An Bord Pleanála

Supplementary Inspector's Report

Ref.:	SU08.SU0028
Development:	Quarry producing sand and gravel products including a sand washing plant and all associated site works in accordance with plans and particulars submitted. Gortagullane, Coolies, Muckross, Killarney, Co. Kerry.
Type of Application:	Substitute Consent pursuant to Section 177E of the Planning and Development Act, 2000, as amended.
INSPECTOR:	Robert Speer

1.0 INTRODUCTION:

1.1 This supplementary report has been prepared in response to a Board Direction dated 21st December, 2015 which sought an addendum report in respect of the revised documentation and Remedial Environmental Impact Statement received from the applicant on 23rd July, 2015 in response to an earlier request issued by the Board on 23rd January, 2015 pursuant to Section 132 of the Planning and Development Act, 2000, as amended, wherein it stated that:

- There is insufficient information on the receiving environment and inadequate data on which to base an assessment of the significant effects of the development (particularly during past periods of peak extraction) in relation to human beings, noise, traffic, soil and geology, water, air quality, landscape, and the interaction of the foregoing; and

- There is insufficient assessment of cumulative effects including effects arising from the adjacent quarry immediately to the west which appears to have been previously accessed through the subject quarry site;

before requiring the applicant to submit the following:

'Further information comprising a revised comprehensive Remedial Environmental Impact Statement (REIS) in accordance with the provisions of section 177(F) of the Planning and Development Act, 2000, as amended. As set out under section 177(F)(1) this revised REIS shall include:

A statement of the significant effects, if any, on the environment, which have occurred or which are occurring or which can reasonably be expected to occur because the development, the subject of the application, was carried out'.

1.2 It should be read in conjunction with the information which accompanied the initial planning application, including the original REIS, the grounds of appeal, and my earlier inspector's report.

2.0 RESPONSE TO NOTIFICATION OF SECTION 37L(7) OF THE PLANNING AND DEVELOPMENT ACT, 2000, AS AMENDED:

2.1 Response of the Applicant:

2.1.1 In correspondence received by the Board on 31st August, 2015 Mr. Colm Longeran, on behalf of Mr. Patrick Doyle, confirmed that the applicant would not be making a direct application for prospective development to the Board and thus it should proceed in its determination of the subject substitute consent application.

2.1.2 However, I would draw the Board's attention to Section 3.5 of the Revised REIS which states that (subject to market demand and a successful substitute consent application) it is proposed to extend the current extraction operation into the southernmost area of the 5.9 hectare quarry site given that there are sufficient deposits remaining there for at least a further 20 No. years at the current rate of extraction (based on an estimated reserve of 850,000m^3 as was determined by survey in 2006).

3.0 FURTHER SUBMISSIONS:

3.1 The Planning Authority:

- The carrying out of an Environmental Impact Assessment of the submitted (Remedial) Environmental Impact Statement is a matter for the Board.
- There are no recorded monuments (as identified in the Record of Monuments & Places or the Sites & Monuments Register) within the bounds or immediate vicinity of the site and, therefore, the Board is referred to the original report of the Planning Authority on the substitute consent application which recommended that the stripping of topsoil to facilitate further quarrying in previously undisturbed areas of the site be subjected to archaeological monitoring under licence from the National Monuments Service.
- No new ecological data has been submitted and thus the Planning Authority has no further comments with regard to the further information provided.
- The Board is referred to the comments of the Environment Section as set out in the original report of the Planning Authority on the substitute consent application.

3.2 Inland Fisheries Ireland:

- States that the only issue from a fisheries perspective would be associated with the potential for emissions to groundwater and that the applicant has addressed this by introducing safeguards as indicated in the application documentation e.g. the use of hardstands, interceptors, storage, surface water diversion etc. Therefore, subject to the domestic effluent disposal arrangements complying with the up-to-date EPA guidance on percolation requirements, Inland Fisheries Ireland does not have any additional observations.

4.0 DEVELOPMENT PLAN

The Board is advised that the Kerry County Development Plan, 2015-2021 was adopted on 16th February, 2015 and has been in effect since 16th March, 2015 (thereby superseding the Kerry County Development Plan, 2009-2015 referenced in the previous Inspector's Report).

Kerry County Development Plan, 2015-2021:-

Chapter 8: Natural Resources:

Section 8.2: *Extractives Industry: General Extractives Objectives:*

NR-4: Facilitate the sustainable development of the extractive industry and seek to ensure the ongoing availability of an adequate supply of aggregates for the construction industry, while ensuring environmental protection, through the implementation of the objectives and Development Management, Guidelines and Standards of this Plan.

NR-5: Ensure all extractive development proposals comply with the objectives of this plan as they relate to development management standards, flood risk management requirements and the protection of landscape, biodiversity, infrastructure, water and air quality, built and cultural heritage and residential amenity.

NR-6: Ensure that quarrying and mining proposals are not permitted in areas where the visual or other impacts of such works would significantly adversely injure the amenities of the area or create significant adverse affects on the road network in the area.

NR-7: Ensure that development for aggregates / mineral extraction, processing and associated concrete production will be prohibited in Prime Special Amenity Areas and will not generally be permitted in other open or sensitive landscapes.

Chapter 10: Natural Environment & Flood Risk Management:

Section 10.1: *Introduction:*

NE-1: Work with all stakeholders in order to conserve, manage and where possible enhance the County's natural heritage including all habitats, species, landscapes and geological heritage of conservation interest and to promote increased understanding and awareness of the natural heritage of the County.

NE-2: Ensure that the requirements of relevant national and EU legislation, including the Habitats Directive (92/43/EEC), the EU (Birds) Directive (79/409/EEC), the Environmental Impact Assessment Directive (85/337/EEC), the Water Framework Directive (2000/60/EC), and the Flood Directive (2007/60/EC), are met by the Council in undertaking its functions.

NE-5: Ensure that the cumulative impacts are taken into account when evaluating the impacts of a particular proposal on biodiversity, particularly in relation to habitat loss and wildlife disturbance.

Section 10.2: *Environmental Designations:*

NE-11: Ensure that all projects likely to have a significant effect on a Natura 2000 / European site will be subject to Habitats Directive Assessment prior to approval.

NE-12: Ensure that no projects which will be reasonably likely to give rise to significant adverse direct, indirect or secondary impacts on the integrity of any Natura 2000 sites having regard to their conservation objectives, shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects) unless imperative reasons of over riding public interest can be established and there are no feasible alternative solutions.

NE-13: Maintain the nature conservation value and integrity of all Natural Heritage Areas (NHAs), proposed Natural Heritage Areas (pNHAs), Nature Reserves and Killarney National Park. This shall include any

other sites that may be designated at national level during the lifetime of the plan in co-operation with relevant state agencies.

Section 10.3: *Water Quality*
Section 10.14: *Environmental Impact Assessment*

Chapter 12: Zoning & Landscape:

ZL-1: Protect the landscape of the County as a major economic asset and an invaluable amenity which contributes to the quality of people's lives.

Section 12.3.1: *Zoning Designations: Rural Secondary Special Amenity:*
The landscape of areas in this designation is sensitive to development. Accordingly, development in these areas must be designed so as to minimise the effect on the landscape.

Proposed developments should, in their designs, take account of the topography, vegetation, existing boundaries and features of the area, as set out in the Building a House in Rural Kerry Design Guidelines (Kerry County Council 2009).

Permission will not be granted for development which cannot be integrated into its surroundings. Development will only be permitted where it is in accordance with the provisions of Chapter 3.3.2.

N.B. The proposed development site is located within an area *of 'Secondary Special Amenity'* as delineated on Map 12.1(o) of Volume 3 of the Plan.

Chapter 13: Development Management – Standards & Guidelines:
Section 13.13: *Extractive Industry Standards and Guidelines*

5.0 ISSUES AND ASSESSMENT:

The revised documentation will be considered under the following heading:

- Remedial environmental impact assessment

This is assessed as follows:

5.1 Remedial Environmental Impact Assessment:

5.1.1 Human Beings:

5.1.1.1 In terms of assessing the impact of the development on human beings, at the outset I would advise the Board that Section 4 of the Revised Remedial EIS essentially repeats '*verbatim'* much of the content of Section 1 of the original REIS which accompanied the subject application for substitute consent. In this respect, I would reiterate that the Revised REIS has focussed attention on the wider issues of population and settlement, employment and other socio-economic considerations (such as the local tourism industry) and that I generally concur with the findings of same as regards the impact of the development on human beings. However, whilst I had previously raised concerns that the original REIS had failed to provide a sufficient level of detail as regards the number of habitable houses and sensitive receptors in the immediate vicinity of the application site which had the potential to be adversely impacted by the quarry both in the past and as a result of its on-going operation, the Revised REIS has provided further information in this regard by acknowledging the high density of linear and cluster type one-off housing developments to the north and south of site in addition to stating that there are approximately 70 No. dwelling houses within a 500m radius of the site, three of which back directly onto the north-western boundary of the existing quarry. Whilst these additional details are to be welcomed, this section of the Revised REIS has failed to provide any significant elaboration on the impact (if any) that the existing quarry development has already had on the amenity etc. on the aforementioned residential properties and has simply asserted that *'No significant impacts from noise, dust or traffic have been identified during the EIS process'.* In support of the foregoing, the Revised REIS repeats its earlier position that the absence of any submissions by local residents to the Planning Authority would appear to suggest that the quarry operation has not caused a nuisance. Similarly, with regard to those measures to be undertaken in order to mitigate the impact of the development on the human environment, other than for a more detailed reference to the erection of a fenced buffer along the top of the faces and other high parts of the quarry in order to prevent any injury to livestock, and a commitment that site operations will be conducted in accordance with the relevant health and safety legislation, the Revised REIS includes limited additional details.

5.1.1.2 At this point, I would reiterate the importance of noting the various inter-relationships between effects on the human environment and effects on other aspects of the environment such as air and water quality. Accordingly, in order to avoid unnecessary repetition, I would again refer the Board to my assessment of the specific implications of the development as regards soil, water and air quality

etc. as set out elsewhere in this report. Therefore, I propose to focus the remainder of my assessment of the impact of the proposed development on human beings on the key issues of noise, traffic and vibration.

5.1.1.3 Noise:

5.1.1.3.1 Section 10 of the Revised REIS seeks to provide for a more detailed examination of the noise impact of the development as carried out to date given that the *'Noise Assessment'* which accompanied the original REIS was, in my opinion, entirely inadequate (with specific reference to the absence of any baseline data on existing conditions) and its conclusions unsubstantiated. In this respect I would advise the Board in the first instance that the revised documentation as submitted provides for a more extensive review of the background to the existing quarry, with particular reference to its operation / development in recent years as can be summarised below:

- *Between 1990 and 2002:*
  By February, 1990 extraction at the quarry had been underway for in excess of 26 No. years, although the on-site operations were considered to be very minor in nature (*N.B.* The disused quarry located directly to the west of the subject lands was in operation during this period up until its closure in 1995). Extraction was purportedly carried out using a tracked excavator and the material was exported by a single rigid tipper truck. This pattern seemingly continued until September, 2002 when the quarry was operated under new management (the son of the owner).

- *Between 2002 and 2007:*
  The intensity of the quarrying works is stated as having increased between approximately September, 2002 and the peak extraction period of 2007. The works were mainly carried out from the centre of the site and progressed northwards with the southern extent of the quarry remaining untouched. During this period it has been submitted that approximately 87,000 No. tonnes of sand and gravel were excavated and exported off site with the level of peak extraction having occurred in 2007 when c. 29,000 No. tonnes were extracted and taken off site.

- *2007 – Present:*
  Between 2007 and the present day, it has been stated that the quarrying works were scaled down due to a reduction in demand arising from the economic downturn. During this period the extraction activities apparently progressed southwards with approximately 74,000 No. tonnes of material

having been excavated between 2008 and 2014. The average yearly exported quantity of sand and gravel since 2012 is stated to be c. 6,700 No. tonnes per year, or approximately 23% of the peak extraction of 2007. Furthermore, the applicant has stated that since 2007 the quarry has never been fully operational i.e. with all machinery working on any given day. In this regard it has been submitted that the quarry is only operational 2 No. days a week at present (e.g. screening of material is only carried out every 2-3 months depending on demand when sand and gravel stockpiles are depleted and is less frequent during the winter months).

5.1.1.3.2 At this point of my assessment, it should be noted that the applicant has placed a considerable emphasis on the progression of the quarrying works between 2007 and 2015. In this regard Section 10.4.10 of the revised REIS refers to gradual changes in the noise emission levels from the various plant and machinery as a result of the following:

- The progression of the quarrying activities southwards thereby increasing the separation distance between the works and the Noise Sensitive Locations alongside the public road to the north (although it is further claimed that the separation distances to those NSLs to the south of the site have also increased marginally).
- The increasing depth of the excavations over time has served to aid in noise attenuation.
- The replacement of plant and equipment with newer and quieter models.
- The significant reduction in the duration of operations and the number of truck movements since 2007 when compared to the period between 2002 and 2007.

5.1.1.3.3 In addition to the foregoing, it has been asserted that there is now a buffer area of 0.5 hectares between the public road and the quarrying activities with a separation distance of approximately 130m. It has also been claimed that the dwelling houses to the south of the site are not exposed to direct sound waves from the quarry due to the 14m cut depth to the quarry floor. However, the applicant has acknowledged that the dwelling houses to the north of the site would be susceptible to noise from the everyday operations as well as noise from the passing trucks, although it has been suggested that this could be mitigated through the provision of earthen bunds along the northern and north-western site boundaries (in particular where the quarry lands abut residential properties).

5.1.1.3.4 Whilst the aforementioned details have elaborated to some extent on the development of the subject quarry in recent years, I am inclined to suggest that they are not in themselves sufficient to establish the specific nature of any noise impacts that may have been experienced at surrounding Noise Sensitive Locations during the previous quarrying activities. In effect, the foregoing comments are somewhat subjective and in need of substantive support by way of empirical evidence. In this respect I note that Section 10.5.2 of the Revised REIS states that simplified noise propagation modelling may be utilised in order to determine the noise levels likely to have arisen at off-site NSLs as a result of the operation of site plant, however, whilst reference is subsequently made to a 'table' which apparently sets out the predicted noise levels derived from modelling undertaken in accordance with *BS5228:2009* (based on 'hard ground' and including an estimated 10dB attenuation due to topographical screening), no further details have been supplied in this regard and the referenced table of results is absent from the both the Revised REIS and its appendices. Indeed, not only are the results of this noise prediction modelling absent, but no details have been provided of the input parameters, with particular reference to the distance between the identified noise source and the point at which the 'A'-weighted sound pressure level has seemingly been calculated. Whilst Section 10.4.8 of the Revised REIS does detail the Sound Power Levels of various items of plant which are claimed to be comparable to those used on site, without the distance between the location of said noise source and that of the modelled 'Prediction Point' (i.e. an identified NSL) it is not possible to calculate a predicted 'A'-weighted sound pressure level at the receptor point / NSL. Furthermore, in the absence of any noise modelling results, it is unclear as to what assumptions have been taken into consideration e.g. the presence of any barriers and the properties of same. Accordingly, the submitted Revised REIS has failed to provide any modelling of the likely noise propagation associated with the quarrying works already undertaken on site.

5.1.1.3.5 Having established that the Revised REIS does not include any satisfactory noise prediction modelling with regard to the (past and present) operation of the existing quarry, it is necessary to consider any previous noise monitoring or surveying of the on-site operations. In this regard I would refer the Board to the results of a noise monitoring survey undertaken on site as summarised in Section 10.5.10 of the Revised REIS in addition to the *'Noise Report'* contained in Appendix 'H' of said document (*N.B.* The complete absence of any noise monitoring of the historical operation of the existing development, or a noise survey to establish background / ambient noise conditions in the surrounding area, was of particular concern in my assessment of the original

REIS). From a review of the available information, it would seem that the existing quarry is well-established and has reportedly been in operation for many years (pre-1964), however, Section 10.5.3 of the Revised REIS states that there is no information pertaining to previous noise monitoring or survey work available from the current quarry owner (*N.B.* This statement would seem to imply that the applicant did not conduct any noise monitoring of the previous quarrying works despite the specific requirement for same set out in Condition No. 31 of the grant of permission issued under PA Ref. No. 08/2019 which stated that the *'owner or operator shall, from time to time, monitor and record the equivalent continuous sound level, Leq, attributable to the on-site operations associated with the proposed development'*). Accordingly, the revised REIS has sought to place a considerable reliance on the results of a single noise survey undertaken by NVM Ltd. over a two-week period in the summer of 2015 as a means of establishing whether or not those works undertaken on site to date would have been likely to have impacted on the amenities of nearby NSLs. This *'Noise Report'* is included in Appendix 'H' of the Revised REIS and details that unattended noise monitoring was undertaken at a single measurement location on site (at the north-western boundary of the quarry adjacent to the nearest residential property) from 28th May, 2015 to 11th June, 2015 during the 'working phase' of the existing quarry in order to measure background noise levels.

5.1.1.3.6 Following an examination of the aforementioned 'Noise Report', I would have a number of concerns as regards the veracity of the results set out in same and the reliability of its conclusions in supporting the applicant's assertion that the development carried out to date is unlikely to have given rise to any noise impact and that mitigation measures were also unlikely to have been recommended or warranted in the past. In this respect it is of particular relevance to note at the outset that although *'Table 2: Possible Noise Sensitive Locations'* of the Revised REIS provides a generalised description of the location of 7 No. private residences in the vicinity of the application site, no clear mapping has been included detailing same whilst it is also unclear as to why these particular properties have been identified despite there being 70 No. dwelling houses within a 500m radius of the site. Furthermore, even if the 7 No. aforementioned properties are assumed to have been selected in order to be representative of surrounding housing there is no correlation between the identification of same and the decision to conduct noise monitoring at a single location. Whilst I would accept that the selected location for the noise monitoring undertaken by the applicant would seem to equate to the nearest dwelling house, it should be noted that the *'Quarries and Ancillary Activities, Guidelines for Planning Authorities'* as published by the Department of the Environment, Heritage and Local

Government in April, 2004 state that noise surveys should be carried out *'at the site boundary near sensitive locations'* as distinct from a position equivalent to the position of the actual NSL in question e.g. the dwelling house.

5.1.1.3.7 In addition to the foregoing, I would have a number of reservations as regards the level of detail and overall completeness of the submitted noise survey. In this regard it should be noted that the noise report does not provide any initial subjective impressions as regards the dominance or audibility of the specific sound being measured or the main noise sources contributing to the residual sound. Furthermore, whilst reference has been made to the use of a Class / Type 1 sound level meter, given that the survey involved unattended noise monitoring it is unclear as to what measures were put in place to ensure the accuracy of the recorded noise measurements (e.g. the need for weather-proofing, including the use of rain and wind-shields). Indeed, it is unclear from the submitted information if it would have been appropriate to disregard any of the recorded noise measurements due to adverse atmospheric / weather conditions. It is also regrettable that no details have been provided of the date of the last verification test of the sound level meter or the calibration levels taken before and after measurement. In the absence of such details I am inclined to suggest that the veracity of the submitted noise measurements is insufficient to permit any definitive conclusions to be drawn from same.

5.1.1.3.8 However, perhaps the most notable difficulty with the submitted Noise Report is the failure to detail the distance between the sound level meter / recording device and the specific sound source(s) being measured i.e. the various plant and machinery in operation on site in addition to any related activities such as extraction / excavation works. Without these details it is not possible to make a reasoned judgement as regards the likely noise impact of those works carried out to date on the amenities of surrounding properties. For example, if the noise sources under investigation (such as the excavation and screening activities etc.) were being conducted from within the southernmost part of the site at the time of the noise survey, it is clear that the increased separation distance between same and the sound level meter would influence the noise levels recorded. In this respect I would have particular concerns that the noise monitoring was undertaken at a time when the principle quarrying activities were being conducted from within the southernmost extent of the existing quarry at a noticeable distance from both the sound level meter and those noise sensitive receptors (including the closest residential property) to the immediate north of the application site. In my opinion, any reliance on these results in order to gauge the likelihood of significant noise impacts having been experienced by those

residences to the north of the site during the course of earlier quarrying works is clearly misplaced on the basis that any such works would have occurred in much closer proximity to those NSLs than any of the activities currently being undertaken in the southern part of the site. This is of particular relevance in reference to the clear evidence of significant excavation works having already been carried out to the immediate rear of the garden areas of the 3 No. dwelling houses which bound the site to the north. It is also noteworthy that in addition to the likely dissipation of sound over distance from the southern extent of the site when measured at the survey point, the intervening topography and ground conditions will also have served to reduce the recorded noise levels. Similarly, the presence of any barriers such as topographical features or stockpiled material may also have influenced the results yielded from the noise monitoring survey. More notably, the foregoing factors are unlikely to have had the same degree of influence on the noise levels likely to have been experienced in the 3 No. dwelling houses to the north of the site whilst extraction works etc. were being conducted to the immediate rear of their property boundaries.

5.1.1.3.9 Notwithstanding the foregoing concerns, I would also draw the Board's attention to Paragraph 10.4.6 of the Revised REIS which states the following:

> *'During the compilation of this report, the quarry was not fully operational on any day. For example, the following works were not operating together i.e. excavating from the quarry face, transportation to screening area, screening, stock piling and removal off site. It was therefore not possible to record maximum noise levels generated by full operations'.*

5.1.1.3.10 Whilst the submitted Noise Report has referred to the noise monitoring as being undertaken during *'the working phase'* of the existing quarry, the foregoing paragraph in the Revised REIS raises further difficulties as regards the veracity of the submitted noise survey and the assumption that the results derived from same can be held to be representative of the noise levels likely to have been experienced at nearby NSLs during the peak quarrying operations in recent years. In this respect it should be noted that the quarry work operations have been stated by the applicant as having intensified after 2002 before reaching a period of peak extraction in 2007 and thus it is likely that during this timeframe the baseline noise conditions at the site differed significantly from those presently experienced on site. In effect, the likelihood is that during this period of peak extraction the noise levels emanating from on-site activities would have been greater and more frequent than those recorded in the submitted noise survey. Indeed, it can be confirmed from a review of aerial photography available

from a number of sources (including the Ordnance Survey Ireland) that the area to the rear of those houses bounding the north of the quarry site was only excavated some time after 2005. Accordingly, it is my opinion that the submitted noise monitoring cannot be considered representative of the likely noise impacts arising when the quarry was in full operation and when excavation works were being conducted in much closer proximity to nearby NSLs than is the case at present.

5.1.1.3.11 Therefore, having considered the additional information, I remain of the opinion that the Revised REIS is entirely inadequate in terms of providing accurate baseline data on existing (and past) conditions and, accordingly, the conclusions reached in the Remedial EIS that noise emissions generated by the operations have had no significant impact outside of the quarry boundary have not been substantiated.

5.1.1.4 Traffic:

5.1.1.4.1 Section 12 of the Revised REIS effectively reiterates much of the contents of the REIS which accompanied the original application, although it does elaborate on the overall intensity of operations conducted on site in recent years. In this respect it has been stated that prior to 2002 the quarry only operated on a very limited small scale, however, between 2002 and 2007 the quarrying activities subsequently intensified with approximately 87,000 No. tonnes of sand and gravel having been excavated and exported off site during this period (*N.B.* The peak extraction year is stated as having been 2007 when approximately 29,000 No. tonnes of material were exported off site). In addition, it has been indicated that since 2007 the quarrying works have been scaled down due to the reduction in demand resulting from the economic downturn with approximately 74,000 No. tonnes of sands and gravels having been excavated between 2008 and 2014 whilst the average yearly exported quantity of sands and gravels since 2012 apparently equates to c. 6,700 No. tonnes per year or c. 23% of the peak extraction rate recorded in 2007.

5.1.1.4.2 With regard to the actual quarrying operations, the applicant has submitted that prior to 2011 all activities took place took place between 08:00 and 18:00 hours, Monday to Saturdays, with no works being carried out on Sundays or public holidays. However, it has been further stated that due to the reduction in demand in recent years the quarry is presently only operational 2 No. days a week (within the designated hours of operation) with the result that the total number of truckloads of sand and gravel being exported from the site has fallen from a peak rate of 7-10 No. loads per day to only c. 3-5 No. loads per

day, although it has also been acknowledged that production levels on site would likely be increased in line with any rise in market demands.

5.1.1.4.3 Whilst the foregoing details as regards the rate of extraction associated with the existing quarrying operations are noted and would seem to generally correspond with the data set out in Appendix 'I' of the Revised REIS, I would advise the Board that this information conflicts with that previously supplied with the original REIS which stated that although the quarry is presently only operational 2 No. days a week (08:00-18:00 hours), an average of 15 No. lorry loads of quarried material is leaving the site on those days. Accordingly, the Board may wish to consider this discrepancy in its determination of the subject application.

5.1.1.4.4 At this point of my assessment I would refer the Board to my previous report and my acknowledgment that traffic generated by the quarry will invariably be influenced by extraction rates which will fluctuate to some extent to coincide with market conditions. With regard to my specific concerns in relation to the original REIS which had only considered the traffic impact associated with the development on the basis that it was only operating 2 No. days per week, and the absence of any details relating to the distribution of traffic from the quarry which would be necessary in order to fully assess the impact on the surrounding road network, I would accept that the additional information provided by the applicant (with particular reference to the total tonnage and number of truckloads of material exported from the site between 2003 and 2014 as set out in Appendix 'I' of the Revised REIS) would suggest that at its peak in April, 2007 the quarry was generating approximately 8 No. two-way truck movements (i.e. 16 No. trips) from the site per day of operation. Therefore, whilst no details have been provided of any ancillary traffic movements associated with the operation of the quarry during this period (such as staff cars etc.), on the basis of the submitted figures, I would accept the proposition that the traffic volumes generated at that time were within tolerable limits and thus are unlikely to have given rise to any significant impact on the surrounding road network (*N.B.* I would advise the Board that although peak extraction at the existing quarry was recorded in 2007 at 29,000 No. tonnes per annum, the grant of permission issued under PA Ref. No. 08/2019 authorised an increase in the extraction rate from 25,000 to 75,000 No. tonnes per annum which is considerably in excess of the historical peak extraction rate). Similarly, whilst few additional details have been provided as regards the historical traffic distribution from the quarry, given the volumes concerned I am amenable to concluding that no significant impacts arose as a result of same.

5.1.1.5 Vibration:

5.1.1.5.1 With respect to any vibrational impacts that may have arisen in the past or as a result of the on-going quarrying operations, Section 10.6.1 of the Revised REIS reiterates that no blasting activities have been / are conducted on site and that the loose nature of the sand and gravel deposits allows for the extraction of same by excavator. Accordingly, the applicant has simply asserted that the operation of the existing quarry has not given rise to any ground vibrations associated with blasting.

5.1.1.5.2 Whilst I would accept that the existing quarrying operation would not seem to have necessitated the use of blasting, it is regrettable that the Revised REIS has not commented on any other potential sources of vibration given the proximity of nearby housing, with particular reference to the movement of HGVs etc. along haul routes (both internal and external to the site) and the extent of those excavation works undertaken to the rear of those houses alongside the north / north-western site boundary.

5.1.2 Fauna and Flora:

5.1.2.1 Section 7 of the Revised REIS is a complete resubmission of the Ecological Impact Assessment which formed Section 2 of Part B of the original REIS that accompanied the initial application and thus I have no further observations on same.

5.1.3 Soils & Geology:

5.1.3.1 Section 6 of the Revised Remedial EIS describes the soil and bedrock conditions underlying the subject site and I would advise the Board that these details are based on a desk study of the information available from the Geological Survey of Ireland.

5.1.3.2 With regard to the soil classifications which previously overlay the site, Figure 2 of the Revised REIS indicates that the subsoil covering for the area comprised a poorly drained till derived chiefly from Devonian Sandstones. In this respect the applicant has confirmed that these soils were removed prior to the excavation of the underlying quarry materials and subsequently used in the construction of bunding and the backfilling of other areas of the site.

5.1.3.3 In relation to the bedrock geology underlying the site, reference to the GSI mapping for the area indicates that this consists of Dinantian Pure Unbedded Limestones of the Killeshin Formation. In addition, on the basis of information

available from the groundwater section of the GSI, it has been noted that the site is underlain by a *'Regionally Important Aquifer - Karstified (diffused)'* and that the classification that would indicate a potential for high rates of percolation to the groundwater aquifer resulting in a high rate of transmissivity.

5.1.3.4 In terms of the depth of the excavations already carried out on site, it has been submitted that due to the uneven topography of the original ground level, the depth of the quarry floor varies from 7m at the north-western corner of the site to 14m at the southernmost quarry face. However, these details are subsequently contradicted somewhat in Paragraph 6.4.1 of the REIS which states that the 'rock' quarry has been excavated into the hill on the northern side of the site to a depth of over 4m whilst the excavations towards the middle of the site heading south extend to a maximum depth of about 10m at various points.

5.1.3.5 In respect of ground and surface waters present on site, the Revised REIS states that whilst there are a number of *'lagoons and naturally occurring depressions'* throughout the site, which were observed to contain water during the survey periods, during dry weather these lagoons dry out thereby indicating that the majority of water on site comprises surface water runoff. It has also been acknowledged that Condition No. 7 of PA Ref. No. 082019 prohibits any excavations within 1m of the underlying water table.

5.1.3.6 In addition to the foregoing, it has been submitted that the depth of subsoil over the bedrock in the locality, and especially within the quarry itself where any subsoil has been removed, means that the aquifer is at a moderate level of vulnerability to contamination or any surface pollution. Paragraph 6.3.14 of the Revised REIS proceeds to classify the underlying bedrock as a *'Moderate Aquifer'* that would be a *'regionally important groundwater resource'* which is somewhat contradicted by Paragraph 6.5.1 which expressly states that the *'bedrock aquifer under the site is classified as poor'.*

5.1.3.7 Having reviewed the wider geotechnical characteristics of the application site, the Revised RIS proceeds to identify the possible negative impacts on the underlying soil / geology which may have arisen as a result of the development carried out to date. In this respect specific reference is made to the direct physical impact of the excavation works on the land, although it is subsequently submitted that this is localised and that due to the small scale of the operation it can be mostly mitigated through the adoption of a suitable future restoration plan for the quarry once extraction activities have ceased. In this regard the Revised REIS proceeds to detail that the site could be landscaped using excavated soils

and subsoil as part of the restoration plan with the extraction area being allowed to regenerate with vegetation in order to reduce potential erosional effects. It has also been suggested that levelled areas could be returned to agricultural use and that the use of native planting and the creation of shallow areas could allow surface water to pond thereby increasing the biodiversity potential of the site once closed. In further support of the application, the applicant has submitted that the soils and subsoils removed from the site are of no significance from a geological perspective which has had the effect of limiting the impact of the quarrying works already undertaken. Therefore, whilst the Revised REIS has acknowledged that the excavation works carried out on site have had a direct residual impact on the geological environment of the subject site, it has been asserted that said impact is localised and of moderate significance.

5.1.3.8 By way of possible further impacts on the geological considerations, the revised REIS has also referenced the possible contamination of soils and groundwater underlying the site due to accidental spillages and leakages, although it has been asserted that there was no evidence of any such fuel spills or oil leaks observed during a walkover survey of the application site. It has also been suggested that current mitigation practices employed on site such as the use of a designated re-fuelling area, the bunding of the fuel storage area, and the regular maintenance / inspection of plant / machinery have served to avoid the accidental release of hydrocarbons on site. Therefore, it is proposed to supplement these measures with the additional mitigation provisions set out in Section 6.5 of the Revised REIS.

5.1.3.9 Following consideration of the foregoing, in addition to the wider contents of the subject application, whilst I would have some concerns as regards the conflicting information provided in respect of the depth of the existing excavations and, by extension, the volume of material removed off site, which gives rise to certain difficulties in ascertaining the full extent of any impacts associated with the works, such as the potential to increase the vulnerability of the underlying aquifer, on balance, I am satisfied that the works to date with regard to the removal of soil and bedrock on site and the use of appropriate mitigation mechanisms in order to minimise the accidental release or discharge of hydrocarbons or other contaminated site runoff to ground would seem to have avoided any significant undue impact on the soils and geology underlying the site. Furthermore, in my opinion, the potential for any future impacts can be satisfactorily mitigated through adherence to best practice site management protocols whilst the specifics of the design of the development, including final restoration and the installation of an appropriately designed wastewater

treatment system with a percolation area to accommodate the disposal of effluent from the staff facilities on site, should also serve to alleviate the potential risk of further impacts i.e. groundwater contamination etc.

5.1.4 Ground and Surface Waters (Hydrology & Hydrogeology):

5.1.4.1 Section 6 of the Revised Remedial EIS also focuses on the hydrological and hydrogeological impacts consequent on the subject development and in this respect I would advise the Board to consider same in conjunction with my observations on the impacts of the development on soil and geological considerations as set out above (in addition to the contents of my initial inspector's report) in order to avoid unnecessary repetition.

5.1.4.2 The original REIS which accompanied the initial application emphasised that the existing quarry was worked as a 'dry' pit with no need for dewatering of the excavation and that 4 No. trial pits which had been excavated to a depth of 4m within the lowest points of the quarry floor had not encountered the water table. It was also acknowledged that the vulnerability of the underlying aquifer would increase as a result of quarrying operations due to the stripping of topsoil etc. and the subsequent excavation of the aggregates thereby reducing the filtration capacity between the water table and the quarry floor. Accordingly, the original REIS identified the principle threat to groundwater as contamination from hydrocarbons and the discharge of wastewater / effluent to ground and in order to mitigate same it recommended the installation of a hydrocarbon interceptor to remove oils etc. from surface water emanating from hardstanding areas in addition to best practice as regards the storage of hazardous substances and the provision of designated hardstanding areas for refuelling, parking, maintenance of plant etc. It also recommended that a wastewater treatment / septic tank system with a percolation area be installed to treat wastewater arising from the on-site toilet and canteen facilities.

5.1.4.3 The revised REIS effectively reiterates the aforementioned mitigation measures and whilst these would normally be considered acceptable with regard to a proposed quarry development, it must be emphasised that the subject application is for substitute consent and thus relates to works which have already been carried out on site. In this respect I would refer the Board to my earlier report wherein it was noted that there are no dedicated hardstanding areas on site for the parking of lorries and other plant and therefore any such machinery is currently parked on bare ground as evidenced during the course of my site inspection. Similarly, no evidence was recorded of any existing wastewater treatment system on site and thus it was unclear if any discharges from the

existing canteen facilities on site had previously been or are continuing to be discharged untreated directly to ground. Whilst Section 6.5.5 of the Revised REIS has suggested that it is improbable that the development of the quarry has impacted significantly on water quality in the past or is having a significant impact at present, it is my opinion that in the absence of any data derived from the continuous monitoring of groundwater quality (and levels) it cannot be definitively concluded that the operation to date has not resulted in the contamination of groundwater. In this respect I would further submit that the results of the water quality analysis undertaken for those samples recently taken from a spring located 570m southwest of the quarry site (as set out in Appendix 'G' of the Revised REIS) should not be relied upon as definitive evidence of the historical impact of the on-site operations on water quality in the wider area.

5.1.4.4 With regard to surface water, the original REIS stated that the 3 No. settlement lagoons on site accommodated surface water runoff and that there were no outfalls from same and thus the accumulated surface water gradually percolated through the permeable ground conditions on site to enter the groundwater. The Revised REIS does not include any additional details in this respect and thus I would reiterate my earlier position whereby surface water impacts were not considered to be of significant concern in this application, although it would be appropriate to require the installation of a dedicated surface water collection system to serve the hardstanding areas with all runoff waters from same to be directed to the settlement lagoons by way of a hydrocarbon interceptor.

5.1.5 Air Quality:

5.1.5.1 In my original assessment of the initial application, it was noted that the extractive industry by its very nature gives rise to dust generation and that it is accepted practice to place a limit on fugitive dust emissions arising from quarry developments in order to protect the amenities of surrounding properties with regular monitoring of same. In this regard the Board was also referred to the *'Quarries and Ancillary Activities, Guidelines for Planning Authorities'* which specify that total dust deposition (soluble and insoluble) at site boundaries near quarry developments, based on the TA Luft Air Quality Standard, should not exceed 350mg/m^2/day when averaged over a 30-day period (*N.B.* The *'Environmental Management Guidelines, Environmental Management in the Extractive Industry – Non Scheduled Minerals'* advocate a similar limit). It was further noted that the Guidelines state that residents living in proximity to quarrying operations can potentially be affected by dust up to 500m from the

source although continual or severe concerns about dust are most likely to be experienced within approximately 100m of the dust source.

5.1.5.12 In a manner similar to the original submission, Section 11 of the Revised REIS provides an overall description of the application site and identifies the principle sources of dust emissions associated with the quarrying activities before outlining the various factors likely to influence the prevalence and deposition of same. It proceeds to state that prior to the commencement of previous workings undertaken on site, and also during the initial stages of the quarrying carried out by the current site owner between 2003 and 2005, any removal of overburden conducted in dry windy weather conditions could have given rise to increased airborne dust levels. It is further acknowledged that some impacts may have arose as a result of windblown dust prior to the vegetation of any stockpiled mounds in addition to dust emissions generated by traffic movements both on and off site. With regard to the significance of mechanical excavation on the level of airborne particulates outside of the site boundaries, it has been submitted that this is likely to have been slight as the duration of any such works would be limited and as any particulates generated would be larger in size and thus deposit closer to the source. The Revised REIS subsequently reiterates that the existing quarry operation has not given rise to any complaints from local residents and proceeds to set out a series of mitigation measures intended to control future dust emissions including the dampening down of the site access with the public road, the installation of a wheelwash, the use of a shower sprayer, reduced vehicle speeds, the compaction, grading and maintenance of internal haul routes, and compliance with the dust suppression and monitoring requirements imposed by existing planning conditions.

5.1.5.3 Whilst I would acknowledge the applicant's proposals to mitigate the continued operation of the quarry, in my previous assessment of the original REIS I had raised concerns as regards the absence of any dust monitoring data pertaining to the historical operation of the quarry, particularly as it was an established activity which had reportedly been in operation for many years (pre-1964) and as the extension of time provided for the lodgement of the application for substitute consent as issued by the Board pursuant to Section 177E(4) of the Act would have allowed the applicant sufficient scope to carry out dust monitoring in accordance with best practice i.e. averaged over a 30 day period. In addition to the foregoing, I had noted that no detailed information had been provided of any sensitive receptors situated within a 500m radius of the quarry / dust source which was of concern given that the *'Quarry and Ancillary Activities, Guidelines for Planning Authorities'* specifically state that residents living in proximity to

quarrying operations can potentially be affected by dust up to 500m from the source with continual or severe concerns about dust most likely to be experienced within approximately 100m of the dust source (with specific reference to the notable concentrations of housing to the northwest and south of the application site with multiple residences within both a 500m and 100m radius of the extraction area).

5.1.5.4 The Revised REIS has sought to address the aforementioned shortcomings by submitting the results of an unattended dust monitoring survey conducted over a two-week period (as detailed in Appendix 'H' of the Revised REIS) which entailed the erection of 2 No. dust monitoring stations at locations alongside the north-western site boundary to the south of the nearest residential property (Dust Location No. 2) and also at the north-eastern site boundary (Dust Location No. 1). Whilst the results of this survey indicate that the daily average dust deposition rate recorded at each of the monitoring locations was seemingly less than the recommended limit of 350mg/m^2/day as set by the *'Quarries and Ancillary Activities, Guidelines for Planning Authorities'* (i.e. 300mg/m^2/day & 83mg/m^2/day at Location Nos. 1 & 2 respectively), I would have serious reservations as regards the veracity of this data. In the first instance, the monitoring was not undertaken over a 30-day period and thus, in my opinion, it has not been definitively established that the total dust deposition (soluble and insoluble) at the site, based on the TA Luft Air Quality Standard, does not exceed 350mg/m^2/day when averaged over a 30-day period. Secondly, the dust monitoring was undertaken at the same time as the noise monitoring and in this respect I would again draw the Board's attention to Paragraph 10.4.6 of the Revised REIS which states the following:

> *'During the compilation of this report, the quarry was not fully operational on any day. For example, the following works were not operating together i.e. excavating from the quarry face, transportation to screening area, screening, stock piling and removal off site. It was therefore not possible to record maximum noise levels generated by full operations'.*

5.1.5.5 By way of clarity, the results of the dust monitoring survey are contained within the submitted 'Noise Report' and whilst this survey was purportedly undertaken during *'the working phase'* of the existing quarry, the foregoing paragraph in the Revised REIS raises difficulties as regards the veracity of the dust monitoring survey and the assumption that the results derived from same can be held to be representative of the dust levels likely to have been experienced at nearby receptors during the peak quarrying operations in recent

years. In this respect it should be noted that the quarry would not appear to have been fully operational during the course of the dust monitoring whilst it is of further relevance to note that the quarry work operations have been stated by the applicant as having intensified after 2002 before reaching a period of peak extraction in 2007 and thus it is likely that during this timeframe the generation of dust at the site differed significantly from that presently experienced on site. Accordingly, in a manner similar to the deficiencies previously identified in this assessment with regard to the noise impact of the works, the likelihood is that during the previous period of peak extraction the dust levels emanating from on-site activities would have been greater than those recorded in the submitted survey. Indeed, it can be confirmed from a review of aerial photography available from a number of sources (including the Ordnance Survey Ireland) that the area to the rear of those houses bounding the north of the quarry site was only excavated some time after 2005. Accordingly, it is my opinion that the submitted dust monitoring cannot be considered representative of the likely dust impacts arising when the quarry was in full operation and, more particularly, when the excavation works were being conducted in much closer proximity to nearby dwelling houses than is the case at present.

5.1.5.6 Therefore, having considered the additional information, I remain of the opinion that the Revised REIS is entirely inadequate in terms of providing accurate baseline data on existing (and past) conditions and, accordingly, the conclusions reached in the Remedial EIS that dust emissions generated by the operations have had no significant impact outside of the quarry boundary have not been substantiated.

5.1.6 Climatic Factors:

5.1.6.1 Whilst the initial REIS failed to include any information as regards the impact (if any) of the subject development on climatic considerations, my earlier assessment of same noted that the actual quarrying activities on site would have invariably resulted in the emission of some greenhouse gases through the use of various plant and machinery and the transportation of aggregates for use off site, although it was possible that these were mitigated to some extent by adherence to good site management including the continued maintenance of all plant and machinery in good working order and the shutting off of equipment during periods of inactivity. Accordingly, I was inclined to conclude that, when taken in context, and given the scale of the activity involved, the development was unlikely to have given rise to any significant impact on wider climatic considerations.

5.1.6.2 The Revised REIS has similarly given limited credence to the impact (if any) of the subject development on climatic considerations with Section 11.5 of the document setting out a brief description of the general climatic conditions prevalent within the region before subsequently concluding that the greenhouse gas emissions associated with the development are not significant due to the limited traffic volumes involved.

5.1.6.3 In my opinion, the failure to include for any further in-depth analysis of possible climatic considerations in the Revised REIS is regrettable and could be construed as a shortcoming in the document, however, on balance, I would reiterate that when taken in context, and given the scale of the activity involved, the development is unlikely to have given rise to any significant impact on wider climatic considerations.

5.1.7 Landscape:

5.1.7.1 Section 9 of the Revised REIS provides for a more detailed examination of the landscape / visual impact of the development and includes additional information with regard to the specifics of the site context, with particular reference to the receiving landscape. It has identified a 'Zone of Visual Influence' which serves to define the general area within which the development site may be visible to some extent due to the surrounding topography (please refer to Figure No. 9 within the Revised REIS). This visual envelope extends up to 1.5km from the site (beyond which the visual impact of the works is considered to be negligible) and generally encompasses lands to the north / northwest of the site. The Revised REIS proceeds to submit that the existing quarry occupies a relatively level north-facing 'shelf' of land within the wider landscape and that the excavation of the quarry floor to a depth of approximately 4m-10m below the original ground level, when taken in conjunction with the colonisation of screen banking by vegetation, has served to effectively screen a large portion of the quarry when viewed from lower vantage points. In this regard it has also been submitted that the quarry faces are not visible locally and that the development is not visible from the east, southeast or south due to the intervening topography and vegetation. It is further asserted that the nature of the local landscape is such that changes to its character can be readily absorbed depending on their size and similarity to the existing features and that whilst the existing development is large in area, all of the quarry floor and the vertical heights of the pit faces are hidden by the surrounding topography and intervening landscape features when viewed from within the visual envelope and thus its visual impact is considerably reduced. The analysis set out in the Revised REIS proceeds to conclude that the visual impact of the existing quarry, when viewed from existing

housing to the north, and also from Purple Mountain to the south, is slightly negative and that this can be mitigated further over time through the provision of additional landscaping with the result that any remaining residual visual impact will be effectively neutral.

5.1.7.2 Having reviewed the additional information provided in the Revised REIS, I would accept that it includes a more in-depth analysis of the overall visual impact of the development, although it is notable that it continues to fail to make any reference to the site location within an area of *'Secondary Special Amenity'* as identified in the Kerry County Development Plan, 2015-2021. Notwithstanding, the omission of any reference to the specifics of the landscape classification as set out in the Development Plan, the overall consideration of the visual impact of the development within the Revised REIS is reasonable and I would generally concur with its findings.

5.1.7.3 With regard to the proposals for the restoration of the quarry upon the cessation of extraction activities, the Revised REIS continues to be somewhat lacking in detail with regard to same, although it would be feasible to address this issue by way of condition in the event of a grant of substitute consent.

5.1.8 Material Assets:

5.1.8.1 The original Remedial EIS which accompanied the initial application was somewhat limited in its assessment of the impact of the subject development on material assets, although these effects were generally given broader consideration throughout the document by reference to the various inter-relationships with other aspects of the environment whilst the specific impacts of the development on matters of architectural / archaeological heritage interest were expressly assessed in Chapter 6 of the REIS.

5.1.8.2 Section 8 of the Revised Remedial EIS serves to elaborate on the original documentation and specifically includes consideration of the potentially significant impacts of the development on the 'material assets' identified in the EPA's *'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements, 2003'* i.e. the effects of vibration on surface structure; road damage due to transport and machinery use; and the loss of, or damage to, water supplies. In addition, the Revised REIS also considers the possible effects on the potential for future groundwater development in the area and any impacts on geological heritage pursuant to the provisions of the *'Draft Advice Notes for preparing Environmental Impact Statements'* published by the EPA in

September, 2015. Accordingly, it is necessary to consider the foregoing items in turn.

5.1.8.3 The Effects of Vibration on Surface Structure:

5.1.8.3.1 With regard to any vibrational impacts associated with the existing quarrying operation, I would refer the Board to my earlier assessment of same as set out in Section 5.1.1.5 of this report.

5.1.8.4 Road Damage due to Transport and Machinery Use:

5.1.8.4.1 The wider traffic impact of the development is considered in greater detail elsewhere in the Revised Remedial EIS and in this respect I would refer the Board to my assessment of same as detailed in Section 5.1.1.4 of this report. However, with regard to the specific issue of road damage, it should be noted that Section 8 of the Revised REIS has asserted that the surrounding local road network has sufficient capacity to accommodate the peak traffic volumes associated with the development and that no damage to any roadways in the vicinity has been recorded to date or is likely to occur into the future. Indeed, it has been further submitted that the existing quarrying activities have not significantly impacted on the road network and that any such impacts will be either minor negative or imperceptible at a local level.

5.1.8.4.2 Having considered the available information, I am inclined to accept the applicant's proposition that the limited traffic volumes associated with the development are unlikely to have resulted in any significant impact in terms of damage to the surrounding road network.

5.1.8.5 The loss of, or damage to, water supplies:

5.1.8.5.1 It has been acknowledged that whilst the Geological Survey of Ireland has identified a well located approximately 2km up-gradient of the site to the southeast, the presence of other smaller wells associated with individual dwelling houses in the surrounding area cannot be discounted. However, given the absence of any significant abstraction points in the vicinity of the quarry, it has also been asserted that no significant impacts on water supplies are likely to have occurred during the course of previous on-site activities and that provided the mitigation measures outlined in Section 6 *('Soils, Geology & Hydrogeology'*) of the Revised REIS are effectively implemented any long-term impact on surface water is likely to be imperceptible. In this respect I would reiterate to the Board that the existing quarry has been worked as a 'dry' pit with no need for dewatering of the excavation and that the 4 No. trial pits previously excavated to a depth of 4m within the lowest points of the quarry floor did not encounter the

water table. Accordingly, on the basis of the foregoing, I am inclined to concur with the applicant that the quarrying operations carried out on site to date are unlikely to have had any significant direct impact on well yields within the surrounding area.

5.1.8.5.2 With regard to the potential impact of the development on water quality within any nearby wells / water supplies by way of possible contamination from hydrocarbons and the discharge of wastewater / effluent to ground, particularly given the increased vulnerability of the underlying aquifer as a result of the stripping of topsoil etc. and the subsequent excavation of the aggregates thereby reducing the filtration capacity between the water table and the quarry floor, in order to avoid unnecessary repetition I would refer the Board to my earlier assessment of the possible impact of the development on *'Ground and Surface Waters (Hydrology & Hydrogeology)'.*

5.1.8.6 Effects on the Potential for Future Groundwater Development:

5.1.8.6.1 In respect of the potential for the existing quarrying operation to significantly impact on the future development of groundwater resources in the area, I am inclined to suggest that the principle threat to same arises from the possible contamination of groundwater from the accidental release of hydrocarbons and the discharge of wastewater / effluent to ground which can be satisfactorily addressed through the implementation of a suitable programme of mitigation measures including the provision of a hydrocarbon interceptor to remove oils etc. from surface water emanating from hardstanding areas, the installation of a wastewater treatment / septic tank system with a percolation area to treat wastewater arising from the on-site toilet and canteen facilities, and best practice management as regards the storage of any hazardous substances.

5.1.8.7 Impacts on Geological Heritage:

5.1.8.7.1 Concerns with regard to the impact of the quarrying activities on geological considerations have been assessed in greater detail in Section 6 *'Soils, Geology & Hydrogeology'* of the Revised Remedial EIS wherein it is stated that the soils and subsoils removed from the site are of no significance from a geological perspective. Accordingly, whilst the excavation works carried out on site have had a direct residual impact on the geological environment of the subject site, I would accept that this impact is both localised and of limited significance.

5.1.8.8 Devaluation of Property:

5.1.8.8.1 Whilst Section 8.3.8 of the Revised REIS has asserted that the existing quarry has had no significant impact in terms of traffic, water quality or landscape considerations and thus has not resulted in any devaluation of property in the vicinity of the site, having reviewed the available information, I would have serious reservations in this regard given the likely loss of residential amenity associated with dust and noise emissions emanating from those past extraction works undertaken to the immediate rear of those dwellings located to the north of the site. Indeed, given the significant increase in the intensity of extraction / excavation activities conducted on site between 2002 and 2007 (as referenced in the Revised REIS), the proximity of the works to nearby housing, and the extension of the overall quarrying operations pursuant to PA Ref. No. 08/2019, I would suggest that there is a considerable likelihood that the existing operation has previously had a detrimental impact on the value of surrounding properties, although it is unclear if there has been any market correction in recent years since the intensity of use on site has declined.

5.1.8.9 Other Issues: Cultural Heritage:

5.1.8.9.1 At this point I propose to focus the remainder of this aspect of my assessment on the impact of the development on architectural / archaeological heritage considerations.

- *Architectural Heritage:*
  Having reviewed the submitted information, I would reiterate the findings of my earlier report that the development is unlikely to have significantly impacted on any item of built heritage in the immediate surrounds of the site.

- *Archaeological Heritage:*
  Section 5 of the Revised Remedial EIS elaborates on the possible archaeological heritage implications of the development and in this respect I would reiterate that it would seem that no known archaeological monuments have been directly impacted on by the quarrying activities undertaken on site. Furthermore, whilst it has been acknowledged that previously unrecorded items of archaeological interest could potentially have been encountered or disturbed during the course of the quarrying works undertaken on site to date and that it is not possible to conclusively determine whether or not any such impacts occurred, I note the applicant's submission that a review of historical sources and relevant mapping has failed to identify any culturally significant features within the

site boundary and that no previously unrecorded archaeological remains were encountered during a walkover inspection of the site. I would also accept that the proposal to construct an earthen bund along the perimeter of the 1.12 hectares of undisturbed area to the south of the site in order to screen the existing quarry would serve to mitigate the visual impact of the operation on the wider cultural heritage of the area.

With regard to the applicant's proposal to extend the extraction area by 1.12 hectares into previously undisturbed areas of the wider site and to mitigate the potential archaeological impact of same by way of pre-development investigations such as through a program of test trenching and / or monitoring of the stripping of the overburden / topsoil, I would reiterate that although the County Archaeologist has recommended that the stripping of topsoil to facilitate further quarrying in previously undisturbed areas of the site should be subjected to archaeological monitoring under licence from the National Monuments Service, I am inclined to concur with the Planning Authority that as the subject application is for Substitute Consent and thus concerns development which has already been carried out, the imposition of conditions relating to future development such as soil stripping and the archaeological monitoring of same are matters which would be more appropriately dealt with by of an application to further extend the quarry pursuant to Section 34 of the Act.

5.1.9 Interactions and Cumulative Effects:

5.9.1.1 With regard to the likely inter-relationships between several of the foregoing factors / impacts, the Revised REIS does not an include a separate chapter / section dedicated to the consideration of same although several interactions are apparent from a review of the contents of the document (e.g. the relationship between the removal of topsoil etc. and the need to ensure groundwater protection).

5.9.1.2 With specific reference to the Board's concerns as regards the need to consider any potential cumulative effects that may have arose from the disused quarry to the immediate west of the application site, Section 3.4.7.1 of the Revised REIS has sought to address same by stating that no quarrying works have been carried out within the adjacent quarry for in excess of 20 No. years as that operation seemingly ceased operation in 1995. However, it has been acknowledged that the applicant's services were engaged by the owner of the adjacent quarry in 2011 / 2012 in order to carry out some levelling works within

same which necessitated access through the application site, although it has been asserted that these works were of a short duration and that upon the completion of same the access connecting the two quarries was blocked off and that this remains closed.

5.9.1.3 Having considered the applicant's submission with regard to the adjacent quarry, it is notable that any extraction activities carried out on those lands up until the pit closure c. 1995 would have occurred at a time when quarrying works on the subject site were relatively limited in scope with extraction purportedly carried out using a tracked excavator and the material exported off site by means of a single rigid tipper truck. Accordingly, it would appear that the adjacent quarry had been closed for a number of years prior to the intensification of operations at the subject quarry between 2002 and 2007 with peak extraction having been reached in 2007. Therefore, whilst it is regrettable that no further details have been made available of the actual scale of the quarrying operations conducted on the adjacent lands, on balance, I am inclined to accept that no significant cumulative impacts would have been arose given the limited extent of works undertaken at the time within the subject site, although the Board may wish to pursue further details in this regard.

5.0 CONCLUSION AND RECOMMENDATION:

Having reviewed the subject application for substitute consent, including the Revised REIS, I am not satisfied that the documentation submitted is sufficient to facilitate a comprehensive assessment of the development and, therefore, I would recommend a refusal of substitute consent for the following reason:

Reasons and Considerations:

1. On the basis of the information submitted in support of the application for substitute consent, including the Remedial Environmental Impact Statement, and the further information received by the Board on 23rd July, 2015, it is considered that there is a significant lack of baseline data which is relevant to the identification and assessment of the environmental impacts of the quarrying that has taken place at this site. This includes:-

    - A lack of historical data on noise levels generated as a result of quarrying, with particular reference to the period of peak extraction between 2002 and 2007, including noise levels at the boundaries of

the quarry adjoining sensitive receptors, such as neighbouring residential properties.

- A lack of historical data on dust generation as a result of quarrying, with particular reference to the period of peak extraction between 2002 and 2007, including dust impacts on adjoining sensitive receptors, such as neighbouring residential properties.

In the light of this lack of information, and notwithstanding the other information provided as part of the application for substitute consent, the Board considered that it was not possible for it to conclude that the development of the quarry that is the subject of the application did not have significant adverse effects on the environment, and in particular in terms of human beings, noise, dust, air quality and material assets. The development would, therefore, be contrary to the proper planning and sustainable development of the area.

Signed: _____ Date: _____

Robert Speer
Inspectorate