Limestone Formation. There are two active levels (sinkings) within the quarry – the lower (Sinking 2) at 46m OD and the upper (Sinking 1) at 60m OD. The processing area is located between 60-80m OD. Waste products are tipped in the southern part of the overall quarry – outside of the red line site boundary.

8.6.2 Appendix 3 gives a good description of the quarry (including annotated photographs). There is a sump in each of the two active levels – the lower one being the larger. The Report at Appendix 3 outlines safety measures and recommendations – rock stability, water handling, and movement throughout the site. A failure in the rock face was observed at a clay-filled joint (dissolution feature). Continued weathering will lead to further instability. It was recommended that the fault be staunched using armour stone infills. By definition, the impact on geology will have been severe, in that the deposit of limestone has been removed. However, in the context of the extent of similar-type geology in the area, the impact will have been minor. The site does not form part of any geologically noteworthy site.

8.7 Water

8.7.1 Section 6 and Appendix 4 of the rEIS deal with the issue of water. There are effectively two quarry levels – Sinkings 1 and 2. Ground water levels

have been suppressed at 45mOD through pumping from a sump on the quarry floor (Sinking 2). It is estimated from piezometers on site that the original ground water level would be 62-63m OD. Pumped water is routed into an open channel at the top of the quarry face and from there through a series of lagoons and channels to a final pair of settlement lagoons just north of the entrance. There is vegetation growing along some of the channels and within the lagoons. The water flow has somewhat changed since the rEIS was prepared – with lagoons being located in slightly different locations – but with the overall handling regime remaining the same. Discharge from the final two settlement lagoons is via an hydrocarbon interceptor to a V-notch weir, before discharge under licence to the New Stream on the western boundary of the site just to the north of the site entrance. On the date of site inspection, discharge was running clear. The New Stream drains lands to the southeast of the quarry – before entering the quarry in the southeast corner. This stream drains lands within which the Ballynacarrick Landfill Site (closed since December 2012) is located – some 1.5km to the southeast. Regular testing is carried out on waters in the New Stream because of the location of the landfill. The stream appears and disappears underground in karst channels within the quarry landholding. The stream has been channelled to the south of the quarry void. The flow in the stream was negligible on the date of site inspection. There is vegetation growing within parts of the newly excavated channel of this stream. The New Stream is rerouted around the two final settlement lagoons, before being channelled beneath the N15 by way of a 2m diameter culvert. The New Stream discharges to the Ballymagrorty Stream which ultimately discharges into Durnesh Lough – some 4km further downstream. Discharge waters are tested monthly since August 2008. As pumped water is channelled through the quarry, it is abstracted for washing of aggregate, concrete block plant, asphalt plant, agricultural lime plant, wheel-wash and dust suppression measures.

8.7.2 Water flow measurements, taken in February 2013, gave an estimated flow rate of 18.5 litres per second in the New Stream, upstream of the quarry discharge. The estimated flow of the Ballymagrorty Stream upstream of its confluence with the New Stream was 10 litres per second, and was 270 litres per second downstream of the confluence. At the discharge point to Durnesh Lough, the flow was estimated at 400 litres per second. It is acknowledged that the measurements were taken after a period of heavy rainfall – and following a wet winter. Certainly, on the date of site inspection by this Inspector, the flow rate in the New Stream was negligible – a mere trickle. The discharge from the quarry provided most of the flow in the New Stream beneath the N15 culvert. There are no Council, EPA or OPW gauging stations for flow rate or water quality on the local stretch of the Ballymagrorty Stream.

8.7.3 The aquifer beneath the quarry is classified as 'Regionally Important (karstified but dominated by diffuse flow)'. The vulnerability is 'Extreme'. The ground water flow is to the west and the sea. The rEIS refers to karst features at some distance from the quarry – but fails to refer to the New Stream which disappears and reappears within the site boundary – in a karstified conduit. There was no indication of inflow of water from quarry faces on the date of site inspection. There was shallow ponding of surface water on the quarry floor on the date of site inspection, and water was being pumped from the sump on the quarry floor.

8.7.4 Water quality monitoring has been undertaken at the quarry since December 2003. The final pair of settlement lagoons was installed around 2006. There has been a Discharge Licence in place for this quarry since December 2006. Since then, suspended solids at the discharge point have only marginally exceeded limits on four occasions – with testing on a monthly basis. The licence allows for discharge of 8,600m^3 per day – average daily discharge is 565m^3 – with peaks of 5,000-6,000m^3 per day in winter. Storm events equate to 16,300m^3 across the quarry site. Such storm events can be accommodated through allowing the quarry floor to flood with shallow water.

8.7.5 A total of six boreholes were drilled around the quarry boundaries BH1-BH6 in March 2012. It was possible to locate all but one of these on the date of site inspection. It was not possible to located BH1, due to dense vegetation cover, although the silt pumped out from the boring was evident on the ground in the area. The rEIS states that ground water levels have been monitored on a weekly basis since 12th March 2013 – a practice which has obviously been discontinued. Piezometers indicate a poor degree of hydraulic interconnection between fissures, faults, joints and bedding planes. They exhibit negligible variation following recharge events. Suppression of water on the quarry floor at 45m OD is not considered to be having any significant impact on water levels in boreholes. Despite their proximity to the void, water levels in piezometers are 10-25m higher than the quarry void – BH2 level is 63m OD (and it is located to the north and close to the quarry void). Based on water levels in BH1 & BH3, it appears that groundwater lowering has not extended beneath adjacent Ballintra SAC to the east.

8.7.6 Foul waste from the canteen and offices is discharged to an old septic tank located in a low-lying marshy field just to the west of the car-park. This septic tank would appear to be in place some considerable time.

8.7.7 As with all quarries, refuelling and lubrication of machinery/plant poses a threat to surface and ground waters in the event of an accidental spillage. Fixed or semi-fixed plant and machinery is refuelled on site using a mobile, double-skinned bowser. Spill kits are available. Spillages would

be drawn towards the sump on site – which ultimately discharges through an hydrocarbon interceptor on the outfall to the New Stream. It would not be practical to move semi-fixed plant or machinery for refuelling. I note that oil storage tanks on the site are fully-bunded, although not covered to prevent ingress of rainwater Exposure of rock results in the groundwater vulnerability being 'extreme'. However, I would be satisfied that appropriate site management in the past would have prevented any significant deleterious impact on ground or surface water quality, arising from storage of fuel and lubricants on site.

8.7.8 The rEIS states that there are no records of flooding at the site or downstream within the receiving watercourse. The report of Donegal County Council confirms this. There is noted to be some ponding of water at swallow holes on the New Stream during heavy rainfall events.

8.7.9 The principal mitigation measures in place and suggested in the rEIS include the following-

- Monitoring of discharge limits by way of Discharge Licence.
- Allowing the quarry floor to flood in the event of significant rainfall events.
- Control of refuelling and any accidental spillages.
- Maintenance of water-handling system of lagoons and channels.
- Re-routing of the New Stream to the south of the quarry void.

8.7.10 I would not consider that the operation of this quarry has not resulted in any detrimental impacts in relation to ground water or surface water within the vicinity of the site.

8.8 Air Quality & Climate

8.8.1 Section 7 and Appendix 5 of the rEIS deal with these joint issues. In the context of a quarry, the principal impact on air quality will arise from dust. There are a number of ancillary activities at this quarry which will contribute to the overall dust emissions – such as agricultural lime plant, asphalt plant and concrete block manufacturing plant. A number of these facilities have separate planning permissions. For consideration under this application for substitute consent is the dust arisings from the quarry as outlined in red. The limestone quarry will have generated dust from drilling, blasting, crushing of rock, grading aggregate, and haul roads. Dust monitoring has been ongoing since 2004 at four locations – with a fifth added in 2008 (Figure 7.1). These results cover the busiest period of the quarry's history.

8.8.2 Custom and practice dictates a maximum deposition rate of 350 mg/m^2/day (total dust deposition measured over a 30-day period). Tables 7.1-7.5 aggregate the readings into four quarterly periods for the years

2008 to 2012. The majority of readings were within acceptable levels – with a summer exceedance at one station in 2008. Since 2009, levels have all been below the recommended thresholds. More recent monthly dust monitoring, carried out from February-August 2012 (at four/five locations), indicated a highest level of 265mg/m^2/day. Later dust monitoring from 2012/2013 indicated dust levels within the EPA threshold of 350mg/m^2/per day.

8.8.3 Quarry walls will have acted to limit fugitive dust emissions. Water is spread on haul roads during dry periods. There is a wheel-wash and spray bar at this quarry. The haul road between the wheel-wash and the quarry entrance is sealed (notwithstanding which there was some evidence of dust from wheels brought out onto the N15. I would not consider that dust from this quarry would have resulted in significant negative impacts on the environment in the past.

8.8.4 The operation of this quarry will not have had any significant impact on climate in the area.

8.9 Noise & Vibration

8.9.1 Section 8 and Appendix 6 of the rEIS deal with these associated issues. Noise-monitoring, associated with blasting, has been carried out since 2003. From 2003 to October 2007, monitoring was carried out at three locations. Since November 2007, periodic monitoring has been carried out at four locations – the quarry entrance (A), the southern boundary (B), southeastern boundary (C), and northeastern boundary (D). Monitoring would correspond to the busiest period of the quarry. Monitoring locations are at quarry boundaries – so noise levels at noise-sensitive receptors beyond the quarry boundary would be less. Periodic night-time monitoring was carried out at location A. All measurements were within the day-time limit of 55dBL_{Aeq} and night-time 45dB$L_{Aeq.}$ The N15 will have been a significant generator of noise in this area. It is noted that there are various ancillary activities (which would generate noise) at this quarry which operate under separate planning permission.

8.9.2 Blasting is carried out between 10.00 and 18.00 hours (Monday-Friday). Nearby residents are given advanced notice of blasts. Monitoring has been carried out since 2003 – which covers the most active period of the quarry's operation. Nine blast monitoring locations are indicated at Figure 8.2. Peak particle velocity (PPV) rates for vibration are set by the EPA where there is one blast per week or less (10mm/second) or where blasts are more frequent (8mm/second). The EPA-recommended air overpressure limit is 125dB(Lin) max. peak with a 95% confidence limit. No individual air overpressure value should exceed the limit value by more than 5dB(Lin). Table 8.1 gives a selection of readings from 17th August

2012 back, for both PPV and air overpressure. Some exceedances for air overpressure are noted but which did not exceed the 5dB(Lin) maximum exceedance. I would be satisfied that the vibration and air overpressure emissions from this quarry would not have resulted in significant negative impacts on the environment in the past.

8.10 Landscape & Visual Assessment

8.10.1 Section 9 and Appendix 7 of the rEIS deal with these inter-related issues. There is mature screen planting along the N15 roadside boundary which screens the quarry from view. The quarry is visible from the N15 – approaching from the Sligo direction. The quarry is not visible from county roads to the north or east, but is visible from limited stretches of county roads to the south (particularly) and from one point on a county road to the west of the N15. The nature of the drumlin landscape acts to limit the extent of views into and out of the site, and to restrict the visual envelope. So, whilst the impact on the landscape itself is severe, the visual impact is limited.

8.10.2 The site is not located with any special scenic designation of the Development Plan. There are no scenic views of prospects listed in the immediate vicinity of the quarry. There is no Landscape Character Assessment for the county. There is an SAC immediately to the northeast and east of the quarry. It is accepted that the quarry was operational pre-1st October 1964. The realignment of the N15 c.1984 would have been a substantial change in the landscape of this area. A site visit was undertaken in May 2013 for preparation of this section of the rEIS. Six viewpoints were selected VP3-8. It is not clear why there is no VP1 or VP2. I note that the site is particularly visible from the county road to the south – and that there is no viewpoint from this location. However, Viewpoint 8 (on the N15) would be similar to views from the county road to the south. The rEIS includes historic aerial photography of the site. I would be satisfied that the quarry at this location has not had a significant negative impact on the landscape or visual amenities of this area.

8.10.3 No restoration proposals have been submitted with the application for substitute consent, and no on-going restoration has been undertaken in the past. Any grant of substitute consent should include a condition in relation to restoration of the quarry – to include removal of any waste and machinery/plant. Mounds of topsoil/spoil are limited at this quarry. Obviously, a large water feature would result from turning off dewatering pumps at this site – the estimated water table being 62mOD. The cessation of quarrying and resultant restored site would be different from the surrounding landscape, but could be seen as complimentary to it. Exposed limestone cliff faces are not uncommon in this part of the country.

8.11 Waste Management

Section 10 and Appendix 8 of the rEIS deal with this issue. Quarry waste products (mostly waste concrete and reinforcing steel) are tipped in the southern sector of the overall quarry site – outside of the boundary of the substitute consent application. A small amount of overburden is stored at quarry boundaries. Other wastes, such as metals and machinery/plant are stored near the site machinery shed – for removal off-site. The handling of waste oils is controlled at the refuelling area. There is no evidence of any waste materials tipped in the quarry void. Waste products at this site are not causing significant damage to the environment.

8.12 Ecology

8.12.1 Section 11 and Appendix 9 of the rEIS deal with the issue of ecology. To some extent, the assessment in this section will overlap with the Appropriate Assessment section of this Report. This section of the report will concentrate on any impacts on ecology outside of European sites. I would note that there does not appear to be a proposed Natural Heritage Area (pNHA) at Ballintra – referred to in some documentation which accompanies this application for substitute consent. Certainly the website of the National Parks & Wildlife Service makes no reference to one, and neither does the Donegal County Council website. If there was a pNHA here in the past, it is likely to have had the same boundary as the SAC of the same name.

8.12.2 A survey of the site was carried out from 9-11 April 2013. The development of this quarry may have resulted in the loss of Annex I habitat (4.5ha) – Limestone pavement. It is possible that some or all of the 20.3ha of calcareous grassland that has been lost might have conformed to the Annex I habitat – 'Semi-natural dry grassland and scrubland facies: on calcareous substrates'. The habitats on the site are presented at Figure 8 of Appendix 9, and are described in detail. All the habitats within the site boundary are as would be expected at a working quarry. None have any conservation significance. Quarries are inhospitable for most types of fauna and for flora also. Figure 10 indicates habitats on abutting the quarry boundaries. It is suggested in Appendix 9 that the Limestone pavement habitat of Ballintra SAC may once have extended to the west into the quarry site. Figure 11 is an illustration of the likely habitats in place prior to obliteration by quarrying.

8.12.3 Section 6.2 attempts to assess what level of fauna may have been present on this site prior to quarrying activity – considering invertebrates, amphibians, reptiles, birds, bats and mammals, such as stoat, hare, pine marten, red squirrel, otter and badger. No detailed surveys for fauna were carried out within the existing quarry – with comments confined to

observations made during the site visit of 9-11 April 2013 – referred to as a Phase 1 survey. A list of flora species encountered is included in Appendix 9. The reason for this is that the rEIS is attempting to explain what flora and fauna might have existed on the site in the past. Jackdaws, ravens and peregrine falcon have been known to nest in faces of this quarry. There are no suitable structures or trees for bat roosting – apart from rock fissures in an abandoned section of the quarry. The sterile nature of the habitat will result in a poor feeding opportunity for bats. Lagoons near the entrance and surrounding grassland may be used for foraging. Habitats on site are unsuitable for Irish stoat, Irish hare, pine marten, red squirrel, otter and badger.

8.12.4 There are no mitigation measures suggested in this section of the rEIS – the exercise having been centred on the possible impact of quarrying in the past. I would be satisfied that the operation of this quarry would not have had any significant impact on ecology in the area.

8.13 Traffic

8.13.1 Section 12 of the rEIS deals with the issue of traffic. Traffic volumes are in the range of 40-60 laden vehicle departures per working day – a decrease from a high of almost twice that volume in 2005. This equates to an output of 300,000 tonnes per annum.

8.13.2 The access to the site is from the N15 National Primary Route. The structure of this relatively new section of road is good. Whilst the 100kph maximum speed restriction applies in this area, sight visibility is good at the entrance. The entrance has been in place since the road was constructed c.1984. The applicant points out that planning permission has been granted in 1994 for a concrete batching and asphalt plant utilising this same access. There is, therefore, no requirement for a Traffic & Transport Assessment and a Road Traffic Audit, as recommended by the National Roads Authority. I would agree with this assessment. The traffic levels using this entrance have decreased with the recent economic downturn. It would not be reasonable to require the applicant to carry out such studies – particularly where the quarry has been operational since prior to 1st October 1964.

8.13.3 No mitigation measures are proposed within the rEIS. I would be satisfied that the level of HGV traffic generated would not have had a significant impact on the environment over the years of the operation of the quarry.

8.14 Material Assets

Section 13 of the rEIS deals with natural resources. The principal natural resource is the limestone itself, and the various added-value products

made at this quarry site. A limited amount of soil has been stripped to expose the limestone. It is noted that there is a 110kV power line traversing this site. The location of two pairs to timber support poles within the quarry site will have restricted quarrying in certain parts of the site – particularly the northeast corner. These lines will have to be rerouted to allow for expansion of the quarry in the vicinity of the support structures. Because access from this quarry is direct to a National Primary Route, there has been no significant impact on the country road network arising from HGVs.

8.15 Socio-Economic Impacts

Section 14 of the rEIS deals with this issue. The development will not have had any significant impact on population in the area. There will have been a small impact on employment, which continues today – despite the economic downturn. The quarry remains operational. It is stated that 12 people are employed at the quarry – outside of associated jobs in haulage and construction. During the peak years 2000-2007, the quarry employed 15-20 people. Rates have been paid to the Council and associated spend in the immediate economy has benefited the area.

8.16 Cultural Heritage

8.16.1 Section 15 and Appendix 10 of the rEIS deal with this issue. The site was visited on 16th March 2013. The National Monuments Service was consulted in the preparation of the rEIS, arising from the partial obliteration of recorded monument RMP DG103-109 – a cashel on the eastern boundary of the quarry void. The Archaeological Survey describes the monument as follows- 'Internal diam. c.27m. A subcircular area enclosed by a collapsed wall. The wall which survives to a height of 0.45m was probably originally c.1.5m wide but now spills out as much as 8.4m. A gap in the wall in the NW sector is the most likely place for the entrance. A field boundary runs through the centre of the site N-S and stone walls or causeway run up to the cashel wall to the W and S. These could represent the remains of an associated field system. The interior slopes unevenly from N to S and loose stones could represent the remains of destroyed structures. It is situated on a rocky plateau with steep drops on most sides' (Report from site visit in early 1980's).

8.16.2 Approximately half of this circular feature has been destroyed through stripping of soil in the vicinity. The dry-stone wall which runs north/south through the monument remains in place (with some collapse). The rEIS does not explain why soil was stripped at the cashel, as it would not have been possible to quarry in this area, due to the proximity of a pair of timber poles supporting a 110kV electricity line which traverses the quarry

north/south. This line would have to be diverted before any quarrying could take place in the vicinity of the cashel.

8.16.3 Appendix 10 of the rEIS goes into some detail in relation to this cashel. It does not appear on the first edition of the OS 6" maps for the area (1830's) – with the suggestion made that it might possibly post-date the mapping. However, it is more likely that it was missed by surveyors. It appears on subsequent editions of maps. It should be noted that the pattern of dry-stone walls in the area do not appear on the first edition of OS maps either – the likelihood being that they were constructed at a later date. It is curious that a dry-stone wall should have been constructed right through the cashel. A likely explanation for this is that the upstanding remains of the cashel were limited, even at that time. Certainly, what remains on the ground at present (on the eastern side of the dry-stone wall) is no more than 0.5m above ground. This area is heavily overgrown by scrub vegetation, and this Inspector could not penetrate to the remains of the cashel.

8.16.4 The rEIS states that there is no threat to the remains of this cashel, as there is no quarrying in this part of the site at present. It is recommended that a further archaeological assessment should be undertaken, including licensed archaeological testing. Remains might have to be preserved '*in situ*' or preserved by record. The Department of Arts, Heritage and the Gaeltacht responded to the request for comment from the Board on 9th September 2013 – noting the impact on Recorded Monument DG103-019. Geophysical survey is recommended over the remains of the archaeological monument. Based on findings, a programme of targeted test-trenching might be required.

8.16.5 There are no Protected Structures within the quarry site or immediately abutting it. Aerial photographs have not picked up any further likely archaeological sites.

8.16.6 The impact of this quarry on Recorded Monument DG103-109 has been significant; half of the monument has been obliterated. It is difficult to envisage any circumstances whereby permission would have been granted, if sought, to remove this monument. In the light of this conclusion, it is clear that the expansion of quarrying at this site, where no environmental impact assessment was carried out, had a significant adverse impact on the cultural heritage of the area, and substitute consent should, therefore, be refused by the Board.

8.17 Interaction between Aspects of rEIS

Section 16 of the rEIS addresses the issue of interaction between the foregoing headings. Table 16.1 indicates the possible interactions. I do

not consider that there are any significant interactions which have not been addressed within the rEIS.

8.18 Conclusion

The rEIS is in compliance with Articles 94 and 111 of the Planning and Development Regulations, 2001, as amended. The rEIS contains the information specified in paragraphs 1 & 2 of Schedule 6 of the Regulations. There is an adequate summary of the rEIS in non-technical language. The rEIS identified the likely significant direct and indirect effects of the past operation of the quarry on the environment. I would be satisfied, having regard to the preceding subsections of this Report, that the operation of this quarry had one significant adverse impact on the environment – in relation to cultural heritage.

9.0 ASSESSMENT – Appropriate Assessment

9.1 A remedial Natura Impact Statement (rNIS), dated July 2013, accompanies this application for substitute consent. Quarrying on the overall site of 50.78ha was stated to have commenced prior to 1st October 1964, but significantly expanded after 1995. The Habitats Directive came into force on 26th February 1997.

9.2 The quarry site immediately abuts Ballintra SAC (Site code 000115) to the northeast and east – although section 261 Registration maps show ownership extending considerably into the SAC. The NPWS Conservation Plan 2006-2011 indicates that Roadstone owns most of the SAC – although this is not indicated on maps submitted with the substitute consent application. The area of the SAC is stated to be 47ha.

9.3 The SAC is of importance due to the following two habitat types-

Limestone Pavement

The Limestone Pavement at this site is the only known Irish location for the protected Rock Rose species. The habitat also exhibits a good example of shattered pavement and associated species rich calcareous grassland. It is one of the most northerly Irish outposts of typical limestone flora. The structure of the Limestone Pavement is well conserved with many intact examples of open limestone pavement interspersed with species rich limestone grassland.

European Dry Heaths

The Dry Heath habitat is a good representation of this kind of habitat. The occurrence of the wet Bog Rush flush in the centre of this heath area adds to the ecology and diversity of the habitat.

9.4 The Screening Assessment notes that the SAC largely comprises limestone pavement with an area of European dry heaths to the east – both of which habitats are protected under the Habitats Directive. The limestone pavement is species-rich. The SAC is stated to be 10m at its closest to the quarry. There are no watercourse connections between the SAC and the quarry pit. Dust blown from the quarry could impact on the SAC. However, the quarry void itself is likely to act to contain dust. Whilst there is dewatering of the quarry, it is not likely to have any impact on adjacent limestone pavement or European dry heaths within the SAC – given that the limestone pavement habitat is not dependant on maintaining a particular water table – being of its very nature, porous. Water measurements in piezometers located on the quarry boundaries (particularly BH 1 & BH3) indicate that the cone of depression is quite steep, and that the influence of water abstraction would not appear to extend under the SAC. The European dry heath habitat exists where there are pockets of deep peaty soil, again located within a porous limestone setting. The European dry heath habitat is located in the southeast of the SAC – furthest away from the quarry The SAC contains the Red List Common Rock-rose (*Helianthemum nummularium*). The Conservation Plan 2006-2011 states at p.15- 'The quarry was originally included within the site but is now excluded'. There is no further corroborating information and no historical maps submitted as to the extent of the site when it was first designated on 1st March 1997: I note that quarrying has been undertaken at this site long before that date. I also note that the principal threat to the management of the SAC is stated to be grazing by cattle. Obviously, if the quarry were to physically expand to the east, the habitat would be lost. However, what is before the Board for consideration is historic quarrying, and any impact this might have had on the European site. I would be satisfied that quarrying has not had a significant impact on the SAC, as it is currently constituted.

9.5 Other European sites within a 15km radius of the quarry consist of-

- Durnesh Lough SAC – 2.3km to the northwest (Site code 000138). The connecting distance is 4.0km by water from the New Stream quarry outfall beside the N15, to that portion of Durnesh Lough SAC due west of the quarry.
- Durnesh Lough SPA – 3.2km to the northwest (Site code 004145).
- Donegal Bay (Murvagh) SAC - 3.75km to the northwest (Site code 000133) but considerably further by water connection – river, lough and sea.
- Donegal Bay SPA – 3.9km to the northwest (Site code 004151).
- Dunragh Loughs/Pettigo Plateau SAC – 5.6km to the east (Site code 001125).
- Tamur Bog SAC – 6.0km to the southeast (Site code 001992).
- Lough Golagh & Breesy Hill SAC – 7.2km to the southeast (Site code 002164).

- Lough Eske & Ardnamona Wood SAC – 14km to the north (Site code 000163).

9.6 All of the above sites fall beyond the zone of influence of noise or dust from the quarry. The European sites which could potentially be impacted (by way of surface water connection) are Durnesh Lough SAC, Durnesh Lough SPA and Donegal Bay SPA. I would agree that these three (apart from Ballintra SAC) might have been impacted by the quarry. The SPAs could be excluded because of the separation distances involved. Durnesh Lough is linked to the site by the New Stream and the Ballymagrorty Stream. However, as the separation distance is 4.0km by water, even a discharge of silt-laden water would be dissipated over this distance. The quarry has a system of water-handling in place, and it is noted that there is a Discharge Licence in place for discharges to the New Stream.

9.7 There are no significant 'in-combination' impacts on European sites – regard being had to the scale of the quarry and other projects and quarries in the area.

9.8 I would be satisfied that there would have been no likely significant impacts on European sites arising from quarrying at this site in the past.

10.0 RECOMMENDATION

I recommend that the Board refuse substitute consent for the Reason(s) and Consideration(s) set out below.

REASONS AND CONSIDERATIONS

1. The development which was undertaken at this site gave rise to profound impacts on cultural heritage by reason of the destruction of part of a recorded archaeological monument – DG103-019 – cashel. These impacts are not capable of mitigation. The development which has been undertaken was, therefore, contrary to the proper planning and sustainable development of the area.

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Michael Dillon,
Inspectorate.

13th June 2014.