Inspector's Report ABP-300037-17

Development	Plant area at existing quarry.
Location	Clonmelsh, Nurney, Co. Carlow.
Application for substitute consent under Section 177E	
Applicant(s)	Grant Thornton (Receivers)
Planning Authority	Carlow County Council
Observer(s)	- William Abbey - Garryhundon Local Residents' Action Group - Philip Morrissey
Date of Site Inspection	15th May & 24th August 2018.
Inspector	Michael Dillon

1.0 Introduction and Context

1.1. This application for substitute consent arises from the granting by the Board, of leave to apply for substitute consent, for quarry plant at Clonmelsh townland (Ref. 01.LS0019), by order dated 7th April 2017. Subsequent applications for extensions of time to make the application were granted by the Board – up to and including 24th October 2017.

1.2. A separate application for substitute consent arises from the granting by the Board, of leave to apply for substitute consent, for quarrying at Clonmelsh and Garryhundon townlands (Ref. 01.LQ0001), by order dated 7th April 2017. Subsequent applications for extensions of time to make the application were granted by the Board – up to and including 24th October 2017. This associated application was lodged with An Bord Pleanála on 24th October 2017 (Ref. ABP-300034-17).

1.3. Finally, there is an application to An Bord Pleanála, under section 37L of the Planning and Development Act, 2000 (as amended), to extend, by 21.9ha, the Clonmelsh quarry (Ref. ABP-300425-17).

1.4. All three files are travelling together.

2.0 Site Location and Description

2.1. The quarry plant site comprises an irregularly-shaped parcel of land at the northern end of the Clonmelsh quarry – one of two parts of the wider quarry at this site – the other part being at Garryhundon. The limestone quarry to the south, provides most, but not all, of the inputs to the plant area. The Dublin to Waterford railway line is located to the west, and the M9 Motorway is located to the northwest. The lands in control of the applicant, and outlined in blue, extend to approximately 170ha. Within this landholding, the application site for substitute consent extends to just over 3ha, within an overall 81ha substitute consent application area – some 51ha for quarrying at Clonmelsh townland, and some 27ha for quarrying at Garryhundon townland.

2.2. The road network in the area has recently been altered in conjunction with the construction of the M9 Motorway – affecting the L3050 and the L3044 county roads

to the northwest and north of the plant area. The 80kph speed restriction applies in this area. There are no public footpaths and there is no public lighting. The sole access (in use) to the Clonmelsh quarry and the plant area is from the L3050 road to the north – sight visibility being good in either direction. The L3044 and L3050 roads are wide enough for two vehicles to pass.

2.3. The Clonmelsh quarry (which includes an asphalt plant), was subject to sand & gravel extraction and then to limestone rock extraction beneath. The current quarry floor is at or about 25m OD in two benches. The void is indicated as being approximately 37.25ha. The quarry is dewatered by way of pumping from a sump on the quarry floor, via a series of siltation lagoons on the quarry floor, to a licensed discharge to a drain adjacent to the L3050 road, within the northern portion of the quarry plant area (which in turn discharges to the Powerstown Stream).

2.4. This single, licenced discharge is common to the two applications for substitute consent (amounting to an area of 0.22ha). It provides a discharge from both the quarry floor for (ABP-300034-17) and from the plant area (ABP-300037-17). The vehicular access from the L3050 road is also common to both applications.

2.5. The plant area boundary is defined by the L3050 road to the north – the boundary with which is 2.4m high, unpainted, palisade fencing, set back from the edge of the carriageway at the western end, but running along the edge of the carriageway at the eastern end. There is some screen planting backing the palisade fencing at the western end. The sole entrance, in use, to the Clonmelsh quarry and plant area is located within this boundary – a recessed set of gates. The eastern and southern boundaries of the site abut the Clonmelsh quarry, and are undefined. The northwestern boundary of the plant area is formed by the Powerstown Stream and an hedgerow.

2.6. The quarry plant is on or about the 60m contour, and is clearly visible from the L3050 road, and intermittently so from the L3044 and L3045 roads. The plant is visible from the M9 Motorway. The plant is visible from higher ground to the east and west of the Barrow River valley.

3.0 **Development Description**

3.1. Substitute consent was sought for this quarry plant on 24th October 2017. As mentioned elsewhere in this report, the application does not include all of the plant area (part of it being the subject of a separate application for substitute consent for quarrying).

3.2. The plant area comprises mostly concrete apron, and contains the following principal elements-

- Recessed vehicular entrance.
- Licensed discharge point to drain running inside the roadside boundary – which in turn debouches to the Powerstown Stream, on the northwestern boundary of the site.
- Concrete block manufacturing area and associated storage, shed (1,244m^2) and silos/conveyors – maximum height 21m.
- 'Readymix' plant – containing three silos up to 23m in height.
- Mobile 'Portacabin' canteen (27m^2).
- Single-storey office 'Portacabin' (103m^2).
- Two storage containers (14.5m^2 & 29m^2) – one for office use.
- Weighbridge.
- Demountable asphalt plant – maximum height of stack 33m – not to be confused with the unused permanent asphalt plant nearby (permission ref. 92/137).
- Two-storey control room building with flat roof (66m^2).
- Single-storey ESB sub-station (51m^2).
- Bunded fuel tanks (4 in total), and associated single-storey pumphouse (35m^2).
- Workshop of corrugated iron construction (180m^2).
- Proprietary effluent treatment tank.
- Two water holding tanks – 11.25 x 2.5m and 3m deep.

- Settlement pond – less than 2m deep.
- Well for staff facilities.

It is noted that some of the items listed above, formed part of a sale which was to be held on 11th November 2017 (as part of the DMIL receivership), and which might, therefore, be removed from the site – subsequent to the making of the application for substitute consent. It was stated by the applicant, that the Section 37L application for continuation of quarrying would post-date the auction of plant items, and that those items sold would be indicated to An Bord Pleanála in that application which was to be lodged on 14th November 2017 [in fact lodged on 5th December 2017]. I note that this information was not submitted with the application to extend quarrying at Clonmelsh ref. ABP-300425-17. However, from site inspection in May 2018, it was noted that all of the above items remain on site.

3.3. The application is accompanied by a remedial Environmental Impact Assessment Report (rEIAR) – dated October 2017; and a remedial Natura Impact Statement (rNIS) – dated September 2017. These documents address both the plant area and quarrying at the site.

4.0 Planning History

4.1. Planning History and Quarry Registration

There is an extensive planning history relating to- normal planning applications to Carlow County Council and appeals to An Bord Pleanála; enforcement; quarry registration under sections 261 & 261A; Discharge Licence; Air Pollution Licence; Section 5 references to Carlow County Council and An Bord Pleanála; which is set out in the rEIAR and other documentation from Carlow County Council on this file.

4.2. Recent Relevant Planning History

Ref. 92/137: Permission granted for a mobile asphalt plant at Clonmelsh. Development was carried out. [This asphalt plant has been excluded from the 3.22ha substitute consent application ref. ABP-300037-17]. It is not currently in use.

Ref. 10/130: Permission was granted by Carlow County Council for continuation of quarrying at Clonmelsh and into Powerstown townland. This involved diversion of county roads on the quarry boundary and deepening the quarry void from 25m OD to minus 75m OD, amongst other things. This decision was the subject of 1st and 3rd Party appeals to An Bord Pleanála (**PL 01.238679**). The proposal was later revised to reduce the extraction area from 123.0ha to 68.4ha, and to alter the extraction depth to minus 25m OD, together with omission of proposed road diversions. The decision of the Board to refuse permission, on 27th May 2013, is the subject of Judicial Review to the High Court by the then applicant, Dan Morrissey (Ireland) Ltd. (ref. 213/556), with no decision to date. [I understand that this court case is not proceeding, pending the decisions of the Board in relation to the three applications currently before it].

Ref. 12/240: Permission was granted by Carlow County Council for retention of plant, machinery and buildings and for new offices and a replacement wastewater treatment system at the Clonmelsh quarry. The retention element was prompted by condition 4(a) of permission ref. 10/130, that omitted certain plant and machinery. This decision was appealed by 1st and 3rd Parties to An Bord Pleanála (**PL 01.242648**), and permission was refused on 17th November 2014, for reasons that the plant needed to be considered in association with the quarrying activities it served.

ABP-300034-17: Application to An Bord Pleanála under section 177E of the Planning and Development Act, 2000 (as amended), for substitute consent for quarrying at Clonmelsh and Garryhundon townlands, by Grant Thornton (Receivers). There is no decision to date on this application.

01.SH0235: Refers to applications to An Bord Pleanála by Grant Thornton (Receivers), for extensions of time to apply for substitute consent for quarry at Clonmelsh and Garryhundon townlands – the final Order being dated 20th October 2017 – extending the appropriate period up to and including 24th October 2017.

01.SH0236: Refers to applications to An Bord Pleanála by Grant Thornton (Receivers), for extensions of time to apply for substitute consent for quarry plant at Clonmelsh townland – the final Order being dated 20th October 2017 – extending the appropriate period up to and including 24th October 2017.

01.LQ0001: Refers to an application to An Bord Pleanála by Grant Thornton (Receivers), for leave to apply for substitute consent for quarry at Clonmelsh and Garryhundon townlands. By Order dated 7th April 2017, the Board granted leave.

01.LS0019: Refers to an application to An Bord Pleanála by Grant Thornton (Receivers), for leave to apply for substitute consent for quarry plant area at Clonmelsh townland. By Order dated 7th April 2017, the Board granted leave.

ABP-300425-17: Application to An Bord Pleanála, under section 37L, to extend the Clonmelsh quarry to the south, by 21.9ha, into the townland of Powerstown. There is no decision to date on this application.

Note: both 01.LQ0001 and 01.LS0019 originated in a single application to An Bord Pleanála, on 6th July 2015 – under section 177C of the Planning and Development Act, 2000 (as amended), for leave to apply for substitute consent. It was considered necessary to split the two elements – (a) quarry and (b) quarry plant, for legislative and procedural reasons. Just how this situation was arrived at, is set out in the Inspector's joint report on 01.LQ0001 and 01.LS0019, and it is not proposed to repeat it here. Suffice to say, An Bord Pleanála has accepted the two applications for substitute consent (under section 177E), and the application for continuation of quarrying (under section 37L), of the Planning and Development Act, 2000 (as amended).

5.0 Policy Context

5.1. Development Plan

The relevant document is the Carlow County Development Plan 2015-2021.

- Section 3.5.7 deals with aggregate resources, mining and extractive industry; and recognises the importance of sand & gravel extraction to the economic life of the county.
- E.D. – Policy 13 states- It is the policy of Carlow County Council to:
    - Provide for quarry and extractive development where it can be demonstrated that the development would not result in a reduction of the visual amenity of designated scenic area [sic], to residential

amenities or give rise to potential damage to areas of scientific, geological, botanical, zoological and other natural significance including all designated European Sites.

- Ensure compliance with the overall objectives of the Water Framework Directive in the context of quarries, mining and extractive development.

- Section 9.1.11 deals with Geological Heritage Sites – and identifies the Morrissey Quarry at Clonmelsh as a potential proposed Natural Heritage Area (pNHA) in the future.
- Section 11.16 deals with 'Extractive Industries' and the factors that will be considered in assessing any applications for quarry development.
- Appendix 6, dealing with Landscape Character Assessment, identifies the area as "Central Lowlands" – being moderately sensitive to development – 2-3 on a scale of 1-5, where 5 is most sensitive. "Applications for quarrying should be accompanied by a detailed landscape plan setting out mitigation measures with particular reference to land grading and screen planting".
- Scenic Route 5 is located approximately 1.0km to the southeast of the Garryhundon quarry – on slightly elevated ground to the north of the village of Nurney, on the Tinryland road.

5.2. Natural Heritage Designations

5.2.1. The River Barrow and River Nore SAC (Site code 002162) is located approximately 1.35km as the crow flies to the southwest of the overall quarry site. The Powerstown Stream, in the northwestern corner of the Clonmelsh quarry, discharges to the SAC some 2.3km downstream. The Cloghristick Wood proposed Natural Heritage Area (pNHA) is located approximately 1.5km to the west of the quarry site.

5.3. Record of Monuments and Places

There are a number of such sites in the vicinity of the overall quarry – particularly to the east of Clonmelsh and north of Garryhundon quarries, and within the townland of Powerstown, wherein it is proposed to extend the Clonmelsh quarry. There are none

such indicated within the red-line boundary of the current application for substitute consent.

5.4. **Quarries and Ancillary Activities: Guidelines for Planning Authorities**

These Guidelines, issued by the Department of Environment, Heritage and Local Government in April 2004, are of relevance. They provide guidance to planning authorities on planning applications and development plan policy as well as section 261 of the 2000 Act. The importance of quarries is emphasised and the continued need for aggregates is highlighted. The potential for environmental impacts needs to be considered. The Guidelines recommend that in formulating development plan aims and strategy, in an area containing significant aggregate resources; the plan should acknowledge their economic value, which may be of national or regional importance. Since aggregates can only be worked where they occur, priority should be given to identifying the location of major deposits, and to including a commitment to safeguard valuable unworked deposits for future extraction. The Guidelines go on to address the assessment of applications and Environmental Impact Statements [now EIARs], and the formulation of planning conditions – including issues related to noise and vibration, dust, water supplies and groundwater, traffic, archaeology, water, environmental monitoring, waste management, contributions, extraction limits and the documentation which should be included in an application.

5.5. **National Planning Framework (Project Ireland 2040) and National Development Plan 2018-2027**

These joint documents set out a vision for the future development of the country and, in particular, to support the sustainable development of rural areas by encouraging growth. National Policy Objective 23 seeks to facilitate the development of the rural economy through supporting, amongst other sectors, a sustainable and economically efficient extractive industry sector, whilst at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.

6.0 **Observers**

6.1. There are three observations submitted to An Bord Pleanála from the following-

- William Abbey, Garryhundon – received on 21st November 2017.
- Vivian Cummins, Architects, agent on behalf of Garryhundon Local Residents Action Group – received on 23rd November 2017.
- SLR Consulting, agent on behalf of Philip Morrissey, Clonmelsh House, Co. Carlow – received on 24th November 2017.

6.2. Many of the issues raised in the three observations are common ones (also submitted in relation to the application for substitute consent for the quarrying at Clonmelsh and Garryhundon townlands), and may not be directly relevant to the application for substitute consent for the plant area. However, reference is made to points raised in relation to submissions made in relation to ABP-300034-17, and where relevant, these have been included below. The issues raised can be summarised in bullet point format as follows-

- The quarry is not adequately fenced.
- Night-time light pollution is a problem.
- The older quarried areas are an eyesore.
- Other quarries in this area, owned by the applicant, have been left in a disgraceful condition and rubbish and waste have been dumped in them. Animals have broken into disused quarries and are grazing over them. People with guns are using disused quarries for firearm practice – particularly on Sundays.
- The asphalt plant emits polluting material to the atmosphere – notwithstanding separation distance from houses.
- Limestone dust has been a nuisance from crushing and transportation on this overall site.
- There is no wheel-wash at the quarry exit.
- Residents, as taxpayers, have rights to a clean, peaceful and properly-managed environment.

- There is a long history of unauthorised development and flouting of the planning rules at this quarry. The substitute consent process is being abused in this instance – to regularise flagrant abuse of planning regulations. Carlow County Council has been identified as being far too lenient with quarry developers.
- Elements of the surface water management system are outside the boundary of the site as outlined in red, and calls into question the actual size of the development. The site cannot be examined in isolation from the adjoining quarry.
- Much of the plant at this site should be located in an industrial area – and is an anomaly in a rural area – much of it stemming from flouting the planning laws. The scale of the plant does not conform to the zoning provisions of the County Development Plan.
- The road network is wholly inadequate for the traffic generated by this development.
- Part of the plant is over 18m tall – the equivalent of a six-storey building. It is visually intrusive and out of character with this rural area.
- Permission would facilitate the continuation and intensification of what was an unauthorised use.
- Section 261 registration does not establish the legal status of a quarry. There must be properly documented pre-1964 activity. Lands in folios were only acquired by the applicant in 1964 and 1968.
- The acquisition of additional lands has, and will continue to lead to, a substantial intensification of quarrying – something which will be facilitated by the granting of substitute consent.
- There are a number of unauthorised elements at this quarry – such as the fixed asphalt plant, biofuel facility, office building, wastewater treatment system, ESB sub-station and vehicular access.
- The manufacturing/production area (as well as other lands within the wider quarry) is subject to licence agreement with Philip Morrissey, dating back to

1985, and must be restored to agricultural use. The Board should require that this be done.

- The applicant does not have title over all of the lands on which the application has been made – some of these lands being in the ownership of Philip Morrissey. The application for substitute consent is invalid.
- The application for leave to apply for substitute consent is entirely different to an application for substitute consent, and the Board must now examine this application *de novo*.
- No Non-Technical Summary of the rEIAR appears to have been submitted.

6.3. Submissions are accompanied by the following documentation of note-

- Submission from Farrell McElwee, Solicitors, in relation to title to lands which form part of the applicant site (including Land Registry documentation). Lands within folio CW2075F are in the ownership of Philip Morrissey. This folio contains a parcel of land in the townland of Garryhundon. Lands within Garryhundon townland in folio CW6086F are in the ownership of Philip Morrissey. The remainder of lands within the townlands of Clonmelsh and Garryhundon (folio CW236F) are in the ownership of Kevin Morrissey. Philip Morrissey is the plaintiff in extant proceedings before the High Court (2017/2361P) which seek, *inter alia*, to prevent the defendants from extracting any further limestone or other material from Clonmelsh quarry, save with the consent of Mr. Morrissey; together with an injunction preventing the defendants, their servants or agents from trespassing on the lands of Mr. Morrissey. Philip Morrissey does not consent to the making of these applications for substitute consent and extending the quarry.

7.0 **Report of Carlow County Council**

7.1. The response of Carlow County Council, received by An Bord Pleanála on 16th January 2018, is similar but not identical, to the submission made in relation to ABP-300034-17, and can be summarised in bullet point format as follows-

- Details of relevant planning history of the site – including referrals, quarry registration under section 261 and 261A and licences for discharges to air and water.
- Details of enforcement history.
- Details of relevant sections of the Carlow County Development Plan 2015-2021.

7.1.1. Issues raised by 3rd parties in relation to previous applications [where relevant] include-

- Indication that progressive restoration ought to have been carried out in the past as quarrying advanced, and areas were quarried out.
- Fencing on the boundaries is inadequate, and life buoys were missing at siltation ponds.
- Reduction in property values arising from air and noise pollution and additional traffic on the road network.
- Lack of engagement with the local community.
- Negative impact on water quality and pollution of wells.
- Use of an unauthorised road.

7.1.2. In relation to the rNIS, it is noted-

- Position of River Barrow and River Nore SAC some 900m to west of site.
- The position of the Clonmelsh Stream is not recognised.
- The position of sites which were considered for in-combination effects were not indicated.
- Confirmation is needed that the rNIS, contains the most up-to-date surveys of sites within 15km of the quarry.
- Confirmation is needed that the rNIS, contains the most up-to-date monitoring data and test results.
- The design and capacity of the septic tank on site needs to be ascertained.

- The rNIS should detail the projected worst-case scenario, in the event that mitigation measures fail.
- Further details are required in relation to cumulative effects when considering Powerstown Landfill and downstream quality of Powerstown Stream. Other quarries hydraulically linked to the Barrow River should also be considered.
- Site infrastructure for the management of surface water, which is set out in the rEIAR should also be included in the rNIS.
- Up-to-date Discharge Licence monitoring results, which are included in the rEIAR should also be included in the rNIS.
- Up-to-date information should be presented on the water quality within the Barrow River – available on the EDEN portal.
- Detail is required on prevention of hydrocarbon spillage.
- Additional information is required on the interaction of groundwater with the Barrow River.

7.1.3. In relation to the rEIAR, it is noted-

- Details of vibration monitoring results should be submitted for the years 2010-2017.
- Lack of information on monitoring and survey data from the period prior to 2002 is critical in forming an assessment in relation to environmental effects.
- It is not clear under what permissions and consents current quarrying is being carried out.
- Details in relation to the septic tank are required.
- It is not clear if the plant will remain in place following the restoration of the quarry.

7.1.4. The submission of two separate substitute consent applications seems to be based on legislative requirements. However, the quarry and the plant are interdependent. The combined assessment of both would be more appropriate.

7.1.5. The principle of the development is acceptable under the provisions of the County Development Plan. The site is the subject on extensive planning and enforcement

history. Any grant of substitute consent should include conditions in relation to the following-

- Restricting grant to development that has already been carried out on this site.
- Providing clarity that future or further development is not authorised by any permission.
- Mitigation measures in the rEIAR and the rNIS should be carried out in full.
- A detailed restoration and landscaping plan should be agreed – to include timescales.
- Details of an aftercare programme should be required – to prevent surface and groundwater pollution.
- A bond for completion of development should be required.

7.1.6. The final section of the report outlines issues for consideration in the event that any further use of the plant area is being permitted. Issues relate to-

- Duration of permission.
- Hours of operation.
- Linking the use of the plant to any further extraction permitted.
- Traffic Management Plan.
- Record of all traffic movements into and out of the plant area – as well as origin and destination, quantity and type of material hauled.
- Haul routes.
- Operational noise and dust limits.
- Lighting.
- Surface water management.
- Groundwater and aquifer protection plan.
- Review of boundary treatments in relation to requirement for safety fencing.
- Environmental management system and monitoring measures.

- Payment of financial contributions to the planning authority in accordance with the Development Contribution Scheme.
- Lodgement of a cash deposit to secure the provision and satisfactory restoration of the site.

7.1.7. The submission is accompanied by extracts from the County Development Plan in relation to natural and built heritage. The report also refers to inclusion of reports from the Environment Section and from the Water Services Department of Carlow County Council and from Irish Water, which were not, in the event, included with the submission to An Bord Pleanála.

8.0 **Prescribed Bodies**

8.1. The application was referred by An Bord Pleanála to a number of Prescribed Bodies, by letter dated 22nd February 2018, for comment on or before 21st March 2018-

- An Taisce.
- Development Applications Unit of Department of Culture, Heritage and the Gaeltacht.
- Fáilte Ireland.
- Health Service Executive.
- The Heritage Council.
- Minister for Communications, Climate Action and Environment.
- Inland Fisheries Ireland.
- An Chomhairle Ealaíon.

8.2. The response of the Health Service Executive, received on 21st March 2018, can be summarised in bullet point format as follows-

- No significant public consultation was undertaken with the local population. To estimate the impacts on public health, such a consultation should have been undertaken.
- The bedrock aquifer is regionally important. All mitigation measures outlined in the rEIAR should be undertaken, to protect this resource.

- The well on the site is not used for drinking purposes, but is classified as 'potable'.
- The wells of three houses indicated on Figure 4.2 should be included in the water sampling plan for the development.
- During a site visit on 15th March 2018, there was a residual level of dust on roads at the Clonmelsh quarry entrance – L3050. Vegetation on both sides of the road was discoloured – consistent with excessive dust deposition. Historically, the Clonmelsh quarry was a significant source of dust deposits on the L3050. Extra monitoring points for dust should be installed on the three houses on the edge of the rEIAR site.
- Extra mitigation factors should include- an assessment of truck-washing facilities at the plant area (to ensure that BAT technology is in place); a truck-washing facility should be provided at the exit from the Garryhundon quarry, and each truck should be covered to reduce dust emissions; proper screening should be provided along the L3050 to reduce dust deposition.
- There were a number of noise exceedances between 2008 and 2017. No mention is made of the contribution of the quarry to such noise exceedances.
- A noise assessment should be carried out on the number of HGV movements on the L3050 and also the L3045, and appropriate mitigation measures, as outlined in the rEIAR put in place.

8.3. The response of the Health Service Executive was referred for comment to the other parties/observers to the application for substitute consent, by letters dated 8th May 2018, requesting comment on or before 28th May 2018.

8.3.1. <u>Response of Applicant</u>

The response of Property Resource Planning Management & Development, agent on behalf of the applicant, received by An Bord Pleanála on 28th May 2018, can be summarised in bullet point format as follows-

- The rEIAR is retrospective in nature, and so public consultation is not appropriate. All aspects of the environment have the potential to impact on human beings. Public consultation is facilitated by the advertising of the application – inviting comments to be made directly to An Bord Pleanála.

- Mitigation measures for the protection of surface water and groundwater are outlined in the rEIAR. The applicant undertakes to carry out quarterly monitoring of the well on the site, notwithstanding that it is used for processing water only, and not for human consumption. In addition, the applicant undertakes to monitor, on a quarterly basis, the wells of three houses along the western edge of the quarry – all of which are in the ownership/control of the applicant. Results will be included in Annual Environmental Report to Carlow County Council.
- The applicant undertakes to install an additional dust monitoring point between D1 and D2 monitoring points (indicated on Figure 8.1 of the rEIAR) – at a house in the ownership/control of the applicant. It will also be possible to install a further dust monitoring point between D4 and D5. A third one as recommended by the HSE is not required, as there is already dust monitoring in place at D1 and D2.
- Truck wash waters are discharged through an interceptor at the plant area.
- All trucks are required to be covered when hauling material from Clonmelsh and Garryhundon or between them.
- The level of material hauled from Garryhundon does not necessitate a dedicated wheel-wash. There is a water bowser and sweeper available from Clonmelsh, should it be needed.
- Noise exceedances are explained by passing traffic on the local road network. Ambient noise has increased with construction of the M9 Motorway.

8.3.2. Response of Carlow County Council

None received.

8.3.3. Response of William Abbey

None received.

8.3.4. Response of Garryhundon Local Residents' Action Group

None received.

8.3.5. Response of Philip Morrissey

None received.

9.0 Response Submissions

9.1. An Bord Pleanála requests information/details from Applicant

9.1.1. By letter dated 22nd February 2018, An Bord Pleanála requested the applicant to submit, on or before 21st March 2018, a Non-Technical Summary of the rEIAR, together with section drawings of the 'Readymix' concrete-batching shed and plant, the pumphouse and the workshop.

9.1.2. The response of Property Resource Planning Management & Development, agent on behalf of the applicant, Grant Thornton (Receivers), received by An Bord Pleanála on 21st March 2018, included a Non-Technical Summary of the rEIAR, but did not include copies of the drawings requested, owing to difficulties with printers.

9.1.3. By letter dated 26th March, An Bord Pleanála requested the applicant to submit a revised CD of the application, to include the Non-Technical Summary of the rEIAR and the previously requested section drawings. This new submission was required on or before the 16th April 2018.

9.1.4. The response of Property Resource Planning Management & Development, agent on behalf of the applicant, Grant Thornton (Receivers), received by An Bord Pleanála on 16th April 2018, included the revised section drawings and new CD (although reference is made to a memory stick in its place). [I note that a memory stick was provided for ref. ABP-300034-17].

9.1.5. An Bord Pleanála decided to circulate, to Carlow County Council and to the three observers for their information, the intention to request the applicant to re-advertise the proposal to state that significant additional information had been received by An Bord Pleanála (in the form of a Non-Technical Summary) – by letters dated 5th June 2018.

9.1.6. Arising from the absence of a Non-Technical Summary to accompany the rEIAR in the initial application for substitute consent, An Bord Pleanála decided to request the applicant to re-advertise the application. This was done by letter dated 23rd May 2018. The revised notices were to be complied with by 12th June 2018 – and stipulated a period of five weeks for interested persons to make submissions to An Bord Pleanála.

9.1.7. Revised newspaper and public notices were in fact received by An Bord Pleanála on 12th June 2018.

9.2. Carlow County Council submission: received on 16th January 2018

This submission was referred for comment to the other parties and observers to the application for substitute consent, by letter dated 26th March 2018, and requesting response on or before 16th April 2018.

9.2.1. Response of Applicant

The response of Property Resource Planning Management & Development, received by An Bord Pleanála on 16th April 2018 [combined response], can be summarised in bullet point format as follows-

- The application for substitute consent binds the extent of future development capable of being proposed by the applicant, and to this end, a landscape restoration plan has been submitted.
- CCC acknowledges that the development, in principle, is supported by the Development Plan.

9.2.2. Response of William Abbey

The response, received by An Bord Pleanála on 13th April 2018, can be summarised in bullet point format as follows-

- There should be combined assessment of the two quarries.
- The quarries are separated by a road and river, and each had independent plant areas.
- Substitute consent applications by Grant Thornton are an attempt to by-pass previous applications by Dan Morrissey Ltd. which are the subject of dispute over proper enforcement of planning regulations.
- It is not clear who would enforce any conditions attached to grants of substitute consent.
- CCC has failed in its duty to local residents. Very little enforcement has been undertaken in the past 20-30 years. Residents have not been warned of

blasts. There has been illegal dumping within this quarry. These issues continue to be of concern.

9.2.3. Response of Garryhundon Local Residents Action Group

The submissions were sent by An Bord Pleanála, in error, to the observer rather than to the agent. The letter was re-issued to the agent for the observer (Vivian Cummins Architects), by letter dated 5th June 2018, requesting a response on or before 25th June 2018. There was no response received.

9.2.4. Response of Philip Morrissey

The response of SLR Consultants, agent on behalf of Philip Morrisey, received by An Bord Pleanála on 16th April 2018, can be summarised in bullet point format as follows-

- The Carlow County Council response makes reference at p.17 to reports from various departments of the Council which should be included with the submission to An Bord Pleanála. These were not received by the observer, and may not have been included in the submission to An Bord Pleanála.
- The observer agrees with the conclusion of CCC in relation to the rNIS. Further information is required before Stage 2 appropriate assessment can be completed. A revised rNIS should be required by An Bord Pleanála. Any such revised rNIS should be circulated to the observers for comment.
- The observer agrees with the conclusion of CCC in relation to the rEIAR. Ground borne vibration and air-overpressure results for each blast between 2010 and 2017 should be sought, and circulated to the observers for comment.
- The applicant has not obtained the consent of Philip Morrissey for quarrying on his lands. This application should be declared invalid in the absence of a letter of consent from Philip Morrissey.
- The approach to restoration of this quarry is not clear. The consent of Philip Morrissey will be required in relation to restoration.

9.3. **Philip Morrissey submission: received on 24th November 2017**

This submission was referred for comment to the applicant and to Carlow County Council, by letter dated 26th March 2018, and requesting response on or before 16th April 2018.

9.3.1. Response of Applicant

The response of Property Resource Planning Management & Development, received by An Bord Pleanála on 16th April 2018 [combined response], can be summarised in bullet point format as follows-

- Applications for substitute consent have been properly and transparently made. The applicants are receivers, appointed by Allied Irish Banks.
- The lands outlined in blue largely coincide with those indicated in planning applications ref. 10/130 and 12/240. These applications were made ahead of the appointment of receivers. Both applications show Dan Morrissey (Ireland) Ltd. as owner of the lands.
- Six copies of a Non-Technical Summary were submitted to An Bord Pleanála in March 2018.
- Licence requirements referred to in this submission do not form any part of the substitute consent application for the Clonmelsh quarry area or the concurrent application for the plant area – ABP-300034-17 and ABP-300037-17 respectively.
- Matters raised in relation to reinstatement are not relevant to the substitute consent application.

The submission is accompanied by copies of application forms for planning permission ref. 10/130 and ref. 12/240.

9.3.2. Response of Carlow County Council

The response, received by An Bord Pleanála on 9th April 2018, indicated that the planning authority had no further comment to make.

9.4. **Applicant submission: received on 16th April 2018**

This submission was referred for comment to other parties/observers to the application for substitute consent, by letter dated 8th May 2018, and requesting response on or before 28th May 2018. Also included (for information purposes) was a copy of notices issued to the applicant under section 132 of the Act, and a copy of the Non-Technical Summary received by An Bord Pleanála.

9.4.1. Response of Carlow County Council

None received.

9.4.2. Response of William Abbey

None received.

9.4.3. Response of Garryhundon Local Residents' Action Group

The submission was sent by An Bord Pleanála, in error, to the observer, rather than to the agent. An Bord Pleanála wrote to the agent, Vivian Cummins & Associates Ltd, on 5th June 2018, requesting response by 25th June 2018. There was no response received.

9.4.4. Response of Philip Morrissey

The response of SLR Consultants, agent, received by An Bord Pleanála on 28th May 2018, relates to the Non-Technical Summary only. It largely restates points already made in relation to property ownership and restoration at this quarry. The applicant is present on the site without the consent of the legal owner, Philip Morrissey. Because the application for substitute consent is a separate application to the application for leave to apply for substitute consent, issues of the ownership of this quarry must be re-examined by the Board *de novo*. The applicant had no right to grant a licence to Plazamont Ltd. to operate the quarry, without the written consent of Philip Morrissey.

9.4.5. Response of Health Service Executive

By letter dated 12th July 2018, An Bord Pleanála circulated this submission for comment, together with notices issued under section 132; for comment on or before 1st August 2018. The response received from the HSE was outside the appropriate period, and was returned.

10.0 General Assessment

10.1. Temporary Cessation if Necessary

It is open to the Board to consider issuing a temporary cessation notice under section 177J of the Planning and Development Act, 2000 (as amended). Having regard to the information presented in the application, the rEIAR and rNIS, and to what was observed at the times of inspection at the quarry plant and its environs, 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. I do not, therefore, consider that a temporary cessation notice is warranted in this instance.

10.2. Associated Files

This application for substitute consent comprises one of three associated applications to the Board – ABP-300034-17, ABP-300037-17 and ABP-300425-17, all of which are travelling together and should be considered together. The two applications for substitute consent – ABP-200034-17 and ABP-200037-17 are inter-related, whilst the third for extension, to some extent, stands alone.

10.3. Clonmelsh Quarry Boundaries and Security

The Clonmelsh quarry is surrounded by hedgerows, and in some instances, large earth berms. The L3050 road boundary comprises 2.4m high palisade fencing; and locked gates secure the only vehicular entrance. Other agricultural entrances/former quarry entrances are locked and, in some instances, large boulders have been placed to prevent unauthorised vehicular access. I would be satisfied that the applicant has taken reasonable precautions to secure the site. The site is fitted with security cameras.

10.4. Clonmelsh Plant and Facilities

There is a wheel-wash at the Clonmelsh quarry exit, but it does not catch all vehicles leaving the quarry (not the ones exiting via the weighbridge). Not all plant at Clonmelsh is operational – older crushing and screening plant is in place, but not

operational. The same is true of the older asphalt plant – in place, but not operational (although this plant is located outside the current application site). Aggregate is crushed/graded and, where necessary, washed on the quarry floor. Stockpiles are located on the quarry floor. Dispatch is from the quarry floor in laden HGVs which climb up from the void to either feed into the plant area or to leave laden, via the weighbridge.

10.5. **Signage**

There is limited commercial signage at the Clonmelsh quarry entrance. The degree of signage does not detract from the visual amenities of the area and does not represent a traffic hazard.

10.6. **Life-Saving Equipment**

Issues in relation to lifebuoys at siltation ponds within the quarry is a matter of good quarry management, and will not have impacted on the amenity or safety of residents in the area. There is only one small siltation pond within the quarry plant site.

10.7. **Floodlighting**

Night-time light pollution would not have been a significant dis-amenity at this quarry. There is no fixed floodlighting within the quarry. Floodlighting at the plant area would not be unusual – to allow for winter working. I note that Junction 6 (Carlow South) on the M9 Motorway at Powerstown, is provided with public lighting; as is the L3044 road from its junction with the R448 road as far as the entrance to Powerstown Landfill and Recycling Centre. This is not a remote rural area.

10.8. **Land Ownership**

Matters relating to the ownership of lands and the entitlement of the applicant to make the application for substitute consent are not strictly planning issues. Any disputes over property ownership or rights over property are a civil matter – with recourse to the courts, if necessary. The history of property ownership at this quarry is not for determination in this application for substitute consent. The extent of the

quarry plant area is determined by the red line boundary of the application for substitute consent. This is the boundary that defines the application before the Board. The applicant company has indicated lands (in blue) over which it has control. These lands do not form part of the current application.

10.9. **Public Consultation**

The engagement or lack of such, by the quarry owners/operators with local residents in the past is not a matter capable of resolution in this application for substitute consent. Those concerned have been afforded an opportunity to make their views known to An Bord Pleanála, by way of this application for substitute consent.

10.10. **Carlow County Council Handling of Applications and Registration**

Claims that Carlow County Council has been overly-generous in allowing for time extensions to submit an application for substitute consent, is not a relevant planning consideration. There is an application for consideration now before the Board. Past permissions of Carlow County Council in relation to this plant area are not open for review by An Bord Pleanála.

10.11. **Submission of a Non-Technical Summary of the rEIAR**

A Non-Technical Summary was not submitted with the application for substitute consent. This was remedied following a request by An Bord Pleanála for submission of same – received on 21st March 2018. This Non-Technical Summary was circulated to Carlow County Council and to those who had made observations to An Bord Pleanála in relation to the application for substitute consent. It was decided to request the applicant to re-advertise the application, on grounds that members of the public might have been put at a disadvantage through the absence of a Non-Technical Summary to accompany the original rEIAR submitted. This was done on 12th June 2018, and submissions invited within five weeks.

10.12. **County Development Plan**

The report from Carlow County Council does not indicate that the development contravenes the current Development Plan for the area. The site is not zoned.

Quarrying is stated to have been on-going at Clonmelsh since the 1940s. There are no designated landscapes, protected areas, Protected Structures or protected views/prospects within or immediately abutting the quarry plant areas. The Plan recognises the importance of quarrying to the economic development of the county. The "Central Lowlands" landscape character designation indicates an area which is moderately sensitive to development. I would be satisfied that the expansion of this quarry and associated plant since 1990, was not contrary to the policies contained in the current development plan.

10.13. **Financial Contribution**

The report of Carlow County Council to An Bord Pleanála, does recommend the imposition of a Development Contribution condition, in the event that the Board is minded to grant substitute consent for this quarry plant area. There is no recommendation to impose any Special Development Contribution. The County Carlow Development Contribution Scheme 2017-2021, does provide for a development contribution for quarries at the rate of €1,500 per 0.1ha. The Scheme goes on to state- "Applications for retention will be charged at the full rate. Exemptions or reductions will not apply to retention applications". In the normal course of events, it is likely that an application to develop or extend a quarry would attract a requirement to pay a development contribution. However, in view of the age of this quarry and the likelihood that the area in which the quarry plant is located would have formed the oldest section of the quarry, likely to have been in operation before the coming into effect of the Planning Act on 1st October 1964, and certainly before the coming into effect of development contribution schemes; it would not seem reasonable to impose a development contribution on the quarry plant area – notwithstanding that some items of plant within it may have been developed without the necessary planning permission.

10.14. **Reinstatement**

The application is not accompanied by any specific plans for reinstatement of the quarry plant area – although overall reinstatement of the wider Clonmelsh quarry is addressed in the rEIAR. It is proposed to flood the quarry void at Clonmelsh, to a level of approximately 48m OD, and to return lands on the margins (including the

quarry plant area) to agricultural grassland and woodland/scrub use. However, there is an application, under section 37L, to extend the Clonmelsh quarry to the south (ABP-300425-17) which would defer the ultimate restoration of this quarry for a further twenty years at least, as dewatering of the overall void would continue to be necessary, as would the use of existing plant to process some of the extracted sand & gravel and stone. I note that aggregate is imported to the plant area for further processing. Carlow County Council has requested that a bond be required of the applicant, to cover future reinstatement of the site. This would seem to be entirely reasonable and prudent.

11.0 **Environmental Impact Assessment**

11.1. **General Comment**

11.1.1. Section 177F(1) of the Planning and Development Act, 2000 (as amended), sets out what is required within an rEIS, as- "a statement of 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 for substitute consent was carried out. Details of any appropriate remedial measures undertaken or proposed to be undertaken by the applicant to remedy any significant adverse effects on the environment and the period within which any proposed remedial measures shall be carried out". Finally, any information which may be prescribed under section 177N.

11.1.2. The rEIAR which accompanies this application has been prepared for a pair of applications for substitute consent at this quarry, and the same document is supplied for both. A Non-Technical Summary has been provided (at a later date). Quarrying at this site is stated to have been continuous since the 1940s – the only suspension of activities was for a short period with the appointment of receivers. The issue of alternatives considered does not arise in relation to applications for substitute consent. The document submitted has regard to the advice given on what should be contained within an Environmental Impact Assessment Report (EIAR) – based on the requirements of the amending European Union Directive 2014/52/EU.

11.1.3. The rEIAR is set out in grouped format – addressing the issues of- Human Health and Population; Biodiversity; Land, Soils and Geology; Water and Hydrogeology; Air Quality and Climate; Noise and Vibration; Material Assets and Traffic; Cultural Heritage; Landscape and Visual Impact; Interactions Between the Foregoing.

11.1.4. The only difficulties which arose in preparing the document were, as might be expected in preparing a document of this nature, the absence of hard data from earlier periods (particularly the period prior to 2002). The operational period for the original EIA Directive was 1st February 1990. The document attempts to address the direct and indirect significant effects which the quarry and associated plant may have had since that date. Aerial photographs from Ordnance Survey Ireland are available for the years 1995, 2000 and 2005. Later aerial photographs are available from several sources. I have included extracts from these OSI aerial photographs for the area (in the photograph pouch accompanying this Inspector's Report) to assist in determining the lateral extent of quarrying – but obviously not the depth of extraction. It is noted that the quarry is in receivership; and the consequent associated difficulties which present, by the fact that the applicant was not the historical operator of the quarry.

11.1.5. The lands the subject of this application extend to approximately 3ha, within a stated larger landholding in the control of the applicant of 170ha. There was a sharp decline in extraction at the quarry post 2008 – the economic slump, and this would have been reflected in a downturn in activity at the plant area. Materials were imported to Clonmelsh from other quarries for processing. The quarry plant area at Clonmelsh contains the following principal items-

- Operational asphalt plant, with three dispatch bays.
- Older asphalt plant (permission granted in 1992) – not operational.
- Concrete blocks/concrete products plant – with both indoor (1,224m^2) and outdoor manufacturing and curing of products.
- 'Readymix' facility with three dispatch bays and adjoining truck wash-out area.
- Weighbridge, and associated staff and office facilities.
- Workshop (180m^2) at the entrance (not open on the date of site inspection in May).

- Four large fuel tanks, fully bunded (168m^2); with adjoining pumphouse (35m^2).
- ESB sub-station (51m^2).
- Some older crushing and screening plant, elevators and control room (66m^2) which are no longer in use – but remain in place.

11.1.6. Extraction at Garryhundon was sand & gravel (with only two small areas of rock extraction), whilst at Clonmelsh, overlying sand and gravel (5.75m approximately) was extracted to expose the limestone bedrock beneath for extraction. Some material won at Garryhundon would have been transported by HGV to Clonmelsh for processing. In addition, other materials were (and are still) imported to Clonmelsh from other quarries for use in the asphalt plant. The quarry void at Clonmelsh is approximately 37ha in extent, whilst that at Garryhundon is approximately 26ha. By the early 1990's it is estimated that 5.4m tonnes of aggregate had been extracted from Clonmelsh, with some 2.1m tonnes from Garryhundon. By 2017, the overall extraction was approximately 21.0m tonnes from Clonmelsh and 2.5m tonnes from Garryhundon.

11.1.7. What follows in the remainder of this section, is an environmental impact assessment of both quarry and quarry plant, operating in tandem, as both would have had a similar and cumulative impact on the same aspects of the environment in the locality.

11.2. **Population and Human Health**

11.2.1. Chapter 4 of the rEIAR deals with these associated issues. Hours of operation were stated to be 0600-2100 Monday to Friday and 0600-1700 on Saturdays – with no work on Sundays or bank holidays. Objectors have claimed that operation beyond these hours occurred in the past and recent past. Over the licence period the number of employees was 20 full-time equivalent positions – now down to 12. Over the period of operation since 1990, the quarry will have had a significant impact on employment in the area. There will have been no impact on population. Issues relating to human health, such as noise, vibration, air quality and water quality, are addressed in the appropriate sections of the rEIAR. There are no towns or villages in the immediate vicinity. There is scattered rural housing flanking local roads. The houses immediately abutting the Clonmelsh and Garryhundon quarries (and in the

ownership/control of the applicant) are, with one exception, derelict or semi-derelict. These are all located on the L3044 road. Some were occupied for periods by quarry employees. A single-storey house on the southeastern corner of the Clonmelsh quarry void – accessed from the L3045 road is not in the ownership/control of the occupant, and is currently vacant. The new Clonmelsh House, (to the immediate east of the Clonmelsh quarry, and to the north of the old cemetery on the L3045 road) is not in the ownership/control of the applicant, but was historically part of the wider quarry operation. [This house is occupied by one of the observers – Philip Morrissey]. Garryhundon House (to the east of the Garryhundon quarry) is set back 180m from the quarry boundary and 290m from the closest extraction area – and is located on the other side of a large walled garden. The portion of the Garryhundon quarry closest to the house would never appear to have been quarried for sand & gravel – remaining in arable cultivation – notwithstanding its inclusion within the red-line boundary of the application for substitute consent. There are no houses in the immediate vicinity of the quarry plant area. There was a traveller encampment on the side of the L3045 road, at the entrance to the Garryhundon quarry, on the date of site inspection in May 2018. It was no longer in evidence on the date of site inspection in August 2018. This encampment would not have been impacted by historical quarrying at Garryhundon. One house is indicated as being removed post-1990: this will not have been a significant impact – houses are allowed to run into dereliction throughout the country.

11.2.2. Drinking water for employees is imported to the site. An on-site well within the quarry plant area feeds the staff facilities area. A domestic waste collection deals with waste from staff facilities.

11.2.3. The operation of the Clonmelsh and Garryhundon quarries will not have had any significant impact on population in the area.

11.2.4. No mitigation measures are outlined in this section of the rEIAR – being addressed in other sections, where there might have been an impact on human health. An application under section 37L to extend the Clonmelsh quarry will allow for retention of existing levels of employment at the overall quarry. The operation of the Clonmelsh and Garryhundon quarries, and associated plant area, will not have had a significant impact on human health – particular regard being had to the policy of the

quarry operators in the past to acquire houses in the immediate vicinity of the quarry, and to effectively take them out of residential use over a period of time.

11.2.5. It would be appropriate to attach condition relating to hours of operation, to any grant of substitute consent. Such a condition should refer to the Quarry Guidelines 2004, rather than to the historical operating hours as stated in the rEIAR. However, it is noted that some processing plant (asphalt) and manufacturing processes (such as concrete block manufacture) would require greater flexibility of working hours. For this reason, I would consider that 0600-1900 hours Monday-Friday and 0700-1600 hours on Saturday would be reasonable in this instance. It may be that out-of-hours operations would be infrequently required for a specific large-scale contract, although such is not mentioned in the rEIAR. It has been contended by an objector that plant operates on a twenty-four-hour basis, on occasion. Such could be provided for by way of condition attached to any grant of planning permission.

11.2.6. There will have been no significant cumulative impact with other projects in the area – particularly other quarries, in terms of impact on human health, arising from the limited lateral extent of such quarries, and separation from the Clonmelsh and Garryhundon quarries, and from each other. Aerial photography indicates the limestone quarry at Milford to the southwest, and now disused sand & gravel pits in the Powerstown area. There will have been no significant cumulative impact on human health either from other quarries or the Powerstown Landfill and Recycling Centre.

11.3. **Biodiversity**

11.3.1. Chapter 5 of the rEIAR deals with this issue. Potential impact on European sites is not dealt with under this heading – addressed instead under the Appropriate Assessment section of this Inspector's Report. A conclusion that there would be no impact on the integrity of a European site is taken that there would be no significant impact on biodiversity within any such site.

11.3.2. The assumed baseline condition of the site is improved grassland. Examination of older OSI maps and aerial photographs indicate a progressive removal of hedgerows – resulting in larger fields over time. A site survey was undertaken on 12th July 2017, and habitats were mapped. The principal habitats are- Active quarry, Recolonising

bare ground, Scrub, Artificial pond, Hedgerows, Drainage ditch and Arable crops. Because of disuse, the Garryhundon quarry exhibits a higher proportion of recolonising bare ground and scrub habitats. Some hedgerows contain standard trees – including ash and elder. There are no records of protected or notable species of plants within the wider quarry site. Badger, Fox, Rabbit, Irish hare, Stoat, Hedgehog and Pygmy shrew would be expected within the site. Bats would forage along hedgerows on the site periphery. Birds would use the site for foraging and some for nesting. Water features on site, due to their ephemeral or shifting nature, limited size, and active use within a working quarry, will have offered little by way of suitable habitat for flora or fauna – although the two ponds at Garryhundon are the exception – quarrying there having halted some time back.

11.3.3. The Cloghristick Wood proposed Natural Heritage Area (pNHA) is located approximately 1.3km to the west of the Clonmelsh quarry, and is not linked to it by the Clonmelsh Stream/Powerstown Stream. Quarrying since 1990, will not have any impact on this pNHA – noted for its trees and woodland floor flora.

11.3.4. Since 1990, the key likely significant impacts could have been-

- Loss of habitat (grassland and associated hedgerows).
- Disturbance to habitats within and immediately adjacent to the quarry and plant areas.
- Dust deposited on plants.
- Potential for suspended solids to have been discharged to the Powerstown or Clonmelsh Streams.
- Accidental spillages of hydrocarbons to groundwater and consequential impact on groundwater and surface water quality in terms of water-dependent flora and fauna.

11.3.5. Mitigation measures will not have been directly put in place in relation to biodiversity, but would have included the following-

- Licensing of discharges to the Powerstown Stream since 2007.
- Licensing of discharges to air from the operational asphalt plant since 2010.
- Hydrocarbons stored in bunded areas.

- Maintenance of machinery and plant.
- Dust suppression measures in place both within the quarry and at plant areas.
- Siltation ponds within the Clonmelsh quarry void to reduce suspended solids in discharged waters.
- Groundwater was, and is, monitored.

11.3.6. Overall, the loss of improved agricultural grassland habitat and associated hedgerows will have been compensated for by the creation of other habitats, and will ultimately contain a large open body of water when the Clonmelsh quarry is flooded. Garryhundon quarry has large portions covered by scrub vegetation, and is to be returned to agricultural use, with some woodland planting, upon completion of restoration; resulting in no significant net loss/gain in terms of biodiversity. A small portion to the north (containing one pond) is not to be restored – being associated with a further quarry area to the east, which does not form part of the red-line boundary of the site. By reference to what exists on surrounding lands – the loss of improved agricultural grassland and associated hedgerows will not have been significant in terms of biodiversity. Disturbance to the mammals referred to above will have been intermittent, and confined to quarry working hours in terms of noise and dust nuisance. There are ample alternative habitats of equal value on surrounding lands – the improved agricultural grassland and arable habitat types being ubiquitous. The impact on species will have been minor. The loss of hedgerows and foraging for bat species will have been minor in terms of what exists on surrounding lands. Quarry activities are generally confined to daylight hours – and will not have impacted significantly on bat species. Bird species will have been disturbed to some extent by quarry operations. However, the creation of new habitats will be of benefit to different bird species, and overall the impact can be considered neutral – this being particularly the case with advancing scrub cover at the Garryhundon quarry.

11.3.7. There will have been no cumulative impact with other projects in the area – particularly quarries, in terms of impact on biodiversity, arising from their limited lateral extent and separation from the Clonmelsh and Garryhundon quarries, and from each other. Aerial photography indicates the limestone quarry at Milford to the southwest, and now disused sand & gravel pits in the Powerstown area. There will

have been no cumulative impact on biodiversity in relation to the operation of the Powerstown Landfill and Recycling Centre.

11.3.8. If the mitigation measures, as outlined, were observed during the operation of the quarry and plant area since 1990, it is unlikely that there has been any significant impact on the biodiversity of the area.

11.4. Land, Soils and Geology

11.4.1. Chapter 6 and Appendix 6 of the rEIAR deal with these joint issues. The expansion of quarrying since 1990 has resulted in the loss of agricultural land. In the case of the Clonmelsh quarry, this is a permanent loss. The Corine land cover maps for the area (extracted from EPA data) are indicated for the years 1990, 2000, 2006 and 2012. These maps show the advance of quarrying and the shrinkage of the area of non-irrigated land/complex cultivation patterns. The adjacent M9 Motorway and the Powerstown Landfill and Recycling Centre are indicated. The area is dominated by agricultural activity – both pasture and arable. Site elevation varies from 25m OD (quarry floor) to maximum 65m OD (height of some berms). The Corine 1990 and 2000 maps do not register aggregate extraction at Garryhundon – even though it did exist (having commenced in the 1950's), and it is clearly visible in OSI aerial photography dating from 1995 and 2000. For this reason, I would be reluctant to make any significant assumptions based on the Corine maps. Suffice to say, the land at both Clonmelsh and Garryhundon which was, at one stage, agricultural land – has now changed to quarry use, and some is reverting to scrub.

11.4.2. The soils are well-drained. Subsoils contain sand & gravel. Bedrock comprises the Ballysteen limestone formation (dolomitised). There are no indicated major fault lines through either the Clonmelsh or Garryhundon quarries. The bedrock has a ten-degree westerly dip. Minor faults have been encountered within the Clonmelsh quarry. Boreholes were drilled in 2007, and trial pits opened in 2005 – in association with then proposals to extend the quarry to the south. From the results of trial pit excavations, the bedrock within the Clonmelsh quarry is estimated to be overlain by up to 15m of overburden – containing sand & gravel. Three trial pits, one of which was excavated up to 9m below ground level, at the southern end of the Clonmelsh quarry did not encounter bedrock.

11.4.3. Since 1990, the key likely significant impacts could have been-

- Footprint of the Clonmelsh quarry has grown from 18.4ha to 51.0ha in 2017 – with an active extraction void of just over 37.0ha.
- The depth of the Clonmelsh quarry has been gradually increased to 25m OD.
- Soils and subsoils have been used in the creation of berms around the quarry void – sand & gravel having been processed and removed.
- The Clonmelsh quarry has been extracted from north to south.
- The Garryhundon quarry has grown from approximately 24.0ha to 26.0ha in 2017.
- The Garryhundon quarry has been extracted from west to east.
- The removal of sand & gravel and rock is a loss which cannot be replaced.
- There are no unstable rock or cliff faces within either quarry.
- Previous blasting may have resulted in unstable faces – but this impact would have been short-term.

11.4.4. The purpose of quarrying was to remove deposits of sand & gravel and stone for economic benefit. The mitigation measures in place will have been limited to-

- Storage of stripped topsoil within berms, for later re-use in restoration.
- Berms have been re-seeded or have self-seeded, and this aids stability of slopes.

11.4.5. In the case of the Garryhundon quarry, it is intended to restore most of the area to agricultural use (with some woodland planting) so the loss is a temporary one. Cleared topsoil has been mounded on the quarry boundaries, and will be used in the restoration scheme. In the case of the Clonmelsh quarry, stripped topsoil and subsoil will be used in the restoration of the quarry edges – the void itself will be allowed to flood. The impact on the geological heritage of the area is regarded as being moderately beneficial – the exposure of rock allowing for assessment by the Geological Survey of Ireland. The extraction of rock and sand & gravel can be regarded as a beneficial impact for the construction industry in the country, and the

use of crushed lime for spreading on land can be regarded as a beneficial improvement to the pH balance of local soils for farmers.

11.4.6. The cumulative impact, when considered in association with quarrying for limestone at the nearby Milford quarry to the southwest, and at three other sand & gravel pits in Powerstown, will not have been significant, in the context of the amount of limestone and sand & gravel deposits in the surrounding area. Nor will the loss of land to agriculture have been significant in the context of the amount of such land in the vicinity.

11.4.7. If the mitigation measures outlined above were observed during the operation of the quarry since 1990, it is unlikely that there has been any significant impact on land, soils or geology of the area.

11.5. **Water and Hydrogeology**

11.5.1. Chapter 7 and Appendix 7 of the rEIAR deal with these associated issues. Reference is made in sections 7.1 and 7.3 to extraction to 10m OD at Garryhundon – which is clearly a misprint (unless the two small flooded areas are very deep indeed). Extraction at the Clonmelsh quarry is below the water table – 25m OD on the quarry floor. Water is pumped (diesel pump) from a large sump (down to approximately 15m OD) via a series of settlement lagoons, and discharged to a channel flowing into the Powerstown Stream, under Discharge Licence from Carlow County Council (DL7/233) – a copy of which is included at Appendix 7.1A. The rEIAR indicates that this discharge was put in place in 2007. It is not clear just how the Clonmelsh quarry was dewatered prior to issuing of the licence – but it presumably must have been to either the Clonmelsh Stream or the Powerstown Stream – the likelihood being the latter, given the current status of the former. There is a washing plant on the quarry floor which is operated on a closed loop system – with silt being pumped up to a pond at a higher level, in the northeastern corner of the quarry – and water drawn from the adjacent siltation ponds as needed.

11.5.2. The Ballysteen Formation limestone bedrock is stated to be only locally, and not widely, dolomitised. Permeability of the bedrock is fracture-fissure, and decreases with depth. Weathering rarely occurs more than 20m below ground level. No karst features have been noted within the quarry. Extraction of sand & gravel at the

Garryhundon quarry, down to 57m OD, remains above the water table – with just two small breach areas, where limestone was extracted.

11.5.3. The wider quarry is located within the Barrow River catchment – and within the South-eastern River Basin District (Hydrometric Area 17). The area drains to the Barrow River to the west. The surface water features in the area include the Clonmelsh Stream (flowing from east to west), which has been diverted to the south in the past, to facilitate the extraction of rock in the Clonmelsh quarry. The stream is ephemeral and is stated to run dry in summer months. It had a small flow of water on the date of site inspection by this Inspector in May 2018, at a culvert beneath the L3045 road, where it flows into the site. Just inside the site boundary, the bed of the stream ran dry, and a small cascade of water into the quarry void in the vicinity, was taken to be the destination. The stream had run dry on the date of site inspection in August 2018. The rerouted bed ultimately debouches to a culvert beneath the L3044 road on the western side of the quarry. The stream bed of this culvert was dry in both May and August 2018 – and the course of the stream within agricultural lands to the west of the L3044 road has been culverted as far as the Powerstown Stream. There was no flow of water in it in either May or August 2018, although the amassing of a quantity of fly-tipped waste on the west side of the L3044 road culvert (at the grill entrance to the culverted stretch) is indication that there was some flow in the stream at some stage in the recent past – given that the waste had been tipped on the east side of the L3044. I did note that in May 2018, the bed of the rerouted Clonmelsh Stream around the quarry void was soft and muddy under foot – indicative of a relatively recent flow of water – whether from the inflow at the L3045 road culvert or from land drainage within the quarry site is not clear. I further noted that there had been some fly-tipping of waste into the bed of the rerouted Clonmelsh Stream at several locations along the L3044. The Powerstown Stream runs along the northwestern boundary of the Clonmelsh quarry and plant area – ultimately discharging to the Barrow River some 2.9km downstream of the quarry boundary. There are no watercourses within or on the boundaries of the Garryhundon quarry.

11.5.4. Water is pumped from the quarry floor. The pipe outlet immediately to the west of the quarry entrance on the L3050 road, was running clear of any silt on the date of site inspection by this Inspector in May 2018. The pipe is routed beneath the quarry entrance to emerge once again beside the weighbridge, where some is diverted to

service the quarry plant areas for manufacturing, dust suppression and wheel-wash. The remainder flows by way of a 0.2km long vegetated channel to the Powerstown Stream. The outfall to the Powerstown Stream, at the northern extremity of the quarry, was running clear of silt on the dates of site inspection in May and August 2018. In May, there was a strong flow in the Powerstown Stream (upriver of the quarry outfall), but by August, this had dwindled to a trickle.

11.5.5. Surface water monitoring is undertaken quarterly (as part of the Discharge Licence for the overall quarry): at SW01 on the Clonmelsh Stream (in the southeastern corner of the Clonmelsh quarry); at SW03 on the Clonmelsh Stream on the western boundary of the Clonmelsh quarry – where it passes under the L3044 road [dry on the dates of site inspection by this Inspector]; and at SW02 on the Powerstown Stream, below the confluence with the culverted Clonmelsh Stream (to the west). The Discharge Licence (DL7/233) – amended by 01.WW0371 decision of the Board – controls discharge from the Clonmelsh quarry and plant area, at discharge point DW01, to a drain on the L3050 road on the northern boundary of the quarry, adjacent to the plant area. The distance from discharge point to Barrow River outfall is approximately 3.5km. The licence sets emission limit values for pH, Ammonia, Total Suspended Solids, BOD, COD, Total Phosphorous, Orthophosphate, Nitrates, Total Hydrocarbons and Turbidity. Flow rates are limited to 2,000m^3 per day and 85m^3 per hour. Emissions are monitored variously, by hour/day/week/month/quarter. Results for the discharge point (DW01) from 2009-2010, indicated slightly elevated levels of sulphate and magnesium, and some elevated levels of suspended solids (stated to be associated with periods of heavy rainfall). Results from 2012 and 2016-2017 indicated some exceedances for ammoniacal nitrogen, suspended solids, BOD, COD, orthophosphate and nitrate. At surface water monitoring points, elevated levels of nitrates and ammonia are attributed to agricultural activity (most recent results from 2017). The most recent results from the discharge point in 2017, indicate no exceedances. The EPA indicates that water quality in the Barrow River (downstream of the Powerstown Stream outfall) is Q3-4 – 'Moderate Status'.

11.5.6. Ground water flow is in the direction of the Barrow River to the west – with an hydraulic gradient of ca. 0.016 (considered to be moderate). This gradient will be much steeper close to quarry faces. The pre-quarrying water table is estimated at 48m OD. Minor faults are the principal means of flow through the bedrock aquifer –

with no evidence of karstification or dolomitization, apart from 1m depth at the top of the bedrock (epikarst). There was no evidence of significant water inflow to the quarry void on the date of site inspection by this Inspector – with the exception of the aforementioned small cascade in the vicinity of the Clonmelsh Stream inflow at the southeastern corner of the Clonmelsh quarry void in May 2018. The aquifer is characterised as being a regionally important diffuse karstified bedrock aquifer with good development potential – the Bagenalstown Lower Groundwater Basin. A sand & gravel aquifer overlies the bedrock aquifer, and is determined to be regionally important – recharging the underlying bedrock aquifer. Groundwater vulnerability at the Clonmelsh quarry is 'high'. Despite dewatering, the bedrock aquifer remains almost fully saturated, with a limited cone of drawdown in the vicinity of the quarry faces. Groundwater monitoring results from 2007/2008 appear to be the most recent available. Elevated levels of Chloride, Nitrate, Nitrite, Orthophosphate, Potassium, and Ammoniacal Nitrogen as NH_4, suggest contamination from agricultural sources.

11.5.7. There are a number of houses within 1km of the Clonmelsh quarry void served by wells – indicated at Figure 7.4. A July 2007 survey indicated 11 wells within 500m of the void. None visited, reported any problems with supply. Some houses to the northeast are served by mains water. Some eight boreholes were drilled in 2007, to monitor groundwater quality and levels. Figure 7.8 indicates the locations around the Clonmelsh and Garryhundon quarries. Of these, BH06 was destroyed by agricultural activity, and it should be noted that there is no BH07. Measured groundwater levels between 2007 and 2013 were relatively stable – with some seasonal variation. BH04 (some 50m to the southeast of the Clonmelsh quarry void) encountered bedrock at 52.5m OD. Monitoring at this borehole has indicated no drawdown below 52.4m OD between 2007 and 2010. There are no Source Protection Zones in the vicinity of the quarry.

11.5.8. There is only one discharge point from the Clonmelsh quarry at DW01. There is no discharge point from the Garryhundon quarry. Rainfall and surface water run-off collects on the Clonmelsh quarry floor in a sump; which is then pumped via a series of settlement lagoons, to a pond, and from thence to the discharge point. Aerial photography indicates that the position of these quarry floor lagoons changed over time with advancing quarrying activity. The Clonmelsh Stream has been diverted, several times, to its current course along the southern boundary of the quarry void.

There are further plans to divert this stream bed to facilitate the expansion of the quarry void to the south (application ref. ABP-300425-17). Water from the quarry floor is used for the 'Readymix' plant, concrete product manufacture, and asphalt plant – having been diverted from the discharge point DW01 into two underground storage tanks (approximately 75m^3 capacity each), and water is also used for dust suppression. A small, shallow (2m) settlement lagoon is located just south of the concrete manufacturing area, serving the plant area – with water recycled for the processing plant. There is a wash-out bay for 'Readymix' trucks adjacent to the dispatch area, with discharge to the aforementioned small settlement lagoon.

11.5.9. A septic tank is located close to the quarry entrance – but at a much lower level. A well on site provides for welfare facilities, with drinking water being imported. The Discharge Licence allows for up to 2,000m^3 per day discharge – in practice the average daily discharge is 950m^3 per day, with winter month discharges of approximately 1,300m^3.

11.5.10. Since 1990, the key likely significant impacts could have been-

- Discharge of silted waters to watercourses – principally to the Powerstown Stream, but also, perhaps, to the Clonmelsh Stream.
- Accidental spillages of hydrocarbons or chemicals leaking to surface water or groundwater.
- Septic tank on site could be regarded as threat to water quality.
- Exposure of mineral-rich seams may have resulted in acidification of water in the quarry void – although there was no evidence of any such on the date of site inspection by this Inspector in May 2018.

11.5.11. Mitigation measures in place would have included the following-

- Discharges at DW01 were controlled under licence from Carlow County Council.
- Attenuation capacity is provided on the quarry floor during periods of heavy rainfall.
- Settlement lagoons on the quarry floor and at the processing plant provide for the removal of silt.

- Process water is extracted from the settlement lagoons and recycled.
- The septic tank is adequately sized and is regularly maintained. It is located on the edge of the quarry void (on steep ground) where groundwater drawdown occurs.
- Drinking water for staff was and is imported to the quarry.
- Monitoring of boreholes for water levels and pollutants was and is undertaken.
- Applicant has undertaken to restore water supplies to private wells, should dewatering of the quarry cause loss of supply.
- Emergency spill-kits were available to deal with accidental releases of hydrocarbons.
- Restoration to agricultural use of the Garryhundon quarry will result in protection of the aquifer beneath.
- Fuel tanks were provided with bunds.
- Regular maintenance of plant and machinery.
- Chemicals stored on spill pallets.

11.5.12. The Clonmelsh Stream is ephemeral, and re-routing will not have impacted on up-stream drainage – where all down-stream drainage lands are within the control of the applicant (as far as the confluence with the Powerstown Stream). The Clonmelsh Stream ran dry shortly after entering the Clonmelsh quarry by way of culvert beneath the L3045 road in May 2018. There was only a small flow on the date of site inspection. The channel of the rerouted stream remains soft and muddy, and whether this be caused by recent flow in the diverted stream or general land drainage, is not clear. There is a small cascade over the edge of the quarry void in close proximity to the inflow point beneath the L3045 road – likely the ultimate destination of the Clonmelsh Stream. The Clonmelsh Stream was dry on the date of site inspection in August 2018, at the inflow beneath the L3045 road. The impact of dewatering on the quality of water within Powerstown Stream is considered to be a positive impact – providing additional dilution, where evidence of high levels of nitrates have been recorded. This is particularly so in dry summers – the flow in the stream north of the L3050 road, being a trickle in August 2018. There was no

evidence of any discharge of silted waters on the dates of site inspection by this Inspector. A Site Characterisation for the septic tank was undertaken in September 2012. A 3.1m deep trial hole indicated no breach of the water table and showed sand/gravel and sand/silt, with a likely T-value of 50. This site investigation indicated that the site was suitable for a septic tank and percolation area. There was no evidence of any ponding of effluent in the vicinity of the septic tank on the date of site inspection by this Inspector, and neither was there any odour in its vicinity. There is no need for testing of the on-site well, as recommended by the HSE, as the water from it is not used for potable purposes.

11.5.13. There will have been no significant cumulative impact with other quarrying activity in the area, construction/operation of the M9 Motorway, or the construction/operation of the Powerstown Landfill and Recycling Centre. The dewatering discharge to the Powerstown Stream is upstream of the Powerstown Landfill and Recycling Centre and the M9 Motorway drainage. The Milford Quarry (Kilcarrig) to the southwest, does not discharge to the Powerstown Stream. Older sand & gravel pits in Powerstown are located off the L3045 road, and are separated from the Powerstown Stream.

11.5.14. If the mitigation measures outlined above were observed during the operation of the quarry since 1990, it is unlikely that there has been any significant impact on ground or surface water flows or quality in the area.

11.6. **Air Quality and Climate**

11.6.1. Chapter 8 and Appendix 8 of the rEIAR deal with these associated issues. Dust is the most likely impact on air quality. Discharge from the mobile asphalt plant at Clonmelsh is monitored by way of an Air Pollution Licence (APL 10/01) granted by Carlow County Council in July 2010, under the Air Pollution Act, 1987 – and Emission Limit Values (ELVs) for NO_x, SO_2, particulates, volumetric flow and temperature are stipulated. It is stated in the rEIAR that this mobile asphalt plant was erected in 2010. Permission was granted in 1992 for an asphalt plant which is located to the southwest of the above-mentioned asphalt plant. This 1992 asphalt plant was not operational on the date of site inspection in May 2018, and would appear not to have been operational for some time.

11.6.2. The Clonmelsh quarry contains the fixed processing plant, and is likely to have been the principal source of dust, given proximity to the L3050 road and situation in relation to prevailing winds from the south. The haul route between Garryhundon and Clonmelsh quarries (along the L3045 road) may also have been subject to dust deposition – given that there would appear to have been no wheel-wash at Garryhundon. I note that aerial photography seems to indicate a Clonmelsh quarry entrance off the L3045 road (just to the south of an existing house on the southeastern corner of the Clonmelsh quarry), which would appear to have been used as a link between the two quarries – constructed sometime between 2000 and 2005. This link still necessitated using a limited stretch of the L3045 road (300m). The link is no longer in operation, arising from halting of extraction at Garryhundon. I note that there are no houses along this 300m stretch of road. Prior to the construction of this entrance – the connection between the two quarries would have been via the L3045 road – and an entrance in the northeast corner of the Clonmelsh quarry, or else via the L3050 road.

11.6.3. The lands surrounding the quarry can be characterised as agricultural (principally arable) in nature. Hedgerows are in place on boundaries, and earth berms have been created along most boundaries, using stripped topsoil. Housing, lining public roads in the area, is sporadic – much of it within the control of the applicant and now derelict. Much of the agricultural land surrounding the quarry is also indicated as being within the control of the applicant. There are only two houses on the L3045 road in the vicinity of the quarry – one of which (new Clonmelsh House) was historically connected to the quarry operation.

11.6.4. The dominant wind direction is from the south – and to a lesser extent from the west, northwest and southeast. Extraction levels have varied since 1990 – with a significant downturn experienced post-2008. Extraction rates in 2017 were down at approximately 180,000 tonnes per annum from a high of approximately 850,000 tonnes per annum in 2007. Such a reduction would have had a knock-on impact on dust created.

11.6.5. Since 1990, the key likely significant impacts could have been-

- Dust from blasting.
- Dust from drill rigs for blasting.

- Dust from crushing/grading/screening of rock.
- Dust from screening of sand & gravel.
- Dust from HGV and plant movements both within the site and on the L3045 road.
- Dust from stockpiles.
- Dust from berms which were not landscaped.
- Emissions from the asphalt plants.

11.6.6. Five dust monitoring points (D1-D5) have been in operation since February 2007. A sixth (D6) was added in August 2010, and a seventh (D7) added in May 2012. All, except D3, are located on or about the Clonmelsh quarry void and plant area. D3 is located somewhat to the west of the Garryhundon quarry. Monitoring results since 2007 (when the quarry was at its most active), are presented in Table 8.5. Reference to 2008, in the table heading, would appear to be a mistake – and should read 2007. The EPA standard of 350mg/m^2/day (measured over a 30-day period) at site boundaries has been adopted as a dust deposition threshold value. There are some notable exceedances – the highest being 1,862mg/m^2/day at D6 in February/March and again at 1,549mg/m^2/day at D6 in July/August. Most exceedances relate to D6 (at the Clonmelsh quarry entrance on the L3050 road). Whilst some of the dust may be attributed to road dust, the majority is likely to be from the quarry and processing plant. I note that there are no houses in the vicinity of D6 – the closest being new Clonmelsh House (historically associated with the quarry operation) – some 300m to the southwest. There was no evidence of any substantial deposition of dust on roads or vegetation in the vicinity of the quarry on the dates of site inspection by this Inspector, on a dry sultry day in May and an overcast day in August 2018. Neither was there any evidence of vegetation die-back in the vicinity of the access, which might have been caused by excessive deposition of limestone dust in the past, as referenced by the HSE observation.

11.6.7. Stack monitoring at the asphalt plant indicates that ELVs for NO_x at 450mg/Nm^3; SO_2 at 500mg/Nm^3; and Particulates at 50mg/Nm^3 were met on 14th July 2017. No other monitoring results have been submitted.

11.6.8. Mitigation measures in place would have included the following-

- Plant switched off when not in use.
- Maintenance of all plant.
- Dust monitoring at site boundaries.
- Spraying of stockpiles with mist during dry periods.
- Seeding of overburden mounds/berms.
- Water bowser in use on haul roads during dry periods.
- On-site speed restrictions <25kph.
- Use of wheel-wash at site egress.
- Adherence to ELVs set down in Air Emissions Licence for demountable asphalt plant.
- Crushing of rock at the quarry face, where the quarry cliff will act as a barrier to fugitive dust.
- Berms at quarry boundaries to act as barriers to fugitive dust emissions.
- Seeding of berms, and natural re-vegetation of berms, disused/abandoned quarry areas to limit wind-blown dust.

11.6.9. The quarry was operational on the date of site inspection in May 2018, as was the asphalt plant. Whilst there was some dust generated on the quarry floor, haul routes and plant areas, there was no evidence that it was being transported beyond the site boundaries to any significant extent. The wheel-wash at the quarry entrance is a ground level spray hose rather than the sunken bath type. There was no evidence of significant amounts of dust or mud carried out onto the L3050 road – notwithstanding the continued arrival and despatch of HGVs during site inspection. There was no noticeable odour from the asphalt plant beyond the quarry entrance on the L3050 road. The applicant has indicated a willingness to provide another dust monitoring point on the L3044 road – at a house in the ownership of the quarry operator, although I would consider this to be unnecessary. There is insufficient space along the palisade fencing to the west of the entrance to allow of provision of screen planting to mitigate the spread of dust.

11.6.10. Cumulative impact with other developments in the area, particularly the Milford Quarry (Kilcarrig) 0.8km to the southwest of the Garryhundon quarry, the Powerstown Landfill and Recycling Centre some 0.9km to the west of the Garryhundon quarry, construction of the M9 Motorway, and older sand & gravel pits at Powerstown, will not have been significant, regard being had to the relevant separation distances from the two portions of this quarry and plant area at the northern end of the Clonmelsh quarry.

11.6.11. If the mitigation measures outlined above were observed during the operation of the quarry and plant area since 1990, it is unlikely that there has been any significant impact on air quality.

11.6.12. The quarry activity on this site will not have had any significant impact on climate, and nor will it into the future.

11.7. Noise and Vibration

11.7.1. Chapter 9 of the rEIAR deals with these associated issues. Noise monitoring has been undertaken at the quarry since February 2008. Noise conditions attached to permissions and licences, generally stipulate 55dBA for daytime and 45dBA for night-time. There are stated to be seventeen 3rd party and four 1st party dwellings within 250m of the quarry – together with one 3rd party and four 1st party derelict dwellings. This number of 1st party derelict dwellings has since increased to six, with a further unoccupied house at Garryhundon Cross. Figure 9.1 indicates the location of houses in the vicinity, as well as noise monitoring locations N1-N5, and blast monitoring locations B1-B3. B1 is at new Clonmelsh House, immediately to the north of the old cemetery on the L3045 road; and B2 is at the house at the southeastern corner of the Clonmelsh quarry (accessed from the L3045 road). These are the two houses closest to the Clonmelsh quarry void, not in the control of the applicant – although it is noted that new Clonmelsh House was historically connected with the operation of the quarry. The five noise monitoring locations are a good selection of noise receptors, both at, and slightly removed from, the Clonmelsh quarry void. I note that monitoring at N5 only commenced in 2012, whilst for the remainder, there are results from 2008.

11.7.2. Table 9.2 indicates a number of day-time exceedances for noise – but these have been attributed to high levels of traffic on the adjoining road network (indicated by elevated L_{A10} readings). Background noise levels were established on 5th March 2010, when the quarry was not operational – to establish that traffic noise was the principal source of noise at monitoring locations. Ambient road noise would have increased since 2009 – with the construction of the M9 Motorway.

11.7.3. Since 1990, the key likely significant impacts could have been-

- Crushing and grading plant, elevators, and other machinery.
- HGVs and excavators moving earth and aggregate.
- The asphalt plants.
- Drilling rigs for explosives, and intermittent blasting.
- Concrete block/product manufacturing and 'Readymix' plant.

11.7.4. Noise mitigation measures would have included the following-

- Maintenance of haul routes to reduce rattling from unladen HGVs.
- Noise attenuation from berms and quarry faces.
- Crushing/grading/washing of aggregate on the quarry floor.
- Noise minimisation for vehicles and plant (including maintenance).
- Reduction in drop heights for aggregate.

11.7.5. Vibration limits generally specify peak particle velocity of 12mm/second, and air overpressure of 125dB$_{\text{Linear maximum peak}}$, with a 95% confidence limit. These limits are set down in the Quarry Guidelines 2004. Blasting is generally excluded outside of 0800-1800 hours Monday to Friday. Vibration monitoring has been undertaken since 2009 – and is now carried out by Irish Industrial Explosives. Table 9.3 indicates that there have been no exceedances in peak particle velocity, and only limited exceedances of air overpressure – whilst remaining within the 95% confidence limit. It is not known when blasting commenced at this quarry, but it would have been required when the sand & gravel resource at Clonmelsh was exhausted in any particular area, in order to extract the rock beneath. Aerial photography indicates that the Clonmelsh quarry was worked from north to south – and did not entail the

winning of all sand & gravel deposits before proceeding to rock extraction – the two having proceeded in tandem.

11.7.6. Mitigation measures for vibration would have included the following-

- Optimum use of explosives to exploit quarry faults and fractures.
- Minimisation of vibration through use of delayed detonation.
- No blasting at weekends or public holidays.
- Monitoring of all blasts.
- Notice given to all neighbours.
- Use of professionally-trained company to carry out blasting.

11.7.7. The quarry and plant area were operational on the date of site inspection in May 2018. On the western side of the quarry, the principal noise source is the M9 Motorway. On the eastern side, the noise from the quarry floor and quarry plant was noticeable on the L3044 road, but not particularly so. At the southern end of the quarry, on the L3044 road, quarry noise is not noticeable. At the northern end of the quarry, the noise from the plant – particularly the asphalt plant, is noticeable on the L3050 road. However, I would note that there are no houses on this part of the L3050 road. Because of the size of the Clonmelsh quarry, noise from the crushing/grading/screening plant on the quarry floor is mitigated by distance, and the presence of quarry walls and earth berms. Noise at Garryhundon would not have been so significant arising from the nature of the materials being won (mostly sand & gravel), and the separation distance from the nearest houses to east and west. There is no necessity for noise assessment on the number of HGV movements from this quarry, as suggested by the HSE. This would place an unnecessarily heavy burden on the quarry operator for a commercial quarry which has operated in this area since before the planning regulations came into force. Background noise in the area is already dominated by traffic on the M9 Motorway.

11.7.8. There would have been no significant cumulative impact with other developments in the area – regard being had to the separation distance from the Milford Quarry (Kilcarrig) to the southwest; the Powerstown Landfill and Recycling Centre to the west; and the influence of road noise on background noise levels in the area – particularly from the N9 (now R448) and the new M9 Motorway.

11.7.9. If the mitigation measures outlined above were observed during the operation of the quarry since 1990, it is unlikely that there has been any significant impact on noise or vibration in the area.

11.8. Material Assets and Traffic

11.8.1. Chapter 10 of the rEIAR deals with these associated issues. Some of the sand & gravel from the Garryhundon quarry would have been transported by HGV to the Clonmelsh quarry for further processing. The L3045 road would have been used for this purpose. I note that aerial photography seems to indicate a quarry entrance off the L3045 road (just to the south of an existing house on the southeastern corner of the Clonmelsh quarry) which would appear to have been used as the link between the two quarries – constructed sometime between 2000 and 2005. This link still necessitated using a limited stretch (300m) of the L3045 road for haulage purposes. The link is no longer functional, arising from discontinuance of extraction at Garryhundon. The rEIAR does not refer to this link between the two quarries. Prior to construction of this link, the entirety of the L3045 road, north of the Garryhundon quarry, would have been used.

11.8.2. There are currently two main access points – one on the L3045 road for the Garryhundon quarry, and one on the L3050 road for the Clonmelsh quarry. Sight distance at both is good in either direction. The 80kph speed restriction currently applies on the local road network. Haulage from the Clonmelsh quarry would have been divided roughly 80-20 towards the R448/M9 to the west and the N80 to the east. This is likely to be mirrored for haulage of aggregate from outside quarries into the processing plant. Reference is made to a possible second access on the L3050 road, but this is now closed-up. For the purposes of EIA, it is reasonable to assume that there was only one, as the impact would have been the same on traffic on the L3050 road. There is no right-turning lane for traffic into the Clonmelsh quarry. Neither are there acceleration or deceleration lanes on the L3050 road. The L3050 road is wide enough for two vehicles to pass. The western portion was realigned in association with construction of the M9 Motorway. This involved realignment of a section of the L3044 road, and construction of a new junction between the two. The L3044 road, to the west of the Clonmelsh quarry, is wide enough for two vehicles to pass. The L3045 road is wide enough for only one vehicle – between the junction

with the L3044 road and L3050 road. The L3050 road becomes the L1003 road shortly after it crosses the M9 Motorway in a westerly direction towards the former N9 National Primary Route (now Regional Road R448). The L1003 road is wide enough for two vehicles to pass. The junction of the L1003 road and the former N9 (R448) road is a staggered crossroads at Milford – approximately 1.3km to the west of the Clonmelsh quarry entrance. There are ghost island right-turning lanes on the R448 road, as well as short left-turn merge/diverge tapers for traffic turning onto the L1003/R448 roads to/from the east of the junction. The 100kph speed restriction applies on the R448 road, and sight distance is good. The junction has been provided with public lighting. Bicycle lanes are in place on either side of the R448 road. The junction of the L3050 road with the N80 National Secondary Road, (approximately 5.3km to the east of the Clonmelsh quarry entrance) at Graiguenaspiddoge Cross, is a broad, staggered T-junction. The 100kph speed restriction applies on the N80 road, and sight distance is good.

11.8.3. The only other relevant material asset is an ESB sub-station at the Clonmelsh quarry plant area. This asset will not have been impacted in any way by quarrying since 1990.

11.8.4. The section 261 registration process for the quarry in 2005, indicated an annual extraction rate in the region of 1 million tonnes – equivalent to a stated 200 laden traffic movements per day. Using a rough figure of 20 tonnes per laden HGV, and a working week of 6 days, 200 traffic movements would equate to approximately 1.25 million tonnes per annum. Reducing this to a 5.5 day working week, the figure would be 1.14 million tonnes. However, I note that in Table 2.3 of the rEIAR, the estimated annual extraction rate was-

- 1990 to 1997 – 500,000 tonnes.
- 1997 to 2007 - 850,000 tonnes.
- 2007 to 2010 – 650,000 tonnes.
- 2010 to 2014 – 300,000 tonnes.
- 2014 to 2017 – 150,000 tonnes.

The annual figure of 850,000 tonnes per annum for the years 1997 to 2007 is likely to be more accurate than the section 261 registration figure. It should also be noted

that aggregate was and is imported to Clonmelsh to feed the asphalt plant – where insufficient stone of a particular grade was/is unavailable from either Clonmelsh or Garryhundon. The same HGVs could have been used for hauling aggregate in and aggregate out of the Clonmelsh quarry – where the normal pattern would be vehicles arriving empty and leaving laden.

11.8.5. Table 10.2 attempts to derive trip generation for the Clonmelsh quarry from 1947 to 2017. For the purposes of the applications for substitute consent, the period of interest is from 1990 to the present. The weekday average number of HGV trips indicates 300 at peak – 1997-2007, somewhat at odds with the 200 indicated in the section 261 Registration documentation. However, this may be partially accounted for by the importation of stone to Clonmelsh for road coverings, beginning in the period 1990-1997. It is clarified that the figures refer to trips inwards, with an equivalent number outwards. Peak hour arrivals/departures of HGVs are indicated at 40 each way. Staff vehicles arrivals/departures will have been insignificant – up to 20 full-time staff at peak operation of the quarry. The peak HGV figures of the 1997-2007 period are now significantly reduced – approximately 17.5% for the period 2014-2017.

11.8.6. The rEIAR does not address the impact of traffic from the Garryhundon quarry on the L3045 road. The volume of material extracted from the quarry is stated to have been 0.4 million tonnes since 1990 – from an overall extraction of 2.5 million tonnes. There is no indication given of when extraction halted at Garryhundon. Aerial photography indicates extraction in 1995, 2000 and 2005. Aerial photography from 2009, 2015 and 2016, indicates stockpiled aggregate at Garryhundon. There was no evidence of any recent activity at Garryhundon, and there was no plant or machinery there, whatever, in May 2018. Therefore, over a period of 26 years from 1990, 0.4m tonnes was won – equating to 15,385 tonnes per annum. Even assuming that all of this was transported to Clonmelsh for processing, which is most unlikely in the case of sand & gravel – it likely being dispatched direct from the quarry (to north or west along the L3045 road); then based on a 5.5 day working week, this would equate to 53 tonnes per day. Again, based on laden HGVs of 20 tonnes each, this would equate to 2-3 laden HGV movements per day and 2-3 unladen. Over a roughly ten-hour working day, this would equate to approximately one vehicle movement every two hours. Such traffic would be incidental on a road of this nature.

11.8.7. Since 1990, are key likely significant impacts could have been-

- HGVs on the L3050 road, hauling aggregate out of and into the Clonmelsh quarry.
- HGVs on the L3045 road hauling aggregate out of the Garryhundon quarry.
- Dust on local roads.
- The construction of the M9 Motorway in phases, and the downgrading of the N9 National Road to Regional Road status (R448) in September 2010.

11.8.8. Mitigation measures in place are stated to have included the following-

- Covering of vehicles to prevent spillage of light-weight aggregate onto roads.
- Use of a water bowser on site haul routes and at the processing area, to prevent dust nuisance for motorists.
- Warning signage on the L3050 road.
- On-site parking provision for visitors.

11.8.9. The L3050 road could handle the peak hour HGV traffic from the Clonmelsh quarry – identified at a maximum of 40 trips in and 40 trips out. This would not have resulted in any degree of traffic hazard or obstruction of road users. The junctions of the L3050 road with the N9 road (R448) and N80 road, are adequately sized and configured to cater for the traffic volumes generated by this quarrying operation since 1990. Certainly, on the date of site inspection by this Inspector in May 2018, there was no evidence of any traffic queuing at any junction in the area. The traffic generated would not have caused a traffic hazard at these junctions – particularly post-September 2010, when the M9 Motorway opened, south of Junction 6 (Carlow South) at Powerstown. The L3045 road is not wide enough for two vehicles to pass. I note that there is limited housing on this road – only two houses between the junction with the L3044 road to the west and the L3050 road to the north. One of these houses (new Clonmelsh House) was historically connected with the quarry. The road also serves as access to farmland and an old cemetery. Most of the farmland is under the control of the applicant. For these reasons, I would consider that the impact of quarrying at Garryhundon on the L3045 road would have been limited, arising from the limited access which the road provides to third party lands.

Extraction rates at Garryhundon would have resulted in approximately one HGV movement per two hours (during working hours), which would not have been significant.

11.8.10. There are no cycling facilities on the local road network, although such have been introduced on either side of the R448 road. The quarrying operation will not have had any impact on the cycling network – as R448 traffic has priority at the junction with the L1003 road.

11.8.11. In terms of possible cumulative impact, I note that access to the Powerstown Landfill and Recycling Centre is from the L3045 road – at a point where two vehicles can pass: with the most direct access to it being from the former N9 road (R448) – south of Junction 6 (Carlow South) on the M9 Motorway. The access to Milford Quarry (Kilcarrig) is from the former N9 road (R448) – and has its own dedicated right-turning lane and short deceleration lane on the R448 road. These facilities used a different network of roads to the Clonmelsh and Garryhundon quarries, post-construction of the M9 Motorway and Junction 6 (Carlow South). Prior to the construction of the motorway, all the facilities would have used the old N9 National Primary Road – an appropriate route of national standing for HGV traffic. Reference is made to three other sand & gravel pits within Powerstown townland. Aerial photography would appear to indicate these pits near the landfill site – with access from the L3045 road, and from thence to the N9 road (R448). There was a biofuel plant in operation within part of the wider land holding of Dan Morrissey (Ireland) Ltd, adjacent to the old cemetery on the L3045 road. This facility operated from the period 2010 to 2013 – and the rapeseed fuel was used to power quarry vehicles. Most of the plant was removed in 2016. The operation of this plant, granted retention planning permission (ref. 11/301 and PL 01.240883), would not have contributed significantly to traffic movements – over and above any intensive harvesting campaign in an agricultural area. Quarrying at Clonmelsh and Garryhundon will not have had any impact on the Dublin-Waterford railway line. Quarrying at Clonmelsh and Garryhundon will not have had any impact on the M9 Motorway (opened in September 2010), apart from likely supply of material to construct it. The construction of the motorway resulted in a sharp decline in traffic on the old N9 road (now R448), which can only have represented an improvement for local traffic (including quarry traffic). I would be satisfied that the operation of this

quarry and plant area will have had no significant cumulative impact with other projects on roads and traffic in the area.

11.8.12. If the mitigation measures outlined above were observed during the operation of the quarry since 1990, it is unlikely that there has been any significant impact on roads and traffic in the area.

11.9. Cultural Heritage

11.9.1. Chapter 11 and Appendix 11 of the rEIAR deal with this issue. The quarry is located within an area of high archaeological potential. A site visit was undertaken in August 2017. A desktop survey was also undertaken. Topsoil/subsoil cleared from the Clonmelsh quarry has been mounded around the edges of the quarry void, whilst at Garryhundon quarry, the topsoil/subsoil has been mounded throughout the sand & gravel pit. Any archaeological remains will have been destroyed. Two portions of the Garryhundon quarry have not been excavated – and are in arable use – to north and east.

11.9.2. The Sites and Monuments Record (SMR) of the OPW indicates recorded monuments in the area. There are two within the Garryhundon quarry boundary – CW012-026 and CW012-136. Both represent enclosures, and the latter is within a portion of the quarry which has not been excavated, but which is in arable use. Extraction at CW012-026 has resulted in the removal of the Recorded Monument. There are a further two Recorded Monuments within the adjoining townland of Powerstown – CW012-093 and CW012-202 – an enclosure and ring ditch respectively. These are located within a large arable field within the control of the applicant – immediately to the south of the Clonmelsh quarry. CW012-093 is located just to the south of the quarry void, and will not have been impacted by quarrying at Clonmelsh. Aerial photography from 2009, shows that archaeological investigation was undertaken at this monument. CW012-202 is located opposite the entrance to the Garryhundon quarry, and will not have been impacted in any way by quarrying at either Clonmelsh or Garryhundon. These two monuments would be impacted by proposals under section 37L to extend the Clonmelsh quarry (application ref. ABP-300425-17). Within the townland of Clonmelsh, CW012-101, a D-shaped enclosure, has been quarried out. There are other Recorded Monuments within fields surrounding the quarry – none of which will have been impacted by quarrying. The

cemetery on the L3045 road immediately abuts lands under the control of the applicant. This is a Recorded Monument under register ref. CW012-024 (001-003) – church, font and graveyard. This monument is separated from the Clonmelsh quarry by large agricultural sheds, and will not have been impacted by quarrying. I note that the graveyard has recently been cleaned and gravestones and walls repaired.

11.9.3. Garryhundon House and associated walled garden, to the east of the Garryhundon quarry, are Protected Structures. These structures will not have been impacted by the extraction of sand & gravel at Garryhundon. The Garryhundon quarry site once formed part of the parkland associated with this house – indicated on old OS maps for the area. An access avenue to the house traverses the quarry – connecting the house with the L3045 road. It could no longer be considered to be part of the curtilage of the house. In any event, extraction of sand & gravel to the north and south of this badly potholed access avenue, will not have impacted on the avenue.

11.9.4. There is no indication given of any mitigation measures undertaken or to be undertaken to protect the cultural heritage of the area.

11.9.5. There are only two Recorded Monuments which have been severely impacted by quarrying: at Garryhundon (CW012-026) and at Clonmelsh (CW012-101) - both enclosures. From study of aerial photography, the Clonmelsh monument was removed sometime between 2005 and 2009. That at Garryhundon would appear to have been removed sometime before 1995, and may have been removed before 1990. It would appear that there was no attempt made to preserve either of the monuments by record. There is no way of mitigating this impact. The surrounding lands indicate the presence of many similar-type monuments. The application was referred by An Bord Pleanála to the Department of Culture, Heritage and the Gaeltacht for comment: with no response received. Ploughing of lands to facilitate arable cultivation may already have impacted on sub-surface archaeology.

11.9.6. In terms of cumulative impact, I would note that many similar-type monuments in the vicinity were removed to facilitate the construction of the M9 Motorway. However, these would have been preserved by record.

11.9.7. Having regard to the density of similar-type archaeological monuments near the site, it is not considered that the removal of Recorded Monument CW0912-101 at Clonmelsh, sometime between 2005 and 2009, would represent a significant impact

on the cultural heritage of the area. The exact date of removal of Recorded Monument CW012-026 at Garryhundon, cannot be determined by reference to the documentation submitted with the application, or from OSI aerial photography; apart from stating that it was likely removed before 1995 and, for the purposes of this EIA, may have been removed before 1990. It is not, therefore, possible to state with any degree of certainty, that the removal of this Recorded Monument had an impact on the cultural heritage of the area for the purposes of this EIA, whilst acknowledging that there was an impact on the area generally, arising from the removal of the recorded monument.

11.10. **Landscape and Visual**

11.10.1. Chapter 12 and Appendix 12 of the rEIAR deal with these associated issues. The assessment addresses a 5km radius of the quarry. Having regard to the continued expansion of the quarry – both at Clonmelsh and Garryhundon – and in the absence of any restoration or remediation of any part of the quarry, it is likely that the visual impact of the quarry, any time since 1990, is at its greatest today – when the quarry has expanded to its fullest extent, and plant erected is also most extensive (although also allowing for the fact that vegetated screening berms do not appear so dominant in the landscape as unvegetated ones). Therefore, by considering the impact on the landscape and visual amenity today, it is possible to consider the greatest impact the quarry has had, at any time since 1990.

11.10.2. There are nine panoramic views included within the rEIAR. Each shows the impact of the quarry (mostly the plant) on the landscape from both the local road network, and also from roads slightly further afield – including Scenic Routes 5 and 9. I would consider that Scenic Route 9 is too remote from the quarry to have been impacted in any way by historical operations.

11.10.3. The County Development Plan identifies the landscape character of the area as “Central Lowlands”. Such lands are stated to be moderately sensitive to development. Quarrying at Clonmelsh and Garryhundon is stated to have pre-dated the coming into effect of the Planning and Development Act, on 1st October 1964 – and that quarrying was always a factor in the local landscape, prior to any landscape characterisation. Quarry plant is indicated as having been introduced from the 1970’s onwards. Of concern, in relation to this application for substitute consent, is

the impact since 1990. Aerial photography from 1995, shows an already substantial rock quarry at Clonmelsh and an extensive sand & gravel pit at Garryhundon. In addition, much of the plant at Clonmelsh predates 1990, and some of it was granted planning permission both prior to and after that date. Notwithstanding the presence of a large quarry, the area would still be characterised as agricultural – with large fields (mostly arable) separated by hedgerows. Housing in the area is dispersed along the rural road network, with no towns or villages in the immediate vicinity. The site is located within a broad, fertile valley (5-6km wide) through which the Barrow River flows, with high ground to the west (Killeshin Hills) and a line of low hills to the east. There is a recreational walkway along the old towpath on the Barrow River Navigation – the Barrow Way.

11.10.4. Since 1990, the key likely significant impacts could have been-

- Extension southwards of the Clonmelsh quarry.
- Extension eastwards of the Garryhundon quarry.
- Creation of large berms, particularly along the western and northwestern boundaries of the Clonmelsh quarry.
- Views of quarry from the L3044, L3045 and L3050 roads.
- Views of quarry from the N9 (R448) and M9 roads.
- Views of quarry from Scenic Route 5 – on high ground 1.0-1.5km to the east.
- Loss of hedgerows and fields, as quarrying advanced.
- Erection of plant at the northern end of the Clonmelsh quarry.

11.10.5. Mitigation of impacts will have comprised-

- Berms around the Clonmelsh quarry void – to screen it from view, particularly from local roads – L3044, L3045, L3050 and also from the N9 (R448) and M9 roads.
- Natural re-vegetation of screening berms with scrub and grasses.
- Remediation plan for both quarries.

- Presence of hedgerows, and mature trees within them, would have screened the quarry from view in areas proximate to the quarry and from adjoining roads – allowing only for glimpsed views.
- Planting of new native hedgerows to replace those lost at the Garryhundon quarry – 300m.
- Construction of the M9 Motorway on an embankment, which screened views of the quarry from the west, from 2010 onwards.

11.10.6. Restoration provides for the flooding of the Clonmelsh quarry to a level of approximately 48m OD (to create a 32.4ha waterbody), together with restoration to agricultural use of fringe areas (10.0ha) and planting of native trees and shrubs (6.9ha); and the restoration of most of the Garryhundon quarry to agricultural use at approximately 57m OD (20.2ha), and for 3.4ha of native woodland planting on the eastern boundary – to act as a screen between the quarry and Garryhundon House. Restoration will involve the removal of all plant and machinery. New native trees and shrubs will be planted on the boundaries of the quarry. Areas naturally regenerating will be left as such, in the interest of biodiversity. An application to extend the Clonmelsh quarry to the south (ABP-300425-17) would defer a considerable amount of the remediation of the quarry for a period of at least 20 years – if granted permission by the Board.

11.10.7. There has been an estimated loss of 1,400m of hedgerows at the Clonmelsh quarry: no figure is given for the Garryhundon quarry. There has been a loss of approximately 20.7ha of agricultural land to disturbed ground around the quarry void at Clonmelsh. Much of the Garryhundon quarry has regenerated naturally with scrub vegetation – leaving only 2.7ha of open sand & gravel pit lost to agricultural use. These losses can be partially made up through restoration at the quarry – particularly at Garryhundon, where advancing natural re-vegetation has screened large areas of the former sand & gravel pit, and rendered the visual impact only slight. At the Clonmelsh quarry, the situation is different, owing to the presence of an active quarry void and large-scale processing plant. The plant is clearly visible from local roads at the northern end of the quarry. However, as pointed out elsewhere in this Report, some of this plant predates 1990. The tallest element (asphalt plant) at 33m, is widely visible from the surrounding area – including the R448 road and M9

Motorway. The visual impact, in terms of the applications for substitute consent, particularly for the plant area, cannot be considered significant – particularly where some plant predates 1990, or was granted permission after that date.

11.10.8. The difference between the visual impact of the void at Clonmelsh quarry in 1990 and at present is not significant – given the limited views of the void. The Clonmelsh quarry has advanced to the south – roughly doubling in size from 1990 to the present – based on the OSI aerial photograph of 1995. This cannot be considered significant in terms of a pre-existing visual impact from quarrying. Views of the quarry from high ground to the east and west of the broad Barrow River valley are such that the intervening distance blends the quarry into the broad panoramic view of the landscape, and the quarry would not be seen to dominate. The overall appearance of the area remains agricultural – when viewed from elevated ground on either side of the Barrow River. The flooding of the Clonmelsh quarry void to approximately 48m OD will not have a significant impact on the landscape, as the water table is below surrounding ground levels – and the entire of the waterbody will be not be visible from any one view. Neither the quarry void nor plant are visible from the Barrow Way.

11.10.9. Views from houses in the area will have been altered by the creation of berms around the Clonmelsh quarry void. However, such berms also screen quarry plant from view, and on balance, the impact is slight. As noted elsewhere in this Report, all houses on the L3044 road are in the control of the applicant. These are the houses most directly affected by the expansion of the Clonmelsh quarry since 1990. The house on the southeastern corner of the Clonmelsh quarry (which is not in the control of the applicant) is heavily screened from the quarry and the L3045 road by mature hedgerows, shrubs and trees, and the advance of the quarry southwards will not have been of significance for residents, in terms of visual impact. The landscape and visual effects of the Clonmelsh quarry extension to the south, since 1990, were limited in degree and geographic extent. The significant impacts which arose are capable of mitigation through flooding of the quarry void and restoration of surrounding lands to agricultural use, woodland, scrubland and marginal aquatic vegetation.

11.10.10. The cumulative impact with other quarries and sand & gravel pits in the area and the Powerstown Landfill and Recycling Centre, will not have been significant,

owing to the separation distance between them. There is no high ground in the immediate vicinity, from which views of all quarries and the Powerstown Landfill and Recycling Centre can be obtained. Both the quarry plant at Clonmelsh and the Powerstown Landfill and Recycling Centre are visible from the M9 Motorway, but the separation between them lessens the visual impact – the M9 is not a designated Scenic Route in the County Development Plan.

11.10.11. Scenic Route 5 is located 1.0-1.5km to the southeast of the quarry, and views of the quarry are only intermittent – the quarry plant being the most prominent of the features. This quarry predates the creation of the Scenic Route and so, would have been an element in the landscape when the route was designated. Clearly it was not considered that the quarry had so serious detrimental impact on the views from Scenic Route 5 – else it would not have been designated such.

11.10.12. I would be satisfied that the continued operation and expansion of this quarry, since 1990, would not have had a significant impact on the landscape and visual amenities of the area.

11.11. Interactions

11.11.1. Chapter 13 of the rEIAR deals with the issue of interactions between the foregoing sections of this assessment. All environmental factors are inter-related, to some extent. In this instance, impacts identified and mitigated, have already occurred since 1990, and some may still be occurring. The permanent removal of agricultural land, and the quarrying of sand & gravel and rock deposits beneath, are permanent negative impacts. The restoration of the quarry will, to some extent, mitigate part of this impact on the loss of agricultural land. Conversely, the generation of employment and supply of aggregate for construction projects/agricultural lime is a positive economic impact for human beings and soil, and in terms of material assets.

11.11.2. Ultimately all impacts on the environment affect human beings – directly and indirectly. Direct impacts include air, water, noise and landscape/visual quality. Noise, dust, vibration and visual screening measures were in place to mitigate against the worst of the impacts of quarrying on human beings. The site is not the subject of any nature designation. The loss of improved agricultural grassland

habitats has been, or will be, compensated for, by the creation of a significant water-based habitat at the Clonmelsh quarry and introduction of woodland and scrub habitats. Stripped topsoil has been retained on site for future restoration purposes. The sand & gravel and the rock on site were not geologically unique. The dewatering of the quarry has imposed a change in the groundwater regime. However, the cone of drawdown is steep around the Clonmelsh quarry faces, arising from the strongly-bedded nature of the limestone. Water which would have naturally drained to the Clonmelsh Stream and the Powerstown Stream is being treated and pumped from the quarry floor back into the Powerstown Stream, and so there has been limited impact on the groundwater flow – which is ultimately towards the Barrow River to the west. Dust levels generated at the peak of output were not such as to cause serious environmental impact. Noise and vibration impacts were ameliorated through locational and operational factors – the principal one of which was separation distance from sensitive receptors. The loss of Recorded Monument(s) without preservation by record, was a significant impact which cannot now be mitigated, and could also be regarded as a loss to landscape character. However, in the context of a landscape replete with such Recorded Monuments, the loss will not have been significant.

11.12. **Conclusion**

The rEIAR complies with Articles 94 and 111 of the Planning and Development Regulations, 2001 (as amended). The rEIAR broadly contains the information specified in paragraphs 1 and 2 of Schedule 6 of the Regulations. There is an adequate summary of the rEIAR in non-technical language. The rEIAR identified the likely significant direct and indirect effects of the past operation of the quarry and associated plant on the environment, and also indicated any likely continuing impacts. Cumulative impacts with other development in the area were also addressed. I would be satisfied, having regard to the preceding subsections of this Inspector's Report, that the operation and expansion of this quarry and associated plant, since 1990, would not have had a significant impact on the environment.

12.0 **Appropriate Assessment**

12.1. **General Comment**

The application to An Bord Pleanála was accompanied by a remedial Natura Impact Statement (rNIS) – dated September 2017. The purpose of this application, is to regularise operations which have occurred since 1997 at this quarry – when the Habitats Directive came into force in Ireland. This rNIS covers the two applications for substitute consent submitted to An Bord Pleanála (ABP-300034-17 and ABP-300037-17), and it is proposed to jointly assess both applications within this section. The operation of the quarry was not directly connected with or necessary to the management of any European site. Species, habitats, surface water drainage etc. are all described in the rEIAR which accompanies the applications to An Bord Pleanála. To firstly carry out screening for appropriate assessment, six steps will be followed in this section.

12.2. **Step 1 – Identify European Sites which could potentially have been affected by quarrying (source-pathway-receptor model)**

12.2.1. The closest European site to the quarry is the River Barrow and River Nore Special Area of Conservation (Site code 002162) – approximately 1.35km to the west of the Clonmelsh quarry and 1.45km to the west of the Garryhundon quarry (as the crow flies). The ephemeral Clonmelsh Stream has been diverted southwards in the past – to facilitate the expansion of the Clonmelsh quarry southwards. This diverted stream debouched into the Powerstown Stream, to the east of the M9 Motorway – downstream of the Clonmelsh quarry dewatering discharge into the Powerstown Stream. However, the Clonmelsh Stream appears now to disappear within the quarry and there does not seem to be any outfall to the Powerstown Stream – notwithstanding that the bed of the stream and a culvert through a field to the west of the L3044 road remain. The Clonmelsh quarry outfall discharges to a roadside channel on the L3050 road, and is controlled by Discharge Licence of Carlow County Council (DL7/233) since 2007. The discharge point is some 3.0km upstream of the SAC. The Powerstown Stream runs along the northwestern boundary of the Clonmelsh quarry site and plant area, and discharges some 2.4km downstream into

the SAC. The stream passes beneath the Dublin to Waterford railway line, the M9 Motorway (in two places – and the steam is connected with the motorway drainage) and passes the Powerstown Landfill and Recycling Centre, before discharging, via culvert, beneath the old N9 National Primary Route (now R448 Regional Road) into the SAC, and then onwards into the Barrow River. There are no watercourses within or immediately abutting the Garryhundon quarry. There is no dewatering of this sand & gravel pit. Water quality in the Barrow River, and groundwater quality generally, is protected by the requirements of the Water Framework Directive (WFD). This Directive requires that there should be no dis-improvement in water quality. The regionally-important karstified diffuse-flow aquifer (Bagenalstown Lower Groundwater Basin) which underlies the quarry, is not at risk of over-abstraction.

12.2.2. The Slaney River Valley SAC (Site code 000781) is located approximately 12.5km to the east, and is within a separate river basin, and for this reason, is not considered here.

12.3. **Step 2 – Identify the Conservation Objectives of the relevant site(s)**

12.3.1. The qualifying interests of the River Barrow and River Nore SAC are as follows-

- Estuaries.
- Mudflats and sandflats not covered by seawater at low tide.
- Reefs.
- Salicornia and other annuals colonising mud and sand.
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*).
- Mediterranean salt meadows (*Juncetalia maritimi*).
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation.
- European dry heaths.
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels.
- Petrifying springs with tufa formation (*Cratoneurion*).

- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles.
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*).
- *Vertigo moulinsiana* (Desmoulin's whorl snail).
- *Margaritifera margaritifera* (Freshwater pearl mussel).
- *Austropotamobius pallipes* (White-clawed crayfish).
- *Petromyzon marinus* (Sea lamprey).
- *Lampetra planeri* (Brook lamprey).
- *Lampetra fluviatilis* (River lamprey).
- *Alosa fallax fallax* (Twaite shad).
- *Salmo salar* (Salmon).
- *Lutra lutra* (Otter).
- *Trichomanes speciosum* (Killarney fern).
- *Margaritifera durrovensis* (Nore freshwater pearl mussel).

12.3.2. The Conservation objectives for the 12,373ha site, are to maintain the favourable conservation condition of Desmoulin's whorl snail, White-clawed crayfish, Estuaries, Mudflats and sandflats, Salicornia, Killarney fern, Water courses of plain to montane levels, European dry heaths, Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, Petrifying springs: and to restore the favourable conservation condition of Sea lamprey, Brook lamprey, River lamprey, Twaite shad, Atlantic salmon, Atlantic salt meadows, Otter, Mediterranean salt meadows, Nore freshwater pearl mussel, Old sessile oak woods, and Alluvial forests. The status of the Freshwater pearl mussel is currently under review, to establish whether a site-specific conservation objective is set for this species.

12.4. **Step 3 – Identify the potential- a) likely, and b) significant, effects of the project with reference to the site's Conservation Objectives, in light of best scientific knowledge**

12.4.1. The principal impacts which may have occurred (both negative and positive), largely relate to water quality, and include the following-

- Accidental spillages of hydrocarbons, entering groundwater.
- Drawdown of groundwater through dewatering at Clonmelsh quarry (measured as only affecting lands within 50m of the void).
- Discharge of suspended solids to watercourses – particularly alkaline silts from concrete manufacture.
- Effluent from the wastewater treatment system.
- Fugitive dust emissions.
- Diversion of the Clonmelsh Stream.
- Improvement to dilution of nitrates in Powerstown Stream, through pumped discharge of groundwater from the Clonmelsh quarry void.

12.5. **Step 4 – As above, but considering in-combination effects with other plans or projects**

12.5.1. The discharge from the Clonmelsh quarry is to the Powerstown Stream. Roadside drainage from the M9 Motorway also discharges to this steam, downstream of the quarry discharge. The local road network drains to this stream. The stream flows past the Powerstown Landfill and Recycling Centre to the southwest – before discharging into the Barrow River. The Milford Quarry (Kilcarrig) to the southwest does not discharge to the Powerstown Stream. Motorway drainage during the construction and operational phases was/is treated prior to discharge, as is the case with the Powerstown Landfill and Recycling Centre. Reference to sand & gravel pits within Powerstown townland are borne out by aerial photography – indicating a number of such accessed from the L3044 road in the vicinity of the Powerstown Landfill and Recycling Centre. Such would not have been dewatered and, in any event, are not located adjacent to the Powerstown Stream. Over the operational

period since 1997, there will have been no opportunity for in-combination impacts on water quality in the Powerstown Stream.

12.6. **Step 5 – Identify any mitigation measures which may have been in place to reduce/lessen likely significant impacts on European sites**

12.6.1. Mitigation measures outlined include the following-

- Monitoring of surface water at two points on the Clonmelsh Stream (SW01 & SW03) and one point on the Powerstown Stream (SW02). I note that monitoring at SW03 may not have been possible – as the stream was dry on the dates of site inspection by this Inspector.
- Monitoring of groundwater levels and quality in wells and boreholes within and adjoining the Clonmelsh quarry.
- Settlement lagoons for silt on the Clonmelsh quarry floor and adjacent to the plant area.
- Soil and overburden stockpiles allowed to become vegetated – to reduce run-off of silt-laden waters.
- Restoration and/or recolonisation by scrub vegetation of some areas of the Clonmelsh and Garryhundon quarries – to protect the underlying aquifer.
- Monitoring of licensed surface water discharge from the Clonmelsh quarry floor – (Licence DL7/233).
- Construction of lined, re-routed Clonmelsh Stream, to encourage flow within this ephemeral watercourse.
- Regular maintenance of the septic tank and percolation area on site.
- Regular servicing of machinery and plant.
- Drip trays used during refuelling of plant and machinery.
- Availability of emergency spill kits.
- Dust suppression measures at plant and stockpile areas and on haul roads.
- No excavation below 25m OD.

- Creation of new aquatic habitats on closure of the quarry [but noting that there is an application to An Bord Pleanála, to continue quarrying at Clonmelsh, under section 37L of the Planning and Development Act, 2000 (as amended)].

12.7. **Step 6 – Determine whether likely significant effects, either individually or in combination with other plans or projects, on European sites, can reasonably be discounted, on the basis of objective scientific information**

12.7.1. The applicant deemed that it was not possible to so discount any likely significant effects, and so proceeded to the preparation of an rNIS for submission to An Bord Pleanála, to enable the Board, as the competent authority, to carry out appropriate assessment. This was reasonable, given the timescales involved, the licensed discharge to the Powerstown Stream, and the proximity of the River Barrow and River Nore SAC.

12.8. **Stage 2 Appropriate Assessment**

12.8.1. The quarry, and particularly the associated plant at Clonmelsh, were substantially in existence when the SAC was so designated – indicated by OSI aerial photography from 1995. Therefore, the impact of quarrying at this site will have been taken into consideration when deciding to include the Barrow River within a candidate SAC. The Discharge Licence controlled what was discharged from the Clonmelsh quarry to the Powerstown Stream – and ultimately the Barrow River (from 2007 at least). As noted elsewhere in this section, there would appear to have been no discharges from the Garryhundon quarry and there are no watercourses on its boundaries. The site is neither within nor immediately abutting the River Barrow and River Nore SAC. The SAC is located approximately 3.0km downstream of the licensed discharge from the Clonmelsh quarry at DW01. Such an intervening distance would allow for some settlement of any accidental discharge of silted waters.

12.8.2. The report of Carlow County Council to An Bord Pleanála raised a number of issues in relation to appropriate assessment. I would be satisfied that the level of detail supplied by the applicant, both within the rNIS and the rEIAR, is sufficient to allow for an assessment of the likely impact of past quarrying on the European site. There was no evidence of any silt within the discharge from the quarry on the dates of site

inspection by this Inspector. Neither was there any indication of siltation of the Powerstown Stream downstream of the discharge point at both the L3050 and the L3044 roads, on dates when the quarry and plant was fully operational. I note that the flow in the Powerstown Stream was a mere trickle upstream of the licensed outfall from the quarry on the date of site inspection in August 2018. The Clonmelsh Stream inflow to the quarry site had run dry on the date of site inspection in August 2018. There was no evidence of any significant amount of wind-blown dust deposited in the vicinity of the Powerstown Stream or the Clonmelsh Stream. Fly tipping of rubbish in the vicinity of the bed or the Clonmelsh Stream on the L3044 road was noted on the dates of site inspection. The septic tank was located during site inspection, and its location within a dry area, under influence of quarry dewatering, should ensure no significant impact on groundwater quality.

12.8.3. The principal or 'high' ranking threats and pressures to the SAC, as indicated by the National Parks and Wildlife Service, are- pollution to surface waters; dykes and flooding defences in inland water systems; modifying structures of inland water courses; erosion; agricultural intensification – without being any more specific. Quarrying is not mentioned, but could be included under the heading of pollution to surface waters both inside and outside the SAC. The 'Site Synopsis' for the SAC indicates that- "The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage plants, over-grazing within the woodland areas, and invasion by non-native species, for example Cherry Laurel (*Prunus laurocerasus*) and Rhododendron (*Rhododendron ponticum*). The water quality of the site remains vulnerable. Good quality water is necessary to maintain the populations of the Annex II animal species listed above. Good quality is dependent on controlling fertilisation of the grasslands, particularly along the Nore. It also requires that sewage be properly treated before discharge. Drainage activities in the catchment can lead to flash floods which can damage the many Annex II species present. Capital and maintenance dredging within the lower reaches of the system pose a threat to migrating fish species such as lamprey and shad. Land reclamation also poses a threat to the salt meadows and the populations of legally protected species therein". Again, quarrying is not mentioned as a main threat to the SAC.

12.8.4. The issue of in-combination impacts is addressed in the screening stage of this Inspector's Report: and the possibility was discounted. It is not, therefore, necessary to consider such impacts afresh – the likely significant impact being from the quarry discharge itself. This discharge is controlled by licence. Mitigation measures are in place to ensure the quality of the water ultimately discharged to the Powerstown Stream. The quarry floor acts as a large retaining reservoir in the event of heavy rainfall – where all drainage within the site ultimately ends up either within the quarry void or percolating to ground. This retention feature within the quarry will have had the effect of containing any large amounts of silt created by heavy rainfall events.

12.8.5. I consider it reasonable to conclude, on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 retrospective Appropriate Assessment, that the quarrying activities at Clonmelsh and Garryhundon, since 1997, either individually or in combination with other plans or projects, would not have adversely affected the integrity of European site no. 002162, or any other European site, in view of the site's Conservation Objectives.

13.0 Recommendation

I recommend that substitute consent be granted for the Reasons and Considerations set out below, and subject to the attached Conditions. I attach a draft order for the consideration of the Board.

DRAFT ORDER

Decision

The Board, in accordance with section 177K of the Planning and Development Act, 2000, as amended, and based on the Reasons and Considerations set out below, decided to GRANT substitute consent in accordance with the following conditions.

Matters Considered

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

Reasons and Considerations

In coming to its decision, the Board had regard to the following:

a) the provisions of the Planning and Development Acts, 2000, as amended, and in particular, Part XA,

b) the provisions of the Planning and Development Regulations, 2001 as amended,

c) Council Directive 92/43/EEC on the Conservation of natural Habitats and of Wild Flora and Fauna, as amended,

d) the 'Quarries and Ancillary Activities, Guidelines for Planning Authorities', issued by the Department of the Environment, Heritage and Local Government, in April 2004,

e) the provisions of the Carlow County Development Plan 2015 – 2021,

f) the remedial Environmental Impact Assessment Report and the remedial Natura Impact Statement submitted with the application for substitute consent, and supporting documentation,

g) the submissions received from the applicant in response to the Section 132 notice from An Bord Pleanála,

h) the report and the opinion of the planning authority under section 177I of the Planning and Development Act, 2000, as amended,

i) the submissions made in accordance with regulations under section 177N of the said Act, (as amended),

j) the decision of the Board to grant leave to apply for substitute consent under section 177D of the Planning and Development Act, 2000 (as amended), – ref. 01.LS0019, on the 7th day of April 2017,

k) the decision of the Board to grant extensions of time for the making of the application for substitute consent to An Bord Pleanála – ref. 01.SH0236,

l) the report of the Board's Inspector,

m) the nature and scale of the development the subject of this application for substitute consent,

n) the planning history of the site,

o) the Wastewater Discharge Licence in place for this quarry,

p) the mitigation measures which were/are in place and the further remedial measures proposed,

q) the nature and scale of the development the subject of an associated application for substitute consent, ref. ABP-300034-17, and,

r) the pattern of development in the area, and the proximity of the quarry to an European site.

Environmental Impact Assessment

The Board considered the nature, scale and location of the subject development, the remedial Environmental Impact Assessment Report, the documentation submitted

with the application generally, the planning, registration and quarry review history of the site, the submissions on file, and the report of the Inspector. It is considered that the remedial Environmental Impact Assessment Report identifies and describes adequately the direct and indirect effects on the environment of the development that have taken place. The Board completed an Environmental Impact Assessment in relation to the subject development, by itself and cumulatively with other development in the vicinity (particularly the associated application for substitute consent for the quarry area ref. ABP-300034-17), and concluded that the development of the quarry was not and would not be likely to have significant effects on the environment. In doing so, the Board adopted the report of the Inspector.

Appropriate Assessment

Having regard to the nature, scale and extent of the development carried out, the remedial Natura Impact Statement submitted, and the mitigation measures contained therein, the submissions on file and the Inspector's assessment, the Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment and completed an appropriate assessment of the impacts of the development on nearby European sites, specifically the River Barrow and River Nore Special Area of Conservation (Site code 002162). In completing the appropriate assessment, the Board accepted and adopted the appropriate assessment carried out in the Inspector's Report in respect of the potential effects the development has or had on the aforementioned European site, having regard to the sites' conservation objectives.

The Board was satisfied that, subject to the implementation of the identified mitigation measures, and on the basis of the information available, the development, either individually or in combination with other plans or projects, would not adversely affect, or would not have adversely affected, the integrity of any European site, having regard to the conservation objectives of any such site.

Conclusions

Having regard to the decisions made in respect of an Environmental Impact Assessment and an Appropriate Assessment, the Board is satisfied that the subject development did not and does not seriously injure the amenities of the area or of property in the vicinity, and was and would be in accordance with the proper planning and sustainable development of the area.

Conditions

1. (a) This grant of substitute consent shall be in accordance with, the plans and particulars submitted to An Bord Pleanála with the application, and further information submitted on the 21st day of March and the 16th day of April 2018, except as may otherwise be required to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority and the development shall be in accordance with the agreed particulars.

   (b) The grant of substitute consent relates only to past construction and use of quarry plant and facilities, and current use of quarry plant and facilities, that has been undertaken as described in the application, and does not authorise any future development, including further quarrying or any further excavation on the subject site.

   Reason: In the interest of clarity.

2. All environmental mitigation measures identified within the remedial Environmental Impact Assessment Report and remedial Natura Impact Statement, and associated documentation shall be implemented in full, save as may be required to comply with the conditions set out below.

   Reason: In the interests of conservation of the environment.

3. Within three months of the date of this order, the wheel-wash facility at the exit from the quarry shall be extended, so as to catch all HGVs exiting from the quarry void onto the L3050 road. Any aggregate, silt or muck carried out onto this road shall be promptly removed by the developer.

Reason: In the interest of public health, traffic safety and visual amenity.

4. No well on site shall be used for potable purposes, unless and until quality testing has been carried out to establish the potability of the supply.

   Reason: In the interest of public health.

5. The septic tank and percolation area serving the quarry shall be in accordance with the standards set out in the document entitled "Wastewater Treatment Manual – Treatment Systems for Single Houses" issued by the Environmental Protection Agency (current edition).

   Reason: In the interest of public health.

6. No further signage shall be erected at the quarry entrance or affixed to quarry plant – so as to be visible from outside the quarry – without a prior specific grant of planning permission.

   Reason: In the interest of visual amenity.

7. All over-ground tanks containing liquids (other than water) shall be contained within waterproof bunded areas, which shall be of sufficient volume to store 110% of the volume of the tanks within the bund. All water contaminated with hydrocarbons, including stormwater, shall be discharged via a grit trap and hydrocarbon interceptor (with sump) to one of the siltation lagoons within the site or within the adjoining quarry void. The sump shall be provided with an inspection chamber and shall be installed and operated in accordance with the written requirements of the planning authority.

   Reason: In order to protect water quality in the interests of public health and the conservation of the environment.

8. The site shall be operated and managed in accordance with an Environmental Management System (EMS), which shall be submitted by the developer to, and agreed in writing with, the planning authority, within three months of the date of this order. This shall include proposals for the following:

   (a) suppression of on-site noise,

(b) on-going monitoring of sound emissions at dwellings in the vicinity,

(c) suppression of dust on site and on the adjacent L3050 road, and

(d) suppression of odours from the asphalt plant.

Reason: In order to safeguard local amenities.

9. All surface-, processing-, and wash-water generated within the plant area shall be discharged off-site via the siltation lagoons located within the adjoining Clonmelsh quarry void.

Reason: In the interest of public health and in the interests of conservation of the environment.

10. Within three months of the date of this order, signage, alerting road users to the existence of a quarry entrance, shall be erected on the L3050 road approach – from the west.

Reason: In the interest of traffic safety.

11. The hours of operation of the plant area shall be between 0600 hours and 1900 hours, Monday to Friday and between 0700 hours and 1600 hours on Saturdays. No activity shall take place outside these hours or on Sundays or public holidays.

Reason: In order to protect the amenities of property in the vicinity.

12. (a) Proposed out-of-hours operations at the plant area shall take place on not more than thirty days in any twelve-month period commencing on the date of this order.

(b) Out-of-hours operations are not permitted between 1600 hours on Saturday and 0600 hours on Monday, and not at all on Public holidays.

(c) The operator shall notify the occupants of all residences within one kilometre of the asphalt plant of any proposed out-of-hours operations, giving at least ten days prior notice.

(d) A written record of all out-of-hours operations (dates and times) shall be maintained at the asphalt plant, and shall be available for

inspection by the planning authority on request, either in writing or by a member of staff of the planning authority visiting the plant.

Reason: In the interest of clarity and residential amenity

13. Floodlighting within the site shall be angled in such a manner as not to cause distraction or glare to users of the L3050 road.

Reason: In the interest of traffic safety.

14. The noise level from within the boundaries of the site, as measured at noise sensitive locations in the vicinity, shall not exceed-

(a) an L_{ArT} value of 55 dB(A) during 0600-1900 hours Monday to Friday and 0700-1600 hours on Saturdays: the T-value shall be one hour.

(b) an L_{AeqT} value of 45 dB(A) at any other time: the T-value shall be fifteen minutes.

Reason: To protect the residential amenities of property in the vicinity.

15. (a) Dust levels at the site boundary shall not exceed 350 milligrams per square metre per day, averaged over a continuous period of 30 days (Bergerhoff Gauge).

(b) A monthly survey and monitoring programme of dust and particulate emissions shall be undertaken to provide for compliance with these limits. Details of this programme, including the location of dust monitoring stations, and details of dust suppression measures to be carried out within the site, shall be submitted to, and agreed in writing with, the planning authority, within three months of the date of this order. This programme shall include an annual review of all dust monitoring data, to be undertaken by a suitably qualified person, acceptable to the planning authority. The results of the reviews shall be submitted to the planning authority within two weeks of completion. The developer shall carry out any amendments to the programme required by the planning authority following this annual review.

Reason: To control dust emissions arising from the development in the

interest of the amenity and conservation of the environment in the area.

16. Unless a permission for the further development of this quarry is implemented, implementation-stage details of the restoration of the Clonmelsh quarry and plant generally, in accordance with chapter 12 of the remedial Environmental Impact Assessment Report, shall be submitted to, and agreed in writing with, the planning authority within six months of the date of this order, and shall include the following:
    (a) details relating to the removal of all plant and buildings and an indication of finished levels of the quarry plant area,
    (b) the control of dust emissions, until such time as the restoration is established,
    (c) a scheme of landscaping and tree planting,
    (d) details of fencing,
    (e) proposals for an aftercare programme of five years, and
    (f) a timeframe for implementation, including proposals for phasing of the restoration works.

    Reason: In the interest of protection of the environment, landscape and public safety.

17. Unless a permission for the further development of this quarry is implemented; within six months of the date of this order, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory restoration of the site, coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory completion of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

    Reason: To ensure the satisfactory completion of the development.

Michael Dillon,

Planning Inspectorate.

28th September, 2018