Inspector's Report

ABP-311677-21

Development	Upgrading of entrance, installation of site facilities for extraction and processing of sand and gravel. An Environmental Impact Assessment Report (EIAR) has been prepared in respect of this planning application. Revised by Significant Further Information which consists of updates to the EIAR and revised plans.
Location	Brackagh Townland,Carbury,Co. Kildare.
Planning Authority	Kildare County Council
Planning Authority Reg. Ref.	201409
Applicant(s)	Kilsaran Concrete.
Type of Application	Planning Permission.
Planning Authority Decision	Grant Permission.
Type of Appeal	First Party and Third Party
Appellant(s)	Kilasaran Concrete and Eco Advocacy.

Observer(s)	No Observers.
Date of Site Inspection	28th February 2023.
Inspector	Elaine Sullivan

Contents

1.0 Site Location and Description

1.1. The subject site has a stated area of 17ha and is a greenfield site located in north county Kildare. It is approximately 5.5km to the north of Edenderry and 6.5km to the southeast of Kinnegad. The Meath/Kildare County boundary follows the River Boyne which flows in an east-west direction approximately 250m to the north of the site. The R401 regional road runs along the western boundary of the site and connects with the M4, which is approximately 4kn to the north of the site. A local road runs along the northern boundary of the site and there are two detached houses directly adjacent to the north-eastern corner of the site.

1.2. Directly to the east of the site is an open agricultural field with an unpaved access road which leads to a disused sand and gravel pit adjacent to the south-eastern boundary of the site. Beyond this site is Brackagh Woods, which also forms part of the southern boundary of the site. Access to the site is via an existing agricultural entrance that opens onto the R401, directly opposite its junction with the L5015. Russelswood Wood, (also known as Rahin Wood), is directly to the north of the L5015 and to the west of the site, on the opposite side of the R401. A small public car park for the woods is located to the west of the site.

1.3. The site is formed by five separate fields which are defined by hedgerows and / or treelines. The fields are agricultural in nature and have an undulating topography which falls to the north. There are two derelict buildings along the western site boundary which do not form part of the development site.

2.0 Proposed Development

The development proposal relates to the extraction of sand and gravel with processing which includes crushing washing and screening and includes the following elements:

- The upgrading of the site entrance onto the R401 regional road to include improvements to the surface to allow regular HGV traffic.
- Installation of site facilities including a pre-fabricated welfare facility comprising a toilet with septic tank and percolation area, a double-skinned fuel tank in a secure container, a weigh-bridge and a wheel-wash.

- The installation of a processing plant and associated settlement lagoon, (closed water system).
- The extraction of sand and gravel with processing that includes crushing, washing and screening over an area of 9.2ha and to occur in two phases; Phase 1 would comprise circa 4.9ha and Phase 2 would be circa 4,3ha). The sand and gravel extraction would be dry working above the water table.
- The remaining 7.8ha would be consist of the processing area, a stockpile area and overburden storage area and buffer zones to the site boundaries.
- Planning permission is sought for a duration of 9 years, which allows for the operational period of 8 years with 1 year to complete restoration of the site lands, which will be to a beneficial agricultural after use.

The application was accompanied by the following documents;

- Planning Report
- Environmental Impact Assessment Report, (EIAR)
- EIAR Non-Technical Summary
- Appropriate Assessment Screening Report

3.0 Planning Authority Decision

3.1. Decision

Planning permission was granted by the PA subject to 35 conditions, which were mostly standard in nature.

- Condition No. 2 states that the permission shall apply for a period of 9 years from the date of commencement after which the land will be restored.
- Condition No. 3 requires that all mitigation and monitoring measures set out in the EIAR shall be implemented in full.
- Condition No. 35 relates to development contributions and requires the applicant to pay to Kildare County Council the sum of €1,132,674.00 in accordance with the Development Contribution Scheme adopted by Kildare

County Council on the 5th November 2015 in accordance with Section 48 of the Planning and Development Act 2000 as amended.

Additional conditions include requirements that relate to the management of ground water, the control of dust, and vibration and traffic management.

3.2. Planning Authority Reports

3.2.1. Planning Reports

The decision of the Planning Authority was informed by two reports from the Planning Officer, (PO). The first report, dated the 21st January 2021, recommended that further information be requested. The second report dated the 20th September 2021, reviewed the further information.

The first report assessed the EIAR and screened the proposal for AA. The report of the PO recommended that further information be requested on 11 points which related to,

- Traffic – sightlines and junction details, upgrade works and extent of road resurfacing for HGV's, road safety audit, structural survey of the bridge over the Boyne, traffic management and turning movements.
- Water & Drainage – a hydrogeological risk assessment is requested with regard to groundwater levels, the volume of water to be extracted from the ground, the location and design of the septic tank and percolation area and details of the welfare facilities.
- Impact of the proposal on Russellswood wood.
- EIAR - additional information is requested regarding Chapters 7, 8 and 10.

The second report dated the 20th September 2021 assessed the information submitted by the applicant and recommended that planning permission was granted subject to 34 conditions.

3.2.2. Other Technical Reports

- **Transportation Department** – The report dated the 20th January 2021, recommended that further information be requested with regard to the provision of adequate sightlines, proposals to upgrade the entrance, the submission of a Road Safety Audit, Structural Assessment Report for the stone bridge over the Boyne, traffic management and turning movements. The report dated the 15th September 2021 was prepared in response to the submission of further information and had no objection to the proposal,
- **Water Services** – Report of the 19th December 2020 states that there is no objection.
- **Clane / Maynooth Area Office** – Area Engineer recommends further information is requested with regard to the entrance from the R401 and the structural condition of the stone bridge over the River Boyne.
- **Environment Section** - The report dated the 8th January 2021 requests that further information be requested regarding Chapters 6, 7, 8 and 10. The report dated the 16th September 2021 had no objection and recommended planning conditions to be attached.
- **Heritage Officer** – The report dated the 22nd January 2021 requested that further information be requested with regard to the impact of the proposal on Russelswood Wood. Planning conditions are also recommended.

3.3. Prescribed Bodies

- **Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media** – The proposed development would involve groundworks close to the areas of archaeological potential around Recorded Monuments KD002-002 - (Holy Well), KD002-003 – (well), and KD002-004 – (graveyard), which are subject to statutory protection. The National Monuments Service would have no objection provided the archaeological buffer zones are adhered to. Archaeological monitoring should be required by planning condition.
- **Transport Infrastructure Ireland, (TII)** – No objection.

- **An Taisce** – The site has no history of quarrying and is located in an area of ecological, landscape and cultural heritage sensitivity. It is in proximity to the River Boyne which has a downstream SAC designation. There are a number of historic monuments in proximity to the site, including the stone bridge over the Boyne which would not be suitable for HGV's. The application fails to meet the preliminary test for site suitability on ecological, landscape, cultural heritage and rural amenity grounds.

3.4. Third Party Observations

Two third party observations were received and raised the following issues,

- Inadequate road network to cater for HGV's,
- Environmental impact on the River Boyne,
- Historical features in the area would be impacted,
- If the site is an Esker, it should be preserved,
- Impact on the River Boyne and River Blackwater SAC which is close to the subject site,
- Concerns regarding reinstatement of the land,
- The proposal is incompatible with the landscape, rural amenity, cultural and built heritage of the area,
- Difficulty for third parties accessing the public file.

4.0 Planning History

- No planning history for the subject site.

<u>On the adjoining site to the east:</u>

ABP - PL09.245674, (PA Ref. 15/696) – Planning permission refused by the Board on the 23rd December 2015 for remediation works at a worked out gravel pit consisting of levelling of existing material already on site and the importation of approximately 45,000 cubic metres of inert subsoil and top soil over a period of two years to return the site to agricultural use at Brackagh, Carrick, Carbury, County Kildare. Planning permission was refused for the following reasons:

1. The site of the proposed development was the subject of an assessment under section 261A of the Planning and Development Act 2000, as amended, wherein it was determined that quarrying was carried out after the 1st day of February 1990, which development would have required, having regard to the Environmental Impact Assessment Directive, an environmental impact assessment, but that such assessment was not carried out or made. The landowner of the subject site was directed to apply to An Bord Pleanála for Substitute Consent with a remedial Environmental Impact Statement. Given that this direction was not complied with, it is considered that the existing site/development within which the proposed development would take place is, therefore, not authorised. It is considered that the proposed development would consolidate and facilitate an existing unauthorised development and would, therefore, be contrary to the proper planning and sustainable development of the area.
2. The proposed development includes the importation of approximately 45,000 cubic metres of inert subsoil and topsoil on the site over a period of two years. This cubic metre figure amounts to 67,500 tonnes, or circa 33,750 tonnes a year over two years. Having regard to the relevant threshold that necessitates a mandatory Environmental Impact Statement in accordance with Class 11(b) of Part 2 of Schedule 5 to the Planning and Development Regulations 20001, as amended, that is, “installations for the disposal of waste with an annual intake greater than 25,000 tonnes”, and to the fact that no such Environmental Impact Statement was submitted with this application, in such circumstances, it is considered that the Board should not further consider the application the subject of the appeal. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area

5.0 Policy Context

5.1. National Policy

5.1.1. Climate Action Plan 2023

The Climate Action Plan 2023, (CAP), is the second annual update to Ireland's Climate Action Plan 2019 and is the first to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021.

5.1.2. 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.

5.1.3. Quarries and Ancillary Activities - Guidelines for Planning Authorities 2004

The Guidelines were issued to offer guidance to planning authorities and An Bord Pleanála for the quarrying industry through the Development Plan and determining planning applications for planning permission for quarrying and ancillary activities and for the implementation of Section 261 of the Planning and Development Act, 2000.

3.6 - Landscape - The development plan will indicate areas of high landscape quality, together with proposed geological Natural Heritage Areas, where quarrying will not normally be permitted. While Quaternary landscape features such as eskers and moraines comprise valuable sediments, they also represent non-renewable records of past climate and environmental change, and should be afforded some protection.

3.7 - Traffic Impact - Best practice/possible mitigation measures: Some related mitigation measures (e.g. in relation to noise and dust) have been outlined above. Specific traffic-related measures may include:

- The improvement of sightlines at the site entrance;
- The strengthening/widening of local roads;
- Limiting HGV traffic to specified routes to and from the site;
- Queuing of vehicles with engines running at quarry sites in the early morning can impact on residential amenity, and must be avoided;
- Provision of footpaths/pedestrian refuges as well as passing bays for vehicles on rural roads in the vicinity of the site.

5.1.4. Regional Spatial and Economic Strategy for the Eastern and Midlands Region 2019-2031

This strategy came into effect on June 28th 2019 and builds on the foundations of Government policy in Project Ireland 2040. It seeks to determine at a regional scale how best to achieve the shared goals set out in the National Strategic Outcomes of the NPF and sets out 16 Regional Strategic Outcomes (RSO's) which set the framework for city and county development plans. The RSO's are underpinned by the Regional Policy Objectives, (RPO's). It supports the circular economy to make better use of resources and become more resource efficient.

- **RPO 6.7:** Support local authorities to develop sustainable and economically efficient rural economies through initiatives to enhance sectors such as agricultural and food, forestry, fishing and aquaculture, energy and extractive industries, the bioeconomy, tourism, and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage.

5.2. Development Plan

5.2.1. The subject site is located within the administrative boundary of Kildare County Council. The Kildare County Development Plan 2023-2029, (KCDP), is the operative Development Plan for the county.

5.2.2. The application was assessed by Kildare County Council in accordance with the policies and objectives of the Kildare County Development Plan 2017-2023, which was the operative Development Plan at the time.

5.2.3. On review of the contents of both plans I note that there are no material changes between the 2017 County Development Plan and the 2023 County Development Plan as they relate to the appeal site and the current proposal.

5.2.4. The subject site is located on unzoned land in a rural area, outside of any settlement boundary. There are no specific designations or protections that relate to the site and the surrounding lands. The following sections of the Kildare County Development Plan, (KCDP), 2023-2029 are of relevance to the proposed development;

Chapter 9 – Rural Economy

Section 9.9 – Mineral Resources & Extractive Industry – The Development Plan acknowledges that whilst the environment must be protected, it is important to ensure the availably of supplies of aggregates to meet future demands and to facilitate sustainable development. Therefore, permission will only be granted where the council is satisfied that residential and natural amenities will be protected, pollution will be prevented, and aquifers and ground water safeguarded

It is the policy of the Council to:

RD P8 - 10.7 – Support and manage the appropriate future development of Kildare's natural aggregate resources in appropriate locations to ensure adequate supplies are available to meet the future needs of the county and the region in line with the principles of sustainable development and environmental management and to require operators to appropriately manage extraction sites when extraction has ceased.

It is an objective of the Council to:

RD 042 - Ensure that development for aggregate extraction, processing and associated concrete production does not significantly impact the following: -

- Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)
- Natural Heritage Areas (NHAs)
- Other areas of importance for the conservation of flora and fauna.
- Zones of Archaeological Potential.
- The vicinity of a recorded monument.
- Sensitive landscape areas as identified in Chapter 13 of this Plan, (KCDP).
- Scenic views and prospects.
- Protected Structures.
- Established rights of way and walking routes.
- Potential World Heritage Sites in Kildare on the UNESCO Tentative List, Ireland.

RD 043 - Consult with the Geological Survey of Ireland (GSI), with regard to any developments likely to have an impact on sites of Geological Importance listed in Chapter 12 of this Plan.

Chapter 13 – Landscape, Recreation & Amenity

In the Landscape Character Assessment, (LCA), the subject site is located within the North-Western Lowlands, which is categorised as Class 1 – Low Sensitivity landscape. This area has the capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance or character of the area.

Table 13.3 sets out the likely compatibility between a range of land-uses and the Principal Landscape Areas. Within this table, the North-Western Lowlands is given a 'High' compatibility with Extractive Industries.

There are no Scenic Routes or protected views in close proximity to the site.

Chapter 15 – Development Management Standards.

Section 15.9.6 – Extractive Industry – This section sets out the schedule of information to be submitted with any application for an extractive industry. It is also noted that the PA favour the use of existing authorised and planning compliant quarries over proposals for extraction from green field sites.

5.3. Natural Heritage Designations

- No designations apply to the subject site.

5.4. EIA Screening

5.4.1. This application falls under Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (i.e. the 2014 EIA Directive). Projects for the purposes of EIA are identified in Schedule 5 of the Planning and Development Regulations 2001 (as amended) and the proposed development which proposes establishing a sand and gravel extraction and processing facility at a site in Kildare.

5.4.2. Under Schedule 5, Part 2, 2(b) of the Planning and Development Regulations 2001 (as amended), the following class of development is subject to Part X, Section 176 of the Planning and Development Act 2000 (as amended) which requires a mandatory Environmental Impact Assessment;

> *Extraction of stone, gravel, sand or clay, where the area of extraction is more than 5 hectares.*

5.4.3. Thus, there is a mandatory requirement for the planning application to be accompanied by an Environmental Impact Assessment Report. An EIAR was submitted with the application is assessed in Section 8 below.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. Two appeals have been lodged for the development.

6.1.2. A 1st Party appeal has been lodged by the applicant regarding the financial contribution applied to the development under Condition No. 35 of the permission. The applicant contends that, in this instance, the conditions of the development contribution scheme were not applied correctly as follows;

- Condition No. 35 requires that the applicant pay the sum of €1,132,674.00 in development contributions applied to the development in accordance with the Development Contribution Scheme adopted by Kildare County Council on the 5th November 2015 in accordance with Section 48 of the Planning and Development Act 2000 as amended.
- Conditions arising from Quarrying/Extractive Industry are stipulated in Section 8(vii) of the Contribution Scheme.
- Section 8(vii) states that, *'Contributions will be charged at a rate of €0.25 per m3, based on proposed extraction volumes'*.
- The total recoverable reserves stated in the development description within the Environmental Impact Assessment Report was 1,600,000 tonnes.
- To convert this to cubic metres, Kildare County Council applied a multiplying conversion factor of 2.83, which is incorrect.
- The correct conversion factor to use is that given in the Caterpillar Performance Handbook for 'Bank', 'Dry' sand and gravel of 1930kg/m3.
- The correct calculation to apply is as follows:

  Extraction Volume = Mass ÷ Density

  Extraction Volume = 1,600,000 tonnes ÷ 1.93 (tonnes per m3)

  Extraction Volume = 829,016m3

  Development Contribution @ €0.25 per m3 = €0.25 x 829,016m3 = €207,254.
- The applicant is requesting that the Board amend Condition No. 35 replace the figure of €1,132,674 with €207,254.

A 3rd Party Appeal was lodged by Eco Advocacy and includes the following:

- The subject site is agricultural land and should be retained as such.

- Residential development nearby will be impacted negatively from the development through dust and noise.
- Air quality will be affected through greenhouse gas emissions and particulate matter. This would impact on human health.
- The River Boyne and River Blackwater SAC could be negatively affected by the development thorough an indirect hydrological connection via the Russelswood River.
- There are concerns regarding the impact of the proposal on the landscape as the development would involve the removal of 1km of hedgerows and the significant altering of the land levels within the site.
- Concerns are raised regarding the impact of the proposal on domestic wells in the area.
- The impact on Russselswood Woodland should be considered more carefully. The provision of a berm close to the public car park to the woods is not good landscaping practice.
- A dense heavy waste byproduct is created by quarry lagoons how will this material be dealt with following the cessation of extraction. it is not clear if this material can be incorporated into a restored landscape.
- It's not clear how a power supply will be provided on the site. This may require additional permissions.
- It is not clear if this site is part of the Esker Riada, which should be preserved as a valuable part of our national heritage.
- The impact of the proposal going on nearby heritage should be assessed. In particular within the area of Ballyboggan. There is a particular concern regarding the impact of HGV's on the historic Ballyboggan bridge.
- There is a question regarding ongoing monitoring the development and how that will be implemented.
- The proposed development would give rise to significant traffic movements on relatively narrow roads in the surrounding area HGV traffic on these roads would be incompatible.

- The appellant questions whether the SEA, Habitats and EIA Directives have been complied with. An extensive list of previous case law is cited for reference.
- The appellant raises issues regarding planning enforcement, access to the public record of the planning application and the practices of the PA. Section 35 of Schedule 4 of the Planning and Development Act, (refusal of permission for past failures to comply), is cited.

6.2. Applicant Response

A response to the first party appeal was received from the applicant on the 15th November 2021. The main points of the response are summarised below.

- The sand and gravel identified at the site is extremely suitable for concrete aggregates and other aggregate uses.
- There are several policies in the Kildare Development Plan that support extractive industries. The Plan also contains guidance on such development.
- Many of the issues raised by the appellant have been addressed in the EIAR which accompanies the application.
- The applicant disagrees with the appellants statement that there are many houses near the development. There are approximately 11 houses within a 500m radius of the site boundary. Of these, 6 are between 250-500m, 2 are between 100-250m, with the remaining 3 within 100m of the site boundary.
- Of the 3 houses within 100m, one is in the ownership of the applicant, plus the remaining two are in excess of 130m from any proposed development works.
- A range of mitigation measures will be implemented during the construction and operational stage to protect watercourses in the area from surface water pollution. As a result, there will be no significant impact on groundwater or surface water quality.
- A Landscape and Visual Impact Assessment, (LVIA), was prepared for the EIAR in accordance with all current legal best practice requirements. The appellant is incorrect to state that the landscape affect was assessed as ‘low’.

The sensitivity of the affected landscape was assessed as ‘low’ in the report of the Planning Officer.

- The impact of the proposal on Russellswood was addressed in a number of the EIAR chapters. A summary of the potential impacts in terms of biodiversity/wildlife, air quality, noise and visibility, was submitted in the response to further information. No significant impacts on Russellswood were identified.
- It is disputed that's the use of screening berms is not good landscaping practice. They serve a function to screen extraction activities and to provide a noise and dust barrier. They can become an unobtrusive part of the landscape.
- Silt from the settlement lagoons will be used around the site in landscaping, restoration works.
- As stated in the EIAR, the processing plant will be powered by a generator. A single-phase pole mounted supply will be sought from the ESB to power the remainder of the site.
- On completion of the extraction works, the pit will be restored to agricultural use. The applicant has submitted photographic evidence in their response to further information, of their previous sites which have been restored.
- The Geological Survey of Ireland (GSI), Irish Geological Heritage (IGH) Programme of audited sites was reviewed for the Lands, Soils and Geology chapter of the EIAR. There are no heritage sites ash are in the immediate vicinity of the site. if the site was unique or a good example of an Esker, it would be designated as such.
- The appellant raises the issue of contamination of local wells. This is addressed in Chapter 7 of the EIAR. Mitigation measures are proposed to ensure this does not happen. The decision of the PA to grant permission includes a number of conditions that relate to groundwater.
- The impact of the proposal on heritage was assessed in the cultural heritage chapter of the EIAR. The proposed development will have no impact on Ballyboggan Priory. The proposed extraction will have no impact on the

setting of the monument as all activity will be screened by a belt of mature forest. There will be no views from the Priory and there will be no impact on the Priory buildings from quarry traffic.

- Concerns were raised with regard to lighting. The Road Safety Audit, (RSA), made no recommendation or requirement for lighting at the upgraded site entrance. The site will require some lighting during winter time hours. Most of the lighting will be concentrated in and around the main yard and at the processing plant. All lighting will be directed to the ground at an angle of c.22-30 degrees.
- The appellant notes condition No. 8(c) which relates to blasting. This appears to be an error as no blasting has been applied for in the application and no blasting is required at the site.
- The applicant queries the appellants comments regarding Strategic Environmental Assessment, (SEA). This assessment is a process for assessing the impact of plans, programmes and strategies and does not apply to planning applications for individual developments.
- The Environmental Impact Noise Assessment report prepared for the EIAR found that the cumulative noise impact from plant associated with the development at all sensitive receptors would be negligible. The EIAR also lists a range of mitigation measures to address noise from the site.
- The EPA does not carry out any air monitoring in the vicinity of the site. The applicant compared the site to one of similar characteristics at Kilkitt in Monaghan which has been subject to air monitoring. The results indicated that the air quality in the application area would be of good quality. The level of traffic generated by the proposal does not meet the threshold of mandatory air quality assessment.
- The potential impacts of dust were assessed in Chapter 8 of the EIAR. The conclusion was that there would be no significant adverse air quality effects for both human and ecological receptors. Overall, the effects of the proposed development on air quality have been considered to be acceptable.

- With reference to past failures to comply the applicant implements Environmental Management Systems (EMS) on all of their operational sites, which are available on request for inspection by the local authority, other statutory bodies or the general public. An EMS Will be implemented at the subject site in compliance with Condition No. 11 of the permission.
- With regards to the concerns raised about traffic the applicant was requested to carry out a structural analysis for the stone culvert at the site access and the stone arch bridge over the River Boyne. A Stage 1 Assessment Report was carried out and found that all structures assessed are capable of carrying the full range of single, double and triple axle loads. The assessment had regard to the baseline traffic figures and construction and operational traffic arising from the development. All of these figures are available in Chapter 14 of the EIAR.
- References to bridges in other locations are of no relevance to the appeal.
- Collision history on the haul route is assessed in the EIAR and does not accord with the claims of the appellant.
- The designated haul route comprises they R 401 Regional Road between the site access and the M4. No HGV's generated by the development will use the R 401 to the south or any local roads.

6.3. Planning Authority Response

A response from the PA was received on the 11th November 2021. The main points of the response are summarised below.

- There appears to be an error in the Development Contributions required in Condition No. 35.
- One tonne of gravel is less than one metre 3 in volume. Therefore, the metre^3 number must be less than the tonnes number. The documents submitted by the applicant appear to be reasonable.
- The applicant states that the correct density is the ‘Dry’, ‘Bank’ density of gravel, the correct density is therefore 1690kg per metre^3 or, 1.690 tonnes per metre^3.

- With 1.6 million tons and a cubic meter of dry, bank, gravel density of 1.690 tonnes per meter^3 the volume is 946,746 metre^3. At €0.25 per meter^3 the contribution is €236,686.
- The Planning Authority has reviewed the content of the third-party appeal and has no further comment to make. The Board is requested to uphold the decision of the PA to grant permission for the development.

6.4. **Observations**

- No third-party observations were received.

6.5. **Further Responses**

A further response was received from the 3rd party appellant on the 15th November 2021 and is summarised below,

- The appellant submits that the Board need to first determine compliance with all other quarries operated by the applicants. This should include compliance with all existing financial obligations in Kildare at a minimum, and ideally encompass other counties too.

7.0 Assessment

7.1. The first party appeal relates to financial contributions only and will be addressed under this heading. I have reviewed the application, the details of the appeal and all other submissions and I consider that the issues raised in the third-party appeal can be addressed under the following headings;

- Principle of development
- Procedural issues
- Residential Amenity
- Water & Drainage
- Traffic
- Ecological Impacts

- Cultural Heritage
- Financial Contributions
- Appropriate Assessment

7.2. Principle of Development

7.2.1. Section 15.9.6 of the KCDP states that the PA favour the use of existing, authorised quarries rather than greenfield sites. Although the proposal is for the development of a greenfield site located in a rural area, I am satisfied that the principle of the proposed development can be considered based on the following,

- The site is not designated under the Habitats Directive, nor is it directly connected with, or necessary to, the management of any European Site.
- The site is located within the Northwestern Lowland Landscape Character, (KCDP, Chapter 13), which is categorised as having low sensitivity.
- Within Table 13.3 of the KCDP, the North-Western Lowlands is given a 'High' compatibility with Extractive Industries.
- There are no Scenic Routes or Protected Views across the site or in proximity to it.
- The site is not listed in Table 12.7 of the KCDP as a Site of Geological Importance in the County.

7.3. Procedural Issues

7.3.1. The appellant contends that permission should be refused based on Section 35 of Schedule 4 of the Planning and Development Act 2000, (as amended), for past failures to comply. The appeal also cites incidences relating to health and safety. Compliance with planning permission falls within the remit of the Planning Authority under Section 8 of the Planning and Development Act 2000, (as amended). It is not a function of the Board and will not be addressed as part of this appeal. Issues relating to health and safety in the workplace are dealt with under a separate legal

code and through the Health and Safety Authority. They are not a matter for the Board's consideration.

7.3.2. The appellant also questions whether the relevant EU Directives have been considered. In particular, queries are raised regarding the Strategic Environmental Assessment (SEA) Directive, the EIA Directive and the Habitats Directive. The SEA Directive provides the framework for evaluating the environmental impact of a 'plan or programme'. It is not the appropriate legislative framework to apply to individual planning applications or 'projects'. A full SEA was carried out for the KCDP during its preparation stage and the policies and objectives of the Plan would have been considered under this context. The issue of EIA and AA are addressed by the Board as the competent authority and are assessed under Sections 7.10 and 8.0 of this report.

7.4. Residential Amenity

7.4.1. The grounds of appeal raise several issues that have the potential to impact on residential amenity and public health. These issues include noise, air quality and traffic and have been examined in detail in the EIAR submitted with the application. Some of the issues were examined further through a request for further information from the PA. As noted above, Section 8 of this report examines the EIAR in detail regarding the impacts of the proposal and how they will be addressed and mitigated if required. To gain a complete overview of the issues, the Board is requested to cross reference the issues addressed in this section of the report with the corresponding topic headings in Section 8.

7.4.2. There are 11 houses within a 500m radius of the proposed development. The three closest houses are located along the northern boundary of the site. One of the houses faces directly onto the site and is within the ownership of the applicant. The other two houses are approximately 132-140m from the site boundary and back onto the site. The development has the potential to directly impact on the residential amenity of the existing houses through noise, air pollution and traffic. Noise and air quality will be addressed individually in the following paragraphs. Traffic will be addressed as a stand-alone issue.

Noise

7.4.3. Chapter 10 of the EIAR deals with the impact of noise from the development. Noise surveys and noise monitoring were carried out at the site to determine baseline noise levels. As there will be no blasting on the site, vibration was not considered or assessed by the applicant. The PA considered that the noise chapter of the EIAR lacked adequate details and requested that a table be submitted showing the baseline noise levels along with the predicted noise levels with and without mitigation measures. Noise monitoring was carried out at four locations around the site, which are detailed in Figure 10-1 of the EIAR. The locations represented the closest houses to the site and were located at the north, north-east and south of the site. Baseline noise levels at all four test locations were found to be mainly dominated by road traffic noise. The $L_{Aeq,AVG}$, (the A-weighted equivalent continuous noise level over the measurement period, i.e. average value), at the sensitive receptors ranged from 60.4-69.9 dB. The development of the site would be divided into two phases. Phase 1 would be in the north-western corner of the site and would the first part of the site to be extracted. The restoration of Phase 1 would be carried out in tandem with the extraction of Phase 2 in the south-eastern corner of the site.

7.4.4. In response to the FI request the applicant submitted information which predicted the level of noise arising from the proposed activities at Phase 1 and Phase 2 during the preparation stage, (i.e. soil stripping, berm construction and restoration), and the operational phase, (i.e. sand and gravel extraction). Noise limits for both stages were taken from the EPA (2006) Environmental Management Guidelines for Quarries and Ancillary Activities and the DoEHLG (2004) Guidelines for Planning Authorities. During the preparation stage the applicant applied a noise limit of 70dB to measure the impact of noise from the use of HGV's and excavators. Noise limits for the operational phase were taken as 55dB. EPA guidance allows for a 70dB noise emission limit to be applied during daytime working hours for periods of up to eight weeks in any working year to facilitate necessary construction or temporary site works. The 55dB noise limit is applied during daytime working hours for ongoing works.

7.4.5. The results of the noise assessment found that the noise generated from excavators and heavy-duty vehicles, (HDV's), during Phase 1 soil stripping, berm construction and restoration would not be more than 70dB at any of the noise-sensitive receptors.

The assessment made an allowance for the distance between the source and the receptors but mitigation through screening was not included. The results for the assessment of Phase 1 are shown in Tables RFI-2 and RFI-3 in the applicant's submission to the PA, (14th July 2021). These tables show that none of the anticipated noise levels would be in excess of the 55dB daytime level.

7.4.6. An assessment of the same works for Phase 2 was carried out and results showed that predicted noise limits would not exceed 70dB, and only two receptors, (R2 and R3), would experience noise above 55dB. Receptors R2 and R3 are the houses at the north-eastern corner of the site; R2 would experience a level of 55dB and R3 would experience a level of 57dB. The same methodology was applied to the Phase 2 assessment and mitigation through screening was not considered.

7.4.7. Predicted noise from the operational / extraction phase was also assessed and included noise levels from front loaders, screening plant and HGV's. During Phase 1 the highest predicted noise levels were found to be 48dB and 49dB respectively and would occur at Receptors R3 and R2. Table RFI-8 compared the predicted cumulative noise levels with the existing ambient noise levels at each of the noise sensitive locations. The results indicated that there would be a marginal difference between the existing ambient levels and the predicted cumulative levels at each of the receptors. Therefore, the impact would be negligible.

7.4.8. The results for the Phase 2 operational stage were similar. The highest predicted noise levels for Phase 2 would occur at receptors R2 and R3 and would be 52dB and 50dB respectively. Cumulative levels were compared to existing noise levels at each of the receptors and the results showed a marginal increase of less than 1dB in all cases. The impact was concluded as minor or negligible.

7.4.9. As noted above, the distance between the source of the noise and the individual receptors was considered in the assessment but no reductions were made for noise screening by berms to be constructed on site. Using this methodology, the results show that the proposed development would not exceed the recommended noise levels, (as per the EPA (2006) Environmental Management Guidelines for Quarries and Ancillary Activities and the DoEHLG (2004) Guidelines for Planning Authorities), and as a result mitigation would not necessarily be required. However, it is proposed to store the topsoil overburden from Phase 1 and Phase 2 towards the eastern side

of the site and c. 140m to the rear of the houses referenced as R2 and R3. A berm will also be constructed along the north-eastern boundary of the Phase 1 area.

7.4.10. The applicant has stated that a generator will be used on the site to power the processing plant during the extraction stage. It was not clear from the EIAR if noise from the generator was included in the noise assessment for the operational stage. Reference was made to noise from 'screening plant, front loaders and HGV's'. The generator may have been included as part of the overall processing plant, but this was not made explicitly clear. Drawing No. PL05 shows the location of the generator, towards the centre of the site and Drawing No. 13 shows the plans and elevations of the contained that the generator would be housed in.

7.4.11. The nature of noise is not cumulative, and it is the highest noise level on the site is the most relevant for the purposes of assessment. I note the location of the generator, towards the centre of the site, at some remove from the nearest houses and, contained within a structure which would supress noise. It is likely that under these circumstances the noise from the generator may not significantly contribute to the overall noise from the site. The results from the noise assessment have a margin of flexibility between the predicted noise levels and the recommended noise limits as the highest level to be expected from the operational works would be 52dB at receptor R2 during the Phase 2 works. Therefore, in consideration of the location of the generator and the mitigation measures proposed, I am satisfied that the noise levels from the proposed development would be acceptable within the context of the site and the recommended Guidelines. However, should the Board disagree, they may seek clarity on this issue.

7.4.12. I am satisfied that, based on the information submitted and the mitigation measures proposed, that the impact of noise from the development will not be at a level to have a significant, negative impact on the residential amenity of the surrounding houses.

Air Quality / Dust

7.4.13. Dust generated from the development has the potential to impact on the amenity of nearby houses through air pollution and nuisance from dust deposition. The principal air quality impacts from the development would be from increased fugitive dust emissions and particulate matter at the proposed sand and gravel pit. Dust

emissions would be likely to arise from HGV's travelling over unpaved surfaces, handling and processing of sand and gravel, stockpiling of aggregates, soil stripping, earthworks and final landscaping. Emissions from plant and machinery would also contribute to air borne pollution in the area.

7.4.14. Air quality is addressed in detail in Chapter 8 of the EIAR. The PA considered that the EIAR lacked adequate detail regarding air quality and requested that further information be submitted. The applicant was asked to submit details of the modelling carried out for dust deposition and a table comparing the baseline levels with the predicted dust levels at each monitoring point before and after mitigation measures. A submission made by the applicant on the 14th July 2021 addressed this request and stated that, *'the fugitive quarry emissions can be estimated as clearly significant, (potential nuisance effect), and does not merit the need for quantification nor an air dispersion screening/modelling assessment'*. It was also noted that there is no current guidance on fugitive dust modelling from sand and gravel operations, or guidance on how to determine the quantitative reduction in emissions from mitigation measures. The applicant argues that Air Dispersion models are not an appropriate model to apply in this instance as dust would not be generated from one industrial point and would be generated from different locations and operations within the development. The submission states that, *'The fugitive emissions from a sand and gravel operation disperses outwards and upwards and progressively falls to the ground surface with larger particles falling first. The concentration off dust therefore reduces very quickly from the emission source. Most emitted dust deposits close to its source generally within a distance of a few 10s of meters'*.

7.4.15. The assessment in the EIAR used the Source-Pathway-Receptor approach to evaluate the risk of dust for the sensitive receptors, which are identified as the eleven houses within 500m of the site. Activities to be carried out during the soil stripping and final restoration works were deemed to be 'low risk' to 'negligible' as works would be confined to the site and there would be no 'trackout' by HGV's from the site. The impact of the activities on the receptors was assessed through a methodology that factored in wind direction and speed, proximity to source, sensitivity of receptor and the occurrence of natural dust suppression, (rainfall), to determine the overall impact of dust from the development on each receptor.

7.4.16. Using this methodology, four receptors, (R1, R2, R3 and R4), were predicted to experience a 'moderate adverse' impact as a result of dust generated from the development. A further two receptors, R5 and R6, were predicted to have a 'slight adverse' impact. The Air Quality Assessment considered that there is generally an acceptable to moderate adverse risk that dust may cause an impact on sensitive receptors within 500m of the dust generating activities. The assessment did not take into account any mitigation measures such as screening or dust suppression measures.

7.4.17. EPA guidance recommends a total dust deposition, (soluble and insoluble), limit value of 350mg/m2/day (averaged over a 30-day period), be adopted at site boundaries associated with quarry developments. Baseline monitoring was carried out at three locations around the subject site. The results of this monitoring showed the highest levels of dust deposition at location D1, (along the eastern boundary and close to an access road), and D3, (along the western boundary and close to the proposed new access). These results were 52.4 and 55.1 mg/m2/day, respectively.

7.4.18. The EIAR also found that there will be no significant impact regarding increased levels of PM_{10} from the development. Comparative background levels are very low, (9 – 8.1 micrograms per m^3), and the projected increase of up to 5 micrograms per m^3 of the annual mean background concentrations of the coarse fraction of particulates, would still be well below the annual objective of 40 micrograms per m^3, (as per S.I. No. 180/2011 – Air Quality Standards Regulations, (AQS) 2011). The assessment considers the overall increase in levels of PM_{10} to be negligible. The EIAR also stated that, based on the scale of the development and the level of traffic that it would generate, (54 HDV movements per day), did not meet the threshold for an extensive assessment, as per the Design Manual for Roads and Bridges (207/07) and the level of combustion emissions from vehicle exhaust emissions associated with the transportation of materials will not have the potential to contribute to local air pollution.

7.4.19. I have reviewed all the information at hand, and I would agree with the PA that the results of the assessments are not laid out in a clear manner. The EIAR assessment follows the guidance contained in the *'Institute of Air Quality Management, (IAQM) Construction Dust Guidance'*. In the assessment, the site is considered to have a low sensitivity as it is in a rural area with no sensitive receptors within 20m and a local

annual mean PM_{10} concentration below the annual mean AQS, (based on comparative data), and the presence of a wooded area between the site and some of the receptors.

7.4.20. Tables 8-8 and 8-9 of the EIAR set out the Determination of Risk Category from Earthworks and Trackout Movements. The headings relate to the 'Distance to Nearest Receptor' and the 'Dust Emission Class'. However, the text accompanying the tables does not explicitly state which Dust Emission Class each activity falls under and it is unclear as to what the predicted risk would be. In the absence of this information, I referenced the IAQM guidance, which is publicly available. Based on Section 7.2 of the IAQM guidelines, earthworks for the site would be defined as a 'Large' dust emission class and trackout movements would be defined as a 'Medium' dust emission class. When the dust classification is cross referenced with the sensitivity of the receptor, (as per Section 7.4 of the IAQM guidelines), the dust emission magnitude of the earthworks and trackout movements would have a 'low risk', which accords with the findings of the EIAR. I note that the assessment was carried out without the consideration of mitigation measures.

7.4.21. The baseline levels for dust deposition and PM_{10} are relatively low in and around the site. Although the predicted levels of dust would be low, it is likely that the nearest houses will experience some additional dust from the development. A full suite of mitigation measures are proposed to minimise air pollution and dust from the development and include the application of dust suppression practices on the site and the provision of berms and planting within the site. The applicant has also committed to ongoing monitoring. I am satisfied that based on the information submitted and the mitigation measures proposed, the impact of the development on dust and air quality will not be at a level to have a significant, negative impact on the residential amenity of the surrounding houses.

7.5. **Water & Drainage**

7.5.1. Concerns were raised in the grounds of appeal regarding the impact of the proposal on existing watercourses and on domestic wells in terms of abstraction and discharges from the site. Chapter 7 of the EIAR addresses the impact of the proposal on the hydrology and hydrogeology of the area and is also assessed in

Section 8 below. A Hydrological Risk Assessment was also submitted by the applicant in response to a request for further information by the PA. This assessment contained information regarding the volume of water required from the groundwater well to service the welfare facilities, the batching plant, wheel wash and to suppress dust during dry days. Potential impacts on existing domestic wells were also to be considered.

7.5.2. The proposed development will not discharge any water from the site and there will be no direct hydrological connection between the site and the adjoining watercourses. The potential impact of the development on designated sites and nearby watercourses in is also addressed in Section 7.10 – Appropriate Assessment.

7.5.3. Existing hydrogeological conditions on the site are outlined in the EIAR and the Hydrological Risk Assessment. To address the concerns of the PA, four monitoring wells were drilled around the proposed extraction area and one at the location of the proposed water supply for the site. The locations of the wells are shown in Figure RFI-1 and the groundwater levels ranged from 63.63m AOD (21-BR-01) to 71.41m AOD (21-BR-03). The results indicated that, based on the geological conditions, it is not expected that groundwater levels will increase dramatically during the winter or in times of heavy rain. On foot of the results of the Risk Assessment, the proposed extraction levels were revised. To ensure a sufficient distance from the groundwater levels, the extraction level at the eastern portion of Phase 1 would be raised to 72m AOD with the remainder of the area to be excavated to 71m AOD as originally proposed. Phase 2 had an original floor level of 65m AOD, which would be increased to 65.5m AOD at the northern limit and sloping to a depth of 69m AOD at the southern limit.

7.5.4. One supply well is proposed for the site and will be located on the western side of the site and to the south of the processing plant. This well will extract groundwater from the underlying bedrock aquifer and will be used for washing plant, welfare facilities, wheel wash and dust suppression. The proposed wheel wash will be a closed loop system that will comprise four lagoons that will be filled using the water from the well. The total volume of the lagoons is c. 2000m^3 and they will be filled gradually with between 200-400m3 extracted from the well. An additional requirement of 76.4m^3 per day is also estimated.

7.5.5. There is a lack of information available regarding domestic wells nearby. As there is no public water supply in the area it is assumed that the nearby houses have their own private wells. Groundwater levels at the two houses at the north-eastern corner of the site were monitored in studies that fed into the EIAR and were compared against the on-site groundwater levels and the surveyed stream and river water levels. A few public supply wells were identified within 5km of the site. The Ballindoolin Group Water Scheme is c. 2km to the south, the Clogherinkoe Groundwater Supply well for Kildare County Council is located c. 2km to the southwest and another unnamed public supply well is c. 2.7km to the north-west. A Department of Agriculture well is located c. 1.6km to the south of the site.

7.5.6. The Risk Assessment notes that the groundwater abstraction from the supply well on site could impact on groundwater levels in nearby wells if the wells are abstracting from the bedrock. The public water supplies are located at a distance and are not expected to be impacted by abstraction. Water abstraction from the bedrock aquifer at a depth greater than 19m is not expected to impact on discharge to the River Boyne and its tributaries. There may be some impact on the domestic wells in proximity if they are abstracting from the bedrock. To mitigate against impacts, initial filling of the washing plant will take place over 5 to 10 days. During this time groundwater at local supply wells including the wells at the properties to the north of the site will be monitored daily. Following this monitoring of local wells will be carried out monthly.

7.5.7. The proposed development and processing plant will operate on a closed loop system and will not result in any discharge of waters to the surrounding watercourses. If all wells are extracting from bedrock, the on-site well has the potential to impact on nearby domestic water supplies through abstraction. During the initial extraction phase, it is proposed to monitor groundwater levels daily to identify any impacts on the domestic wells. Regular monitoring will be carried out for the duration of the works. Standard site operating measures are proposed to deal with accidental spills or pollution to groundwater. Based on the nature of the works and the mitigation measures proposed, I am satisfied that the proposed development will not result in any significant impact on the existing watercourses in the area or on the hydrology and hydrogeology of the site and the surrounding area.

7.6. **Traffic**

7.6.1. The issue of traffic was raised in the appeal and by third parties during the initial consultation phase with the PA. A Traffic and Transport Statement was prepared for the development and was included in Chapter 14 of the EIAR. Although the development was unlikely to meet the threshold for a Traffic and Transport Assessment, (as per the TII, Traffic and Transport Assessment Guidelines, 2014), the applicant carried out an assessment on the local roads that were identified as having an uplift of HGV traffic because of the development.

7.6.2. Access to the development would be via an existing agricultural entrance on the western side of the site. This access opens onto the R401 and is directly opposite the R401 junction with the L5015. The proposed haul route would follow the R401 northwards to the M4 - Junction 10.

7.6.3. The assessment states that, based on the quantity of materials to be excavated and moved from the site and the number of working days per year, (264), the proposed development is likely to generate 30 HGV trips along the haul route per day, (i.e. one trip is HGV movement to the site from the M4 and then back again). The development would generate 3 inbound car movements in the morning and evening to accommodate workers on the site with an additional 5-10 trips generated during the day. Using traffic surveys from similar facilities, the applicant estimates that the typical maximum movements to the site would be in the order of 6 no. movements in and out per hour. Typically, HGV movements are elevated in the mornings and reduce in the mid-afternoon.

7.6.4. Results of traffic surveys carried out on the R401 and at the junction of the R401 and the L5015, near the site entrance indicated that traffic levels were relatively low for a regional road. The average weekday, two-way daily traffic flow on the R401 is 1,706. The average flow between 07.00 and 19.00 was 1,431 vehicles with an even distribution travelling in both directions, (713 northbound and 718 southbound). Of the northbound vehicles – 666 were light vehicles (cars and vans) 44 were HGV's and 4 were buses. Of the southbound vehicles, 671 were light vehicles and 43 were HGV's and 4 were buses. The level of HGV traffic on the R401 was calculated as approximately 6.4% in both directions.

7.6.5. At the R401 / L5015 junction, turning count surveys found that the total weekday, two-way traffic flow recorded on the L5015 between 07.00 and 19.00hrs was 106 vehicles, 8 of which were HGV's. There were 50 eastbound movements, (towards the site), and 56 westbound movements, (from the R401). The proportion of HGV's using the road was approximately 7.5% of the total traffic, (i.e. 4 HGV's were counted travelling in each direction).

7.6.6. Using traffic surveys from similar facilities, the applicant estimates that the typical maximum movements to the site would be in the order of 6 no. movements in and out per hour. Typically, HGV movements are elevated in the mornings and reduce in the mid-afternoon. Traffic modelling was not considered to be necessary as the traffic levels generated would be low and the existing road junctions have no capacity issues.

7.6.7. The number of movements to be generated by the development is relatively low and would be evenly distributed throughout the day. Having assessed the information at hand, visited the site and driven the proposed haul route on a weekday, I am satisfied that the existing road network would have sufficient capacity to absorb the levels of traffic that would be generated from the development.

7.6.8. It is proposed to upgrade the existing site access which is located on a turn in the road and close to the R401 and L5015 junction. The PA requested further information from the applicant as to how adequate sightlines could be provided at the proposed entrance. This information was submitted in the response to further information and is shown on Drawing No. 03141/RFI/PL-01, to the satisfaction of the PA. The proposed junction and sightlines were designed to accommodate the 80kmph speed limit of the R401, which requires sightlines of 145m, (Design Manual for Roads and Bridges). Surveys were also carried out to determine the 'design speed' of the road. Results showed that during dry weather the 85th percentile speed is calculated at 68km/hr for northbound traffic and at 73kmph for southbound traffic. Sightlines of 150m are achievable in both directions at the existing entrance and for motorists on the approach. I am satisfied that this is in accordance with the guidance provided.

7.6.9. The proposed haul route would direct HGV's to cross over a masonry arch bridge over the River Boyne, approximately 700m to the north of the site entrance.

Concerns were raised in the grounds of appeal and by third partied regarding the impact of additional HGV traffic on the structure of the bridge. A Structural Impact Assessment for the bridge was requested by the PA, and for a stone culvert that traverses the road at the site entrance. As part of the impact study, assessments were carried out on three structures,

- the Boyne River Bridge,
- the Boyne River Flood Span and
- Nule's Bridge, (Structure ID KE-R401-004.00)

7.6.10. The Boyne River Bridge is approximately 700m from the proposed site entrance and is a masonry arch structure with a span of 9.15m. The Boyne River Flood Span carries the R401 over a flood plain and comprises a 4.85m single-span masonry arch structure. Nule's Bridge is located directly to the south of the proposed entrance and carries the R 401 over a minor stream, (Russelswood River). It comprises a 3.95 M single span masonry arch structure. A culvert crosses underneath the carriageway at a skew of 51 degrees so that the overall length of the culvert is 15.8 meters. The report notes that Nule's bridge is located to the south of the designated haul route and, as vehicles will be entering and exiting from the north, HGV's are not expected to pass over this bridge during the operational stage.

7.6.11. Following a visual inspection, the Boyne River Bridge was found to be generally in good condition, apart from the southwest wingwall where longitudinal repairs to the carriageway surfacing may be indicative of recent movement of the wall. The report notes that vegetation clearance is required to determine the significance of observed defects and to confirm its current condition. The Boyne River Flood Span was also found to be in generally good condition but requires routine maintenance and masonry repairs to remediate impact damage on the southeast approach wall. Nule's Bridge requires significant masonry repairs to reinstate the east parapet which has suffered extensive impact damage as well as minor repointing at discrete locations.

7.6.12. A structural assessment of all three bridges was carried out using the three TII guidance documents, (AM-STR-06026 – The Assessment of Road Bridges and Structures, AM-STR-06002 – The Assessment of Road Bridges and Structures, and, AM-STR-06056 – Stage 1 Structural Assessment of Road Structures). The structural

assessment found that all elements, (substructure, arch barrels, parapets, spandrel walls and wing walls), of the three structures could carry the full range of single, double and triple axel loads. This would include both the construction and operational traffic associated with the development. However, the assessment notes that the parapets of Nule's Bridge do not comply with either the geometric or containment requirements of BS 6779-4:1999, 'Highway Parapets for Bridges and Other Structures', as the east parapet is completely missing.

7.6.13. I am satisfied that the assessments were carried out in accordance with industry guidance and that the findings are sound. Based on the findings of the assessment, I am satisfied that the bridge structures can carry the vehicles required to service the proposed development.

7.7. Ecological Impacts

7.7.1. The appellant argues that the impact of the development on Russelswood was not adequately assessed in the application. The EIAR did not directly address the potential ecological or visual impacts on the woods. However, the PA requested that the applicant specifically address the impact of the development on the woods in a request for further information.

7.7.2. The applicant states that Russelswood wood was not considered to be a 'sensitive receptor' in terms of air quality and / or noise as it is not a designated site under the EU Habitats Directive (92/43/EEC) and is not considered to be an ecological receptor of concern. Although the woods are not designated for protection, the biodiversity chapter of the EIAR noted that the protected species of Pine Marten, Badger, Otter and Red Squirrel, had previously been recorded within the area of Russelswood and Brackagh Woods, which is to the southeast of the site. Apart from evidence of an outlier badger sett, none of these species were recorded on the site.

7.7.3. The EIAR evaluated the treelines and hedgerows within and around the as having a low suitability for roosting and foraging bats. The trees and hedgerows on the perimeter of the site were determined to be of higher value to commuting and /or foraging bats as they contain more trees and are adjacent to the woodlands.

7.7.4. In terms of ecological impact, I consider the potential for dust deposition and disturbance from noise to be the most significant considerations for local ecology. Chapter 8 of the EIAR deals with Air Quality. Potential impacts on Natura 2000 sites were screened out of this chapter due to the distance between sites and the lack of a pathway. However, significant dust deposition can restrict photosynthesis, respiration and transpiration and could have an impact on the trees in the woods.

7.7.5. The results from the baseline Dust Deposition Monitoring carried out on the site showed that the highest level measured was 52.4 mg/m^2/day, at location D1, along the eastern boundary of the site. In terms of referencing the potential magnitude of impact from site operations, the EIAR has referenced UK technical guidance from LAQM.TG(03), which states that fugitive dust from stockpiles, pit operations can potentially contribute to 5ug/m3 towards the annual mean background concentrations of particulates in the immediate area. Based on the comparative information from EPA monitoring for a similar Zone D site, the highest reading for PM_{10} concentrations was 11 micrograms/m3 in 2013. When the additional 5 micrograms/m^3 is applied this would still be significantly below the threshold of 40 micrograms/m^3 per year for the protection of human health. The EIAR does not convert the recommended levels for ecological receptors to annual micrograms/m^3. However, I note that the threshold for damage to plants is five times higher than the threshold for humans. On this basis I am satisfied that the levels of PM_{10} from, the site would not result in a significant negative impact on the trees in Russelswood wood. Furthermore, the prevailing wind across the site travels from the south-west which would carry dust towards the north and east of the site and away from the woods.

7.7.6. No assessment was carried out regarding the impact of noise on species within Russelswood wood. The Habitats Directive (92/43/EEC) specifies that, where specific noise from industry measured at the habitat /nest site is below the LAeq, 1hr level of 55 dB, it is considered unlikely that it will have an adverse impact on designated species. Within Chapter 10 – Noise of the EIAR, Receptor R1, (Figure 10.1), would be the closest receptor to the woods. This receptor is a house to the north of the site and is owned by the applicant. It was not included in the noise assessment. During the temporary works, (which would include soil stripping, berm construction and site restoration), this level would be slightly exceeded, (58 dB LAeq,

1hr), at receptors R2 and R3 at the north-east of the site. During the operational stage the highest predicted level would be 48 dB(A). I am satisfied that any noise disturbance to nearby protected species would be temporary and moderate and would not result in a significant negative impact on existing species population levels.

7.7.7. The appellant also raised concerns regarding the visual impact of the proposal on Russelswood. During the site inspection, I visited Russelswood and observed the subject site from the public car park at the entrance to the woods. The subject site is only visible from the car park and the existing view is towards the fragmented tree line towards the undulating landscape beyond, which is at a noticeably higher level than the road and the car park. It is proposed to install a 2m high screening berm behind the treeline along this boundary as a mitigation measure for a number of impacts. There are no protected views across the site and the full extent of the site is not currently visible from the woods. I am satisfied that the proposed berm will provide adequate screening for the development from the public areas. Based on the existing and proposed views from the woods, I do not consider that this element of the development will result in any significant visual impact on the woods. I note that condition No. 34 of the PA's decision requires the installation and retention of this berm for the duration of the works. I would agree that the berm is required and would recommend that a similar condition be attached to any grant of permission.

7.8. **Cultural Heritage**

7.8.1. The appellant raised concerns regarding the impact of the proposal on the cultural heritage in the surrounding area with specific concerns raised about whether the site is part of the Esker Riada and if it will impact on the ruins of Ballyboggan monastery. These issues are addressed by the applicant in the EIAR under Chapter 6 - Land, Soils and Geology, and Chapter 12 - Cultural Heritage. I have reviewed these chapters of the EIAR in Section 8 below.

7.8.2. Ballyboggan Priory is a recorded monument, (RMP ME046-018). It is in a field approximately 0.5km from the northern boundary of the site in County Meath. The monument is approximately 0.09km to the west of the R401, which is the designated haul route, and is not visible to, or from the subject site and. I am satisfied that the

proposed development will not have any impact on the setting of the recorded monument by virtue of the separation distances between both sites and no works will be carried out near the monument that may disturb it.

7.8.3. There are no recorded monuments located within the red line boundary but there are a number of monuments in the wider area around the site. The closest Recorded Monument is located c. 8m to the south of the site entrance and 80m from the extraction area. The monument Ref. is KD002-003 and is described as 'Brackagh Ritual Site - Holy Well'. There are two other recorded monuments in the vicinity of the site. A second well, KD002-002, Brackagh Ritual Site – holy well, is located approximately 60km to the north of the application site and on the other side of the road. Brackagh Burial Ground, KD002-004 is located approximately 64m to the south of the site boundary and on the opposite side of the field boundary and stream. Beyond this again is KD002-005, Brackagh Castle, which is described as 'Site of Castle' on maps dating from 1829-1841. No visible surface traces survive.

7.8.4. There are no protected structures within the application area. There is one protected structure located approximately 60m to the north of the site – B02-02 Brackagh Holy Well – 'Lady Well'. The EIAR identifies three structures of potential heritage value in proximity to the site. A 5-bay stone house with slate roof is located to the north of the site and on the opposite side of the local road and was identified as a 'Police Station' on historic maps dating from 1829 – 1841. Two other structures are located along the south-western boundary of the site. Both structures are in ruins and are overgrown. Although the structures are located within the field boundaries for the wider site, they are outside of the red line boundary and no works are proposed.

7.8.5. I am satisfied that the proposed development is at a sufficient remove from the protected structures and recorded monuments so as not to impact on their character and setting. However, given the number of recorded monuments in the surrounding area and to the submission made by the DAU, I recommend that, should permission be granted for the development, that a condition requiring archaeological monitoring be attached.

7.8.6. The subject site is not listed in Table 12.7 of the KCDP as a Site of Geological Importance in the County. It is also not listed on the GSI maps as a Geological Heritage site. No reference is made to the site forming part of the Esker Riada and it

is not designated for protection as a heritage site. I am satisfied that the proposal will not impact on any site which has been designated as geologically sensitive in the KCDP or on any site which is listed by the GSI as a Geological Heritage Site.

7.9. Financial Contributions

7.9.1. A 1st Party appeal has been lodged by the applicant regarding the financial contribution applied to the development under Condition No. 35 of the permission.

7.9.2. Condition No. 35 requires that the applicant pay the sum of €1,132,674.00 in development contributions applied to the development in accordance with the Development Contribution Scheme adopted by Kildare County Council on the 5th November 2015 in accordance with Section 48 of the Planning and Development Act 2000 as amended. The applicant contends that, in this instance, the conditions of the development contribution scheme were not applied correctly. Since the decision was issued by the PA, a new Development Contribution Scheme has been adopted. The Kildare County Council Development Contribution Scheme 2023-2029 now applies.

7.9.3. In the previous Contribution Scheme, conditions arising from Quarrying/Extractive Industry were stipulated in Section 8(vii) of the Contribution Scheme, which stated that, *'Contributions will be charged at a rate of €0.25 per m3, based on proposed extraction volumes'*. Section 8.2.2 of the current scheme relates to the development contribution applicable to extractive industries and states that the development contribution shall be €0.50 per cubic metre of material.

7.9.4. The total recoverable reserves stated in the development description within the Environmental Impact Assessment Report was 1,600,000 tonnes. The grounds of appeal states that, to convert this to cubic metres, Kildare County Council applied a multiplying conversion factor of 2.83, which is incorrect. It is argued that the correct conversion factor to use is that given in the Caterpillar Performance Handbook for 'Bank', 'Dry' sand and gravel of 1930kg/m3 and that the correct calculation to apply is as follows:

- Extraction Volume = Mass ÷ Density
- Extraction Volume = 1,600,000 tonnes ÷ 1.93 (tonnes per m3)

- Extraction Volume = 829,016m3
- Development Contribution @ €0.25 per m3 = €0.25 x 829,016m3 = €207,254.

7.9.5. A response was received from the PA and states that an error was made in the calculation for Condition No. 35 and that the calculation submitted by the applicant appears to be reasonable. However, the PA notes that the applicant states that the 'Dry', 'Bank' density of gravel is the correct density but then applied the figure for the 'Pitrun','Loose' density instead. A revised calculation is submitted by the PA and states that, *'With 1.6 million tonnes and a cubic metre of 'Dry', 'Bank' gravel density of 1.690 tonnes per metre 3 the volume is 946,746 metres 3. At €0.25 per metre 3 the contribution is €236,686'*.

7.9.6. It is clear to me that an error occurred in the initial calculation for the development contribution. I have reviewed the table in the Caterpillar Performance Handbook, (Caterpillar, June 2018), which is referenced by the applicant and the PA, and I am satisfied that the calculation carried out by the PA applied the correct methodology and reference figure. The applicant argued that the figure for the 'Dry', 'Bank', category is the correct figure, but they appear to have used the figure for 'Gravel – Pitrun', instead.

7.9.7. I note that the amount of the development contribution to be applied has increased in the new scheme. However, I recommend that the methodology in the calculation set out by the PA be applied to any new calculations which relate to Section 48 contributions should planning permission be granted.

7.10. Appropriate Assessment

7.10.1. A Stage 1 Screening statement was prepared for the application and concluded that, *'The proposed project, i.e. the creation of an operational sand and gravel pit in the townland of Brackagh, will not result in significant effects on Natura 2000 sites'.*

7.10.2. The conclusion of the Screening Report was considered within the context of the detailed desktop and filed studies carried out for the EIAR and the findings of that report support the conclusion that there is no likelihood of significant effects on any Natura 2000 sites as a result of the proposed development.

7.10.3. In accordance with obligations under the Habitats Directives and implementing legislation, to take into consideration the possible effects a project may have, either on its own or in combination with other plans and projects, on a Natura 2000 site; there is a requirement on the Board, as the competent authority in this case, to consider the possible nature conservation implications of the proposed development on the Natura 2000 network, before making a decision, by carrying out appropriate assessment. The first stage of assessment is screening.

7.10.4. The proposed development is for the extraction of sand and gravel on a greenfield site. Additional works include the upgrading of an existing entrance to accommodate HGV traffic, the installation of a processing plant and all site required facilities, including a double skinned fuel tank in a secure container, a weighbridge, wheel wash and staff welfare facilities. The application lands would be worked dry and the extraction level would be kept 1m above the winter groundwater level. The processing plant would operate on a closed loop system and there would be no water discharge from the site. Extraction will occur in two phases. It is envisaged that the restoration of Phase 1 will be carried out in tandem with the extraction works to Phase 2. A full detailed description of the project is set out in Section 4.0 of the AA Screening Report submitted with the application.

7.10.5. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on a European site(s). The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) to assess whether it may give rise to significant effects on any European Site in view of the conservation objectives of those sites.

7.10.6. In consideration of the characteristics of the development, the Screening Report determined that the zone of influence of the development would be 2km. The closest European sites are Mount Hevey Bog SAC, (Site Code 0023425), which is approximately 6.8km to north and the River Boyne and River Blackwater SAC and SPA, (Site Code 002299 and 004232, respectively), which are approximately 7.3km to the north-east of the site.

7.10.7. There is no direct hydrological link or pathway between the subject site and the closest European sites. Russelswood River, (IE_EA_07B040400), is a tributary to the River Boyne and runs along the southern boundary of the site. This would create an indirect hydrological to the River Boyne and River Blackwater SAC and SPA. The hydrological separation distance between both sites would be 9.17km. However, as noted above, the proposed development will not involve any water discharge from the site and no works will be carried out within 30m of the site boundary.

7.10.8. I have reviewed the qualifying interests and conservation objectives of the nearest European sites and, having regard to the nature and scale of the proposed development, which would not involve any water discharge from the site, the indirect hydrological connection and the hydrological separation distance of 9.17km to the River Boyne and River Blackwater SAC and SPA, no Appropriate Assessment issues arise. It is considered that the proposed development would not be likely to have a significant effect individually or in combination with other plans or projects on a European site.

8.0 EIAR

8.1. Introduction

8.1.1. This section of the report deals with the potential environmental impacts of the proposed development during the construction and operational phases of the development. This section should be read in conjunction with Section 7.0, (Assessment), of this report.

8.2. Legislative Requirements

8.2.1. The applicant has submitted an Environmental Impact Assessment Report (EIAR) which comprises two volumes, a Non-Technical Summary and the main report providing a technical assessment of environmental effects.

8.2.2. It is submitted by the applicant that the EIAR has also been prepared in accordance with the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 that came into effect on 1st September 2018, and which the Board will be aware, transposed by Directive 2014/52/EU into Irish planning law.

8.2.3. As is required under Article 3(1) of the EIA Directive 2011/92/EU amended by Directive 2014/52/EU, the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape and it equally considers the interaction between the factors referred to in points (a) to (d).

8.2.4. I am satisfied that the EIAR and Addendum EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the applicant, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with all relevant the requirements. I am also satisfied that the information contained in the EIAR complies with article 94 of the Planning and Development Regulations 2000, as amended, and the provisions of Article 5 of the EIA Directive 2014. I have carried out an examination of the information presented by the applicant, including the EIAR, further information submitted on request from the PA and the written submissions.

8.2.5. The EIAR describes the proposed development, including information on the site and the project size and design. Alternatives were considered and a justification for the outcome was included in the report. The impact of the proposed development was assessed under all the relevant headings with respect to population and human health; biodiversity; land, soils and geology; hydrology and hydrogeology; air quality; climate; noise; material assets; cultural heritage; landscape; traffic; interactions of impacts; and the suggested mitigation measures are set out at the end of each chapter.

8.3. Difficulties Encountered

8.3.1. No significant difficulties were encountered by the design team in the preparation of the EIAR.

8.4. Alternatives

8.4.1. The proposal is site specific as it relates to the extraction of resources in the form of sand and gravel. The ‘Do Nothing’ scenario would mean that they proposed

activities would not commence and the site would remain as is, and the existing site would continue to be worked as farmland for grazing and crop growing purposes.

8.4.2. The proposed development is justified on the basis that;

- The sand and gravel at the site is of relatively high quality and is suitable for multiple uses including concrete mortar and asphalt production.
- The proposed pit is screened from the surrounding area,
- It has good access to the regional and local road network,
- The proposed pit is in a favorable location and standard extraction methods can be used.

8.4.3. No appropriate alternative location has been identified at the current time. Potential sites have been investigated and have been ruled out for the following reasons,

- their potential environmental effects
- high clay content within the deposit
- poor access
- distance from markets
- proximity to built-up areas

8.4.4. Alternative layouts were considered for the extraction works with the preferred option to work on a phased basis to limit potential impacts. The decision to position the plant at the centre of the site was considered the most suitable location, due to its proximity to both extraction areas and its low elevation which would provide acoustic and visual screening. Phasing the extraction works will also allow for the provision of screening for nearby houses by installing berms of topsoil between the site and the residential development.

8.5. Summary of Likely Significant Effects

8.5.1. Section 7.0 of this report identifies, describes and assesses the main planning issues arising from the proposed development and it should be considered in conjunction with the following environmental impact assessment (EIA).

8.5.2. The EIA identifies and summarises the likely significant effects of the proposed development on the environment with respect to several key receptors in the

receiving environment. It identifies the main mitigation measures and any residual impacts following the implementation of these measures together with any planning conditions recommended in section 7.0 of this report. It assesses cumulative impacts, identifies interactions between the receptors, and considers the risks associated with major accidents and/or disasters. The EIA reaches a Reasoned Conclusion.

8.6. **Population and Human Health**

8.6.1. Chapter 4 of the EIAR addresses the impact of the proposed development on the population and human health. As would be expected, the likely effects of the development are addressed under a number of chapters in the EIAR. The potential impacts on human beings and human health in terms of air quality, noise, visual impact and traffic are dealt with in detail in Chapters 8, 10, 13 and 14 respectively and are cross referenced in Chapter 4. These issues will also be addressed separately in the EIA below.

8.6.2. I consider that there is an overlap with Section 7.4 of this report, (Residential Amenity), which addresses these issues in detail.

Existing Environment

8.6.3. I refer the Board to Section 1.0 of this report which describes the context of the existing site. The site is in a rural area which is characterised by dispersed rural housing. There are 5 houses within a 250m radius of the site and a further 6 houses between 250-500m of the site. The nearest houses are identified as sensitive receptors. There is one house directly to the north of the site boundary and two more houses back onto the north-eastern corner of the site.

8.6.4. Baseline conditions for noise, air quality and traffic are contained in the relevant chapters of the EIAR and are predictably low given the rural nature of the site.

Predicted Impacts

8.6.5. Given the phased nature of the proposal, the location and intensity of the impacts at the sensitive receptors will vary as the project progresses and the extraction area moves from the southeast to the northwestern side of the site.

8.6.6. There would be a slight positive impact in terms of employment as there would be up to 4 people employed on the site during the construction phase and up to 3 people during the operational phase.

8.6.7. Impacts on human health would be from increased levels of dust, noise, and traffic with the potential to cause pollution to soils, groundwater, and surface water. These impacts would be caused by stripping of soils, vegetation, the installation of plant and screening berms during the construction phase would any by the extraction and processing of aggregate during the operational phase. These impacts are addressed in detail in the relevant chapters of the EIAR and specific mitigation measures are also outlined in each chapter.

Mitigation Measures

8.6.8. Berms would be constructed around the perimeter of the site and to the rear of the closest houses at the north-eastern corner of the site. The berms would be approximately 2m high along the western boundary with an overburden / topsoil storage area of up to 3m to the rear of the houses. This would mitigate against dust generation, noise and visual impact.

8.6.9. Best practice and good site management measures would be implemented in terms of operations to help limit dust generation, noise and the potential of pollution from spills.

8.6.10. Ongoing noise and dust monitoring would be carried out on the site and in proximity to the sensitive receptors.

8.6.11. HGV traffic would be directed towards the designated haul route along the R401 and away from the local roads.

Residual and Cumulative Impacts

8.6.12. Given the existing rural character of the site and the surrounding area, some additional noise and dust would be experienced from the development. There would be no cumulative impacts from the proposal.

Conclusion

8.6.13. The development of a greenfield site would result in additional impacts on the houses in proximity to the site regarding noise, dust and additional traffic. Specific concerns regarding the impact of the proposal on residential amenity were raised in

the grounds of appeal. I note the extent of the site and the distance between the proposed extraction areas and the nearest houses. I have considered all the information on file including written submissions made in relation to population and human health and the information contained in the EIAR. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on population and human health.

8.7. Biodiversity

8.7.1. Chapter 5 addresses biodiversity. The appellant raised concerns regarding the impact of the proposal on the River Boyne and River Blackwater SAC, (Site Code 002299), through an indirect hydrological connection via the Russelswood River. A Stage 1 Screening for Appropriate Assessment was prepared for the application and concluded that, *'The proposed project, i.e. the creation of an operational sand and gravel pit in the townland of Brackagh, will not result in significant effects on Natura 2000 sites'.* The issue of Appropriate Assessment is addressed in full in Section 7.10 of this report and should be read in conjunction with this section. The impact of the proposal on Russelswood wood is assessed in full in Section 7.7 of this report and contains some overlap with the issues outlined below.

Existing Environment

8.7.2. The subject comprises agricultural land, divided into five fields and separated by hedgerows. Russelswood woods are located to the north-west of the site and Brackagh woods are to the south-east. There is a worked-out quarry sand and gravel pit to the south-east with the remainder of the surrounding landscape comprising agricultural fields. The River Boyne runs in an east-west direction, approximately 240m to the north of the site. Russelswood River is a tributary to the Boyne and runs along the southern boundary of the site.

8.7.3. The EIAR includes a desk top study and site surveys. The zone of influence for the proposed development was 2km based on the absence of ecological features and pathways from the site. The chapter notes that there are no Natura 2000 sites within 5km of the subject site.

8.7.4. Surveys carried out on the site recorded thirteen species of birds, a full list of which is contained in Table 5.2 of the EIAR. None of the species recorded are listed on Annex I of the EU Birds Directive or red listed, but five are amber listed. Evidence of badgers was found within the site and evidence of otters was found along the Russelswood River to the south of the site. The common frog was also recorded on the site and the presence of two ponds could provide a potential, (although sub-optimal) breeding habitat. Hedgerows and treelines surrounding and within the site provide commuting and / or foraging routes for bats. A bat survey carried out in 2018 recorded four species of bat in the study area. The nearby woods are considered to provide a better habitat for roosting or breeding bats.

8.7.5. The important species identified within the site include birds, bats, badger and otter. Important habitats are eroding / upland rivers, hedgerows and treelines.

Predicted Impacts

8.7.6. The Do-Nothing scenario would result in the continued use of the lands for agriculture with no significant change in the ecological interest of the site.

8.7.7. There are no effects predicted for the Eroding/Upland Rivers habitat as the pit will be worked at a level above the winter groundwater table. The excavations will be worked dry and will not require any dewatering operations or the discharge of wastewater into the stream.

8.7.8. The removal of 860m of hedgerows and 165m of tree line on a phased basis will be a significant impact. It will represent a loss of potential nesting habitat for commonly occurring bird species and would displace bats that use the hedgerows for commuting or foraging. The use of lighting in the site during winter hours could also impact on bats. Hedgerow removal may impact on badgers by removing potential habitats for badger setts and grassland for foraging. Otters will not be impacted by the development.

8.7.9. The restoration phase will see the site return to agricultural use. The site will be seeded with wildflowers along the pit faces and grass along the pit floor. A total of 1,500m of native hedge will be planted, (including 640m along the site boundary under initial works to screen the development).

Mitigation Measures

8.7.10. The pit floor level will be kept above the winter groundwater level to avoid impact on groundwater and Eroding / Upland Rivers habitat.

8.7.11. The excavations will be worked dry and would not require any dewatering operations or the discharge of wastewater into the stream. There will be a 20m buffer between the development and the stream which will result in a negligible impact of surface water runoff entering the water course from areas stripped of vegetation to construct the access road.

8.7.12. All vegetation clearance will be carried out outside of the bird nesting season unless a qualified ecologist has first certified the vegetation to be free of nesting birds.

8.7.13. Prior to the removal of any vegetation or ground-breaking works on the site, an ecologist will carry out a check for any active badger setts within the site. An identified outlier sett is located in the Phase 2 area which will not be disturbed for the first two years of operation.

8.7.14. Derelict buildings within the site will be retained to protect any bat roosts. Lighting within the site will be directed away from the cottage and adjacent tree line.

The proposed restoration plan for the overall site includes measures that will mitigate the loss of hedgerows. A total of 1,500m of native hedge will be planted and will comprise native and typically occurring species present in the local vegetation and/or hedgerows in county Kildare.

Residual and Cumulative Impacts

8.7.15. There will be a residual effect due to the loss of this habitat until the site is restored and the hedgerows are sufficiently mature to mitigate those losses during development. Following the restoration of the site there would be no significant residual impacts. There would be no cumulative impacts from the proposed development.

Conclusion

8.7.16. I note that the third-party appellant raised concerns regarding the impact of the proposal on sensitive ecology and the loss of native hedgerows and trees within the site. Having reviewed the information at hand and visited the site, it is evident that there may be some ecological features on the site may be of local importance, such as the hedgerows, but I am satisfied that there will be no effect on sensitive flora or

fauna or on sites designated for nature conservation because of the proposed development.

8.7.17. Loss of habitat will occur when hedgerows and treelines are removed. However, these habitats will be restored following the extraction works. Some additional planting will also be provided along the site boundary prior to excavation works commencing. Mitigation measures for hedgerows, treelines, birds and badger have been recommended. No mitigation is required for otter, bats and the Russelswood River as the design of the site ensures that there will be no impacts.

8.8. Land Soils & Geology

8.8.1. In the grounds of appeal, the third-party appellant queried whether the deposits on the site formed part of the Esker Riada, which they contend should be preserved as part of our national heritage. Chapter 6 of the EIAR addresses land, soils and geology. There is some interaction between this section of the EIAR and Chapter 7, Water, which addresses the hydrology and hydrogeology on the site.

Existing Environment

8.8.2. The information in Chapter 6, was compiled in by using desktop studies, trial pit information and a topographical study of the site. Ground investigation using trial pits was carried out on the site in 2018 to determine the extent of the resources. The total depth and thickness of the sand and gravel was not proven. It was initially intended to extract the sand and gravel to a depth of 71m AOD in Phase 1 and 65m AOD in Phase 2. Information submitted by the applicant on foot of a request from the PA proposed to raise these levels to 72m AOD in Phase 1 and 65.5m in Phase 2.

8.8.3. The Teagasc soil mapping for the Irish Forestry Soils (IFS) mapping project, indicates that the soils in the proposed extraction area comprise Rendzinas and Lithosols, which are shallow, well drained soils derived mainly from calcareous parent material, i.e. carboniferous limestone. The soils on the site have formed on the well-drained sand and gravel subsoils. The mapping also indicates alluvial soils (fines) along the River Boyne channel on the low-lying lands to the north and west of

the site. To the south of the site is an area of peat soils on the low-lying valley floor of the stream.

8.8.4. Subsoils within the site have been mapped as sand and gravel deposits which are comprised predominantly of Carboniferous limestone material. Other subsoils in the vicinity of the site have been mapped as glacial till, alluvium material along the River Boyne and Peat to the south of the site. The EIAR notes that there are also a number of esker deposits within c. 1km of the site, one to the south-east of the site and another to the north-west, on the opposite side of the Boyne. No reference is made to the Esker Riada.

8.8.5. Information from the Geological Survey of Ireland, (GSI), GSI Geology Map Sheet 16 (1995) for Kildare and Wicklow, indicates that a geological fault runs across the site from east to west. The north of the site is underlain by Carboniferous Limestone and Shale from the Edenderry Oolite Member, with Carboniferous Limestone and Shale from the Lucan Formation along the southern side of the site. No bedrock is exposed, and none will be extracted under the subject proposal. There are no karst features within the vicinity of the sand and gravel extraction area.

8.8.6. The GSI Irish Geological Heritage (IHG) programme was reviewed to establish if any geological heritage issues were present in relation to the site. An IHG audit of heritage sites was undertaken by GSI and there are no heritage sites at or in the immediate vicinity of the site. There is a quarry approximately 1.7km to the north-east of the site at Kilrany which is designated for its bedrock exposures (Oolite from the Edenderry Formation). There are no sites of designated County Geological Importance within, or immediately adjacent to the proposed pit area as indicated in the Kildare County Development Plan.

8.8.7. In terms of land, soil and geology, the sensitive receptor identified from the baseline study is the agricultural land and agricultural soils at the site.

Predicted Impacts

8.8.8. Soil and vegetation will be removed during the construction phase. There will be a temporary loss of a small area of agricultural land during extraction which will be restored following reinstatement. Following extraction, soils will be restored across the site and the long-term, neutral impact is considered to be negligible. There will be a permanent loss of subsoils following extraction.

8.8.9. There will be no impact on the bedrock geology of the site. There will be no indirect impacts on lands, soils or geology as a result of the proposed development.

8.8.10. A slight risk of ground instability may occur from unplanned events such as accidents caused by unstable pit faces.

Residual and Cumulative Impacts

8.8.11. Residual impacts would relate to the removal of the subsoils from the site. No cumulative impacts have been identified and no interactions with other impacts will occur. Following restoration, the residual impact on soils is considered to the be low to imperceptible

8.8.12. Under the Do-Nothing Scenario, there will be no impact on the land, soils and geology.

Mitigation Measures

8.8.13. As the nature of the development will result in the removal of subsoil within the site mitigation measures relate mainly to the management of topsoil within the site during the operational stage.

8.8.14. A Soil Management Plan will be prepared and implemented to protect the integrity and characteristics of the topsoil for restoration of the site. This will relate to the excavating, handling, moving and storage of soil on the site.

8.8.15. The pit floor will remain approximately 1m above the identified winter groundwater table to ensure that the restored soils at the site will remain free draining.

8.8.16. In order to mitigate against unplanned events such as accidents, operations at the pit will adhere to the Health and Safety Authority, (HSA), Safe Quarry Guidelines and the HAS Welfare at Work (Quarries) Regulations 2008.

Conclusion

8.8.17. I note the concerns of the appellant regarding the geological importance of the site. However, the site is not designated locally or nationally as a site of geological importance or heritage. The loss of the sand and gravel from the site will be permanent and irreversible. However, I have considered all the written submissions made in respect of land and soil. I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed

scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of land and soil.

8.9. Water

8.9.1. Issues relating to hydrology and hydrogeology are addressed in Chapter 7 of the EIAR. The PA considered that the EIAR lacked sufficient detail with regard to Chapter 6 – Land Soils and Geology, and also Chapter 7 – Water, and requested further information. The applicant was requested to submit a detailed Hydrogeological Risk Assessment to determine the highest ground water levels in both extraction areas. The applicant was also requested to submit information about the volume of water that will be required to be extracted from the groundwater well to service the welfare facilities, the batching plant, wheel wash and to suppress dust during dry days. Potential impacts on existing domestic wells should also be considered.

8.9.2. On foot of the Hydrological Risk Assessment, the proposed extraction levels were revised. To ensure a sufficient distance from the groundwater levels, the extraction level at the eastern portion of Phase 1 will be raised to 72m AOD with the remainder of the area to be excavated to 71m AOD as originally proposed. Phase 2 had an original floor level of 65m AOD, which will be increased to 65.5m AOD at the northern limit and sloping to a depth of 69m AOD at the southern limit.

8.9.3. I have reviewed the contents of the EIAR and the Hydrogeological Risk Assessment and a full assessment of the issues is contained in Section 7.5 of this report.

8.9.4. In the grounds of appeal the appellant raised concerns regarding an indirect hydrological connection between the site and the River Boyne through the Russelswood River tributary and the potential for pollution from the site. This issue is addressed in Chapter 5 of the EIAR- Biodiversity.

8.9.5. The study area for the EIAR included the site and the surrounding area up to a 5km radius from the site boundary. Information was gathered through desktop studies and on-site investigations which included on-site trial pits and ponds, and an on-site standpipe.

Existing Environment

8.9.6. The site is located within the Boyne catchment and within the Boyne_SC_010 sub-catchment, Code 07_4. The River Boyne is located approximately 250m to the north of the site and its tributaries in the vicinity of the site have a River Water Quality Status, (2013-2018), of 'Moderate' under the Water Framework Directive, (WFD). The closest surface water body to the site is Russelswood River, which runs along the southern boundary of the site and is a tributary to the River Boyne.

8.9.7. The surface water level of the River Boyne was measured at the bridge approximately 280m to the north of the site and was found to be 63.37m OD. The EIAR notes that the river was in high flow at the time of the survey and that the level is more likely to be at least 1m lower during normal flows. In 2020 the surface water level of the Russelswood River, (stream channel), was measured at 70.56m OD in the area near the Phase 1 extraction area. The proposed pit level for Phase 1 is 72m OD, which was amended under FI. The surface water level in the stream near the site entrance was measured at 68.87m OD, and to the north-west of the site, close to the Phase 2 extraction area the water level was 64.76m OD. The pit floor of the Phase 2 extraction area would be 65.5m OD). The surface water levels were below the proposed pit floor levels for the relevant and nearby areas.

8.9.8. There are two small ponds at the site, one at the northern section of the site and one in the south-eastern corner. The ponds are fed by direct rainfall and storm surface water runoff and are perched above the groundwater table.

8.9.9. The site is underlain by a locally important sand and gravel aquifer and a locally important bedrock aquifer beneath that. The sand and gravel aquifer provides baseflow to the Russelswood River along the south-western boundary. Regional groundwater flows in the gravels and bedrock will be towards the River Boyne to the north of the site.

8.9.10. The winter water level measured in the standpipe in the southern part of the site and close to extraction phase one area was measured at 70m OD. A water level in the northern part of the site has been measured at circa 64m OD close to the extraction phase two area.

8.9.11. The site is outside of the river Boyne floodplain and is not at risk of flooding from the river. Water supplies in the vicinity of the site for private residences are from

groundwater and an assumption is made that all residences have individual wells. The closest groundwater well listed by GSI is c. 1.2km to the south of the site. The well has a depth of 28m and is owned by the Department of Agriculture. The water was described as bacteriologically satisfactory, though the chemistry showed evidence of organic pollution.

8.9.12. The site is underlain by bedrock aquifers categorized by the GSI as Lm- Locally important aquifer and bedrock which is generally unproductive. The groundwater bedrock units are Dination Pure Bedded Limestones (DPBL), to the north of the geological fault across the site, which refers to the Edenderry Oolite member, and Dination Upper Impure Limestones (DUIL) to the south, referring to the Lucan Formation. Overlying bedrock is the River Boyne Gravels aquifer, which is assumed to be in direct continuity with the underlying locally important bedrock aquifer. The proposed extraction area is located on the boundary of the River Boyne Gravels aquifer which is categorized as being a Lg – Locally important aquifer. The groundwater vulnerability at the site is classified as High and is attributed to high permeability Sands & Gravels where the thickness of the material overlying the bedrock is >3m. There are no karst features within the vicinity of the sand and gravel extraction area.

8.9.13. The sand and gravel pit extraction area is located in the Kilrathurry groundwater body, (KGB), referring to the gravel aquifer. This aquifer is underlain by the Trim GWB aquifer.

8.9.14. Local groundwater flows across the majority of the site follow the topography of the site and will be to the south-west towards the small stream. However, groundwater levels recorded at the houses along the northern boundary of the site indicate that groundwater levels are lower in this area and that groundwater flows are in a northerly direction, towards the River Boyne.

8.9.15. Based on the studies carried out, the sensitive receptors have been identified as, Russelswood River, the River Boyne, the Locally important aquifer at the site, groundwater supply wells in the surrounding area and the locally important bedrock aquifer.

8.9.16. One supply well is proposed for the site and will be located on the western side of the site and to the north of the site access. This well will extract groundwater from

the underlying bedrock aquifer and will be used for washing plant, welfare facilities, wheel wash and dust suppression. The proposed wheel wash will be a closed loop system that will comprise four lagoons that will be filled using the water from the well. The total volume of the lagoons is c. 2000m^3 and they will be filled gradually with between 200-400m3 extracted from the well. The estimated total site requirement is 76.4m3 per day.

Predicted Impacts

8.9.17. During the construction stage soil and overburden material will be removed and groundwater beneath the site would be naturally vulnerable to potential pollution. The principal impact during this stage would be from an accidental fuel leak or spillage at the site which could impact on groundwater quality.

8.9.18. Indirect impacts during the construction stage would be an impact on water quality in the river Boyne from an accidental fuel leakage or spillage.

8.9.19. During the operational stage there if a potential for a reduction in groundwater quality in the gravel aquifer from an increase in suspended solids from the washing of aggregate and from any accidental fuel leakage or spillage.

8.9.20. There may also be an impact on surface water quality from an increase in suspended solids and / or accidental fuel leakage / spillage from site operations.

8.9.21. A reduction in groundwater levels in the domestic water supply may occur because of abstraction from the on-site supply borehole if the domestic wells are abstracting from the bedrock.

8.9.22. Indirect impacts during the operational phase could occur from an increase in suspended solids and / or fuel leakage / accidental spillage.

8.9.23. Following the restoration of the site, surface water runoff may accumulate on the floor of the former pit during times of heavy rainfall. The water will either evaporate or infiltrate naturally into the ground. No direct impacts are anticipated on the surface water or groundwater.

Mitigation Measures

8.9.24. During the construction stage, mitigation measures would be implemented through avoidance and prevention. The pit workings will remain above the winter

groundwater table at the site. Groundwater quality will be monitored in the adjacent houses to the north of the site for any deterioration in quality.

8.9.25. Best practice methods of storage of fuels/lubricants and protocol for dealing with accidental spillages will be implemented on the site. A site-specific environmental management system, (EMS), will be prepared and implemented on site. A wheel wash facility will be utilised to prevent materials from being carried from the site.

8.9.26. A closed wash system for processing aggregate would be installed on the site and would include the settlement lagoons. All settlement solids will be incorporated as part of the restoration scheme for the site.

8.9.27. The settlement lagoons will be constructed of low permeability subsoil material available at the site and will operate as sealed lagoons. Groundwater and surface water monitoring during will be undertaken at the site.

8.9.28. Initial filling of the washing plant will take place over 5 to 10 days with a daily extraction limit of 400m^3 to be applied. The underlying aquifer is a 'Locally Important' bedrock aquifer, which according to the GSI, can yield in excess of 400m^3 per day. During this time groundwater at local supply wells (including W01 and W02, shown in Figure 7-2 of the EIAR) will be monitored daily. Following this monitoring of local wells will be carried out monthly.

Residual and Cumulative Impacts

8.9.29. Provided that appropriate mitigation measures are put in place there will be no residual impacts with respect to groundwater and / or surface water during the construction stage, operational stage and post-operational stage.

8.9.30. There will be no dewatering of the sand and gravel aquifer at the site and there will be no discharge of water within the site. Therefore, there will be no impact on groundwater levels in the site.

8.9.31. Cumulative impacts would result from the groundwater extraction of the proposed well and from the existing wells in the surrounding area.

Conclusion

8.9.32. I note the physical characteristics of the site and the nature of the development proposed. There will be no discharges to ground or surface water from the site. There will be a separation distance of c. 20m between Russelstown River and the

site boundary which will prevent any incidental surface water runoff. Site operations would be managed through an agreed EMS and many of the mitigation measures proposed include good site management practices that would be employed as standard.

8.9.33. I have considered all of the written submissions made in relation to water. I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions including monitoring conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of water.

8.10. Air Quality

8.10.1. Chapter 8 assesses the predicted impacts that the proposal will have on air quality. The appellant raised concerns regarding the impact of dust on the receiving environment and also contends that the impact on Russelswood Wood was not adequately considered. The PA requested that the applicant submit further information with regard to the air quality modelling carried out for the EIAR. I have addressed the issue of air quality and dust in full in Section 7.4 of this report and recommend that the Board have consider both sections together. I have reviewed the information contained in the EIAR and in the response to further information as part of my assessment.

Existing Environment

8.10.2. The subject site and the surrounding area fall into Air Quality Zone D, rural Ireland, (EPA). The closest air quality monitoring location to the site, and in a similar zone D rural area is located at Killkitt. Co. Monaghan. For comparison purposes, the data from this monitoring station is used for the air quality baseline concentrations in the study area. Data from the Killkitt monitoring station showed that PM_{10} concentrations were below the annual mean Air Quality Standards, (AQS). The primary source of PM_{10} in Zone D – rural areas would be residential fuel emissions and local agriculture or rural based activities.

8.10.3. Dust monitoring was also conducted at three locations in and around the application site in 2018. The results of the dust monitoring showed that the recorded baseline dust deposition rates were very low and below emission limit values (ELV's). The results from the baseline Dust Deposition Monitoring showed that the highest level measured was 52.4 mg/m^2/day, at location D1, along the eastern boundary of the site.

8.10.4. Climactic conditions that impact on the dispersion of dust particles are wind direction, wind speed and rainfall. Wind conditions for the site were taken from the weather station at Dublin Airport, which is the closest monitoring station to the site. The conditions from this station show that the predominant wind direction is from the south-west with moderate to high-speed winds occurring for approximately 83.6% of the time. Rainfall data was taken from the Irish Meteorological Service website for Dublin Airport. Information showed that the annual average days with rainfall greater than 0.2mm is 191 days per year. Natural dust suppression (from rainfall) is therefore considered to be effective for 53% of the year.

8.10.5. To determine the level of dust deposition from the site the EIAR applied the source-pathway-receptor model. The sensitive receptors around the site would be the dispersed one-off houses along the local roads around the site. Within a 1km radius of the site, 41 sensitive receptors were identified. Most of these are residential with some commercial uses also identified. All locations are shown in Figure 8-5 of the EIAR. The impact of the activities on the receptors was assessed through a methodology that factored in wind direction and speed, proximity to source, sensitivity of receptor and the occurrence of natural dust suppression, (rainfall), to determine the overall impact of dust from the development on each receptor. The assessment did not take into account any mitigation measures.

8.10.6. In terms of referencing the potential magnitude of impact from site operations, the EIAR has referenced UK technical guidance from the Local Air Quality Management (LAQM), Technical Guidance (03), which states that fugitive dust from stockpiles, pit operations can potentially contribute to 5microgram/m^3 towards the annual mean background concentrations of particulates in the immediate area. Based on the comparative information from EPA monitoring for a similar Zone D site, the highest reading for PM_{10} concentrations was 11microgram/m^3 in 2013. When the additional 5 microgram /m^3 is applied this would still be significantly below the threshold of 40

microgram /m^3 per year for the protection of human health as set out in the Air Quality Standards Regulations 2011. The EIAR does not convert the recommended levels for ecological receptors to annual microgram /m3. However, I note that the threshold for damage to plants is five times higher than the threshold for humans.

8.10.7. The methodology applied to examine impacts from emissions from the site activities was to determine the sensitivity of the surrounding area as per the IAQM Construction Dust Guidance. The site is considered to have a low sensitivity as it is in a rural area with no sensitive receptors within 20m, and a local annual mean PM_{10} concentration below the annual mean AQS, (based on comparative data), and the presence of a wooded area between the site and some receptors.

Predicted Impacts

8.10.8. Impacts on Natura 2000 sites were screened out due to the separation distance between sites and through the absence of a direct pathway.

8.10.9. Air quality impacts would arise from emissions from increased fugitive dust emissions and particulate matter from operational activities such as HGV's travelling over unpaved surfaces, handling and processing of sand and gravel, stockpiling of aggregates, soil stripping, earthworks and final landscaping. Emissions from plant and machinery would also contribute to air borne pollution in the area.

Mitigation Measures -

8.10.10. Measured to reduce dust from the site would include good operational practices such as minimising drop heights when handling material, minimising distances of haul routes, water spraying to moisten surfaces during dry weather, restricting vehicle speeds, paving of access roads, road sweeping, use of wheel wash systems etc.

8.10.11. Berms of up to 2m will be constructed along the western site boundary and to the rear of the houses at the north-eastern corner of the site. A topsoil overburden would be positioned towards the centre of the site, between the houses and the Phase 2 area.

8.10.12. Dust deposition monitoring will be undertaken at the site on a monthly basis, from April to October, for the duration of the excavation and processing operations on the site.

Residual and Cumulative Impacts

8.10.13. Based on the assessment carried out and the assumptions made, as well as the mitigation measures to be implemented, there will be no significant residual impacts regarding air quality as a result on the development.

8.10.14. There are no significant sources of emissions to air within close proximity to the site and therefore no cumulative impacts have been identified.

Conclusion

8.10.15. Concerns were raised in the grounds of appeal regarding the impact of dust from the development on the amenity of nearby houses. I am satisfied that sufficient detail has been provided to support the conclusion that the proposed development with mitigation would not result in excessive dust emissions.

8.10.16. Concentrations of PM could result in negative impacts on human health. However, the assessments carried out demonstrate that there will be no significant impact regarding increased levels of PM_{10} from the development. Comparative background levels are very low and the projected increase of up to 5 micrograms per m^3 of the annual mean background concentrations of the coarse fraction of particulates would still be well below the annual objective of 40 micrograms per m^3 as set out in the Air Quality Standards Regulations 2011. On this basis and having regard to the legislative framework and limits set out therein, the proposed PM_{10} levels at the quarry are within the parameters set in terms of human health and the overall PM_{10} would be negligible.

8.10.17. The impact of the scheme is considered to be negligible with regard to vehicular emissions from as the traffic movements, (54 two-way HDV movements per day) would not meet the threshold set out in the guidance document Design Manual for Roads and Bridges, HA 207/07, National Highways UK and no further assessment is required.

8.10.18. I have considered all of the written submissions made in relation to air and climate. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed

development would not have any unacceptable direct, indirect or cumulative effects on air quality.

8.11. **Climate**

Existing Environment

8.11.1. The existing climate in Ireland is a typical maritime climate with relatively mild, moist winters and cool, cloudy summers. Prevailing winds are from the south-west. Over the next 30 years climate change projections for Ireland include a high probability of rising sea levels with higher temperatures in winter and summer.

8.11.2. Meteorological information for the site was taken from the Dublin Airport which indicated that the prevailing wind across the site is form the south-east. Typical mean maximum daily temperatures range from 8.1- 19.5^{o} Celsius and typical mean minimum temperatures range from 2.3 – 11.7^{o}. Met Eireann records indicate that the mean average annual rainfall around the application site is approximately 75.8mm / year with the greatest daily total, (73.9mm) falling in June.

Predicted Impacts

8.11.3. Direct impacts on climate change from the development would be from greenhouse gas emissions, (GHG).

Mitigation Measures

8.11.4. Mitigation measures to address the impact of climate change in terms of extreme weather events such as extreme rainfall, flash flood, storms and winds have been designed into the development.

8.11.5. The extraction level will be c. 1m above the winter groundwater level and adequate drainage will be provided on the site. Measures to address storms and winds will be required in the operational plan.

8.11.6. A Green House Gas, (GHG), monitoring programme will be adopted for the site and based on this, targets and objectives for reduction will be determined. Specific mitigation measures would relate to reducing the demand for energy using renewables, energy efficient machinery / energy, avoid unnecessary transport journeys and monitoring the use of equipment.

Residual and Cumulative Impacts

8.11.7. Residual impact from the development will be an increase in the level of GHG from the site during its development. However, it is noted that the increase is minor when compared to national levels and that the life span of the project is temporary.

Conclusion

8.11.8. The mitigation measures proposed relate to general good practice in a time when the use of energy efficient practices is vital. Therefore, I am satisfied that the implementation of the mitigation measures proposed will work to reduce the overall impact on climate change from GHG. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative effects on climate.

8.11.9. I have considered all the written submissions made in relation to climate as well as the extent of the development and the scale of its output and impact. I am satisfied that potential effects would be avoided, managed, and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative effects on climate.

8.12. **Noise**

8.12.1. Chapter 10 of the EIAR addresses noise. I have assessed the impact of noise in Section 7.4 of this report and recommend that both sections be cross referenced.

8.12.2. The PA considered that the noise chapter of the EIAR lacked adequate details and requested that further information be submitted regarding baseline and predicted noise levels at each monitoring point. I have reviewed the information contained in the EIAR and the further information submitted by the applicant and combined the information to form a full overview.

8.12.3. Baseline information was gathered through a mix of desktop studies, site visits and the carrying out of a noise survey at the site. Noise monitoring was carried out at four locations around the site, which are detailed in Figure 10-1 of the EIAR. These locations represented the closest houses to the site and were located at the north, north-east and south of the site.

8.12.4. Sensitive receptors were identified as the residential and commercial developments around the site with 11 properties identified as within the potential zone of influence for the development.

Existing Environment

8.12.5. The existing environment is rural in nature. It is bounded by a local road to the north and by the R401 regional road to the west. The M4 is approximately 4km to the north of the site.

8.12.6. Noise surveys were carried out to determine the baseline noise levels. Baseline noise levels at all four test locations, (shown in Figure 10-1 of the EIAR), were mainly dominated by road traffic noise. The $L_{Aeq,AVG}$, (the A-weighted equivalent continuous noise level over the measurement period, i.e. average value), at the sensitive receptors ranged from 60.4-69.9 dB.

8.12.7. The EIAR notes that the site is not subject to any statutory nature conservation designation and that ecological receptors of concern are those areas designated under EU Habitats Directive (92/43/EEC). On this basis the project was evaluated at a distance of up to 2km, i.e. the zone of influence for Natura sites.

Predicted Impacts

8.12.8. Noise would be generated from the use of machinery on the site, such as excavators and HDV's which would be used during the soil stripping, berm construction and pit restoration.

8.12.9. Noise from the sand and gravel extraction would be generated from machinery such as screening plant and front loaders.

8.12.10. Noise can also result in negative impacts on designated species in terms of disturbance during breeding seasons or disturbance which would result in relocation of habitats.

8.12.11. There will be no cumulative impacts from the development.

Assessment Results

8.12.12. The noise assessment for soil stripping, berm construction and site restoration uses 70dB(A) as the acceptable noise level as these works would be temporary in nature. Noise levels at the sensitive receptors would range from 49 – 58 dB(A) and

would not exceed the 70dB(A) level. (Note – 70dB is taken as the average street noise – traffic etc.). For the purposes of the impact assessment, no reduction, have been adopted for the noise screening (mitigation measures) for the soil stripping, berm construction and restoration for receptors located to the north and north-east of the site.

8.12.13. Noise from sand and gravel extraction activities is assessed as continuous during the site operation and as such the acceptable dB(A), is taken as 55 dB(A). The predicted noise levels from the operational stage were calculated to range from 41 dB(A) to 48 dB(A), which is within the 55 dB(A) limit. Mitigation measures were included in this assessment and a reduction of 10dB(A) was adopted for full noise screening by perimeter berms around the application site for sand and gravel extraction.

8.12.14. The predicted noise levels from the sand and gravel extraction /operational phase were added to the baseline noise figures to determine the cumulative impact of the development. The cumulative levels were compared to the ambient noise level at each sensitive receptor. The results found that there would be no difference between the existing baseline and the cumulative noise levels, when logarithmically added. The cumulative impact on the sensitive receptors was deemed to be negligible.

8.12.15. The level of traffic serving the site is below the threshold for assessment as set out in the DMRB guidance and no further study was carried out on this impact.

8.12.16. Impacts on human health were assessed using a calculation of the Lden, (EU standard to express noise levels over an entire day), at all sensitive receptors. The operational Lden predictions were taken from the site boundary rather than the location of the noise source to determine a 'worst case scenario'. The threshold level is taken as 50Len dB for Reported Health Effects, (WHO Guidelines). (However, I note that annoyance and/or disturbance can occur from 42 dB Len – Table 10-5 EIAR). Noise predictions showed that the sensitive noise receptors would be below the 50 dB threshold by a range of 2-9dB.

Mitigation Measures

8.12.17. During the initial stages of the development works will be carried out on the site to construct the required processing plant and ancillary buildings and to

construct screening mounds. During this stage mitigation measures will include site management measures to reduce noise by applying good site management practices such as limiting idling machinery and plant.

8.12.18. During the extraction stage screening berms will be constructed adjacent to the closest houses along the northern boundary. Perimeter hedgerows will be retained, and additional planting would be provided.

8.12.19. Plant and machinery will be properly maintained, and their use managed to reduce noise.

Residual and Cumulative Impacts

8.12.20. There will be an increase in noise from the works on site. However, I am satisfied that the additional noise will be managed in a sufficient manner by the mitigation measures proposed and that they would not be significant. There will be no cumulative impacts.

Conclusion

8.12.21. I note the results of the noise modelling assessment and am satisfied that the proposed development will not exceed the thresholds for noise as set out in S.I. No. 180/2011 – Air Quality Standards Regulations, (AQS) 2011 and EPA Guidance. I have considered all the written submissions made in relation to noise as well as the extent of the development and the scale of its output and impact. I am satisfied that potential effects would be avoided, managed, and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative effects on the existing noise levels.

8.13. Material Assets

Existing Environment

8.13.1. The subject site is a greenfield site that is not serviced. The site has no direct electrical power supply and there are no high voltage electrical transmission lines running through the site or in the vicinity of it. There is no public water supply in the townland, and it is assumed that all residential dwellings in the area are served by

private water supplies. There is no wastewater treatment facility in the area, and it is assumed that all houses in the area are served by private septic tanks.

8.13.2. The appellant queried how power would be brought to the site. In their response dated the 15th November 2021, the applicant clarified that the processing plant would be powered by a generator and that a single pole-mounted supply will be sought from the ESB to power the remainder of the site.

Predicted Impacts

8.13.3. The proposed development is unlikely to have any impact on existing built services during any stages of the development. Foul water will be dealt with inside the site through a septic tank and percolation area and potable water will be brought onto the site as required.

8.13.4. Impacts may arise from additional traffic. This issue is dealt with in full in Chapter 14 of the EIAR and is assessed in Sections 7.6 and 8.16 of this report.

8.13.5. Impacts from waste generated by the development will be minimal and would relate to waste from plant and machinery and domestic waste from employees and persons using the site. All waste to be moved off-site would be dealt with through a licenced contractor. A waste management plan would be prepared for the site.

8.13.6. Impacts from unplanned events because of the development would be limited to accidents on the site due to instability of pit faces or ground due to extraction, spill from traffic accidents and flooding.

8.13.7. There would be no significant cumulative impacts with other planned development or extant permissions.

Mitigation Measures

8.13.8. As no impacts are anticipated for material assets, no specific mitigation measures are required.

8.13.9. To mitigate against accidents, the HSA Safe Quarries Guidelines and Regulations will be adhered to. Specific mitigation measures to deal with accidental spills or leaks are set out in Chapter 7 – Water.

Residual and Cumulative Impacts

8.13.10. There will be ne residual or cumulative impacts from the development.

Conclusion

8.13.11. I have considered all of the written submissions made in relation to material assets as well as the extent of the development and the scale of its output and impact. I am satisfied that potential effects would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on the material assets.

8.14. Cultural Heritage

8.14.1. Chapter 12 of the EIAR deals with cultural heritage. The appellant raised concerns regarding the impact of the proposal on the cultural heritage in the surrounding area with specific concerns raised about whether the site is part of the Esker Riada and if it will impact on the ruins of Ballyboggan monastery. These issues are addressed in full in Sections 7.8 of this report.

Existing Environment

8.14.2. There are no protected structures within the application area. There is one protected structure located approximately 60m to the north of the site, RPS Ref – B02-02 Brackagh Holy Well – 'Lady Well'. Ballyboggan Priory is a recorded monument, (RMP ME046-018), located within County Meath and approximately 0.5km to the north of the site.

8.14.3. The EIAR identifies three structures of potential heritage value in proximity to the site. A 5-bay stone house with slate roof is located to the north of the site and on the opposite side of the road. Historic maps dating from 1829 – 1841 marked the house as 'Police Station', which indicates local heritage value. The ruins of two other structures, which appear to be stone buildings, are located along the south-western boundary of the site. Both structures are outside of the red line boundary.

8.14.4. There are no recorded monuments located within the application area. The closest Recorded Monument is located c. 8m to the south of the site entrance and 80m from the extraction area. The monument Ref. is KD002-003 and is described as 'Brackagh Ritual Site - Holy Well'. There are two other recorded monuments in the

vicinity of the site. A second well, KD002-002, Brackagh Ritual Site – holy well, is located approximately 60km to the north of the application site and on the other side of the road. Brackagh Burial Ground, KD002-004 is located approximately 64m to the south of the site boundary and on the opposite side of the field boundary and stream. Beyond this again is KD002-005, Brackagh Castle, which is described as 'Site of Castle' on maps dating from 1829-1841. No visible surface traces survive.

8.14.5. No archaeological excavations have been carried out on the application site.

Impacts

8.14.6. In consideration of the separation distances between any protected structures and recorded monuments, there will be no impacts from the development.

8.14.7. Given the location of the recorded monuments, there is a possibility that ground disturbances during the excavation stage will have a direct and negative impact on previously unrecorded archaeological remains.

Mitigation Measures

8.14.8. Topsoil stripping will be archaeologically monitored.

Residual and Cumulative Impacts

8.14.9. There will be ne residual or cumulative impacts from the development.

Conclusion

8.14.10. There are no protected structures or recorded monuments within the site area. The development will not result in any impact, temporary or permanent, on any of the protected structures or recorded monuments within the vicinity of the site by virtue of the separation distances and the nature of the works proposed. I have considered all the written submissions made in relation to cultural heritage as well as the extent of the development and the scale of its output and impact. I am satisfied that potential effects would be avoided, managed, and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative effects on cultural heritage.

8.15. Landscape

8.15.1. Chapter 13 of the EIAR addresses issues arising from the impacts of the development on landscape. The chapter was compiled using desktop and field studies.

Existing environment

8.15.2. The subject site is a greenfield site that comprises five agricultural fields currently used for pasture. Field boundaries are marked by hedgerows and/or treelines. Russelswood Wood is located along the north-western boundary of the site with a public car park to access the wood approximately 250m to the north of the proposed access. A disused sand and gravel pit is located to the south-east. The wider landscape surrounding the site comprises mainly agricultural land with several blocks of conifer plantations / mixed forests which break up the agricultural land.

8.15.3. The site is located within the North-Western Lowlands Landscape Character Area (LCA), which is generally a flat landscape in the north-western tip of Kildare and adjacent to the Meath border. The North-Western Lowlands LCA is categorised as Class 1 – Low Sensitivity in the Kildare County Development Plan. The KCDP also states that the landscape has the capacity to accommodate a wide range of uses without significant adverse effects on the appearance or character of the area.

8.15.4. There are no scenic routes or protected views across the site. There are no designated sites or any special protection or conservation orders.

Predicted Impacts

8.15.5. During the construction and operational stages, the works will involve the removal of c. 14ha of agricultural grassland for the extraction, processing and storage areas. Approximately 1,025m of hedgerows will also be removed.

8.15.6. The topography of the site will be significantly altered through extraction and the levels will be reduced in some places by up to 9m for extraction Phase 1 and up to 17m for extraction Phase 2.

8.15.7. During the operational stage there may be views across the site from the surrounding roads. There will be a visual impact along the western boundary as a result of the changes to the agricultural entrance to the site.

8.15.8. There would be no cumulative impacts from permitted development or from the adjoining worked-out sand and gravel pit to the south-east of the site.

Mitigation Measures

8.15.9. Screening berms and hedge planting will be used to conceal the extraction areas from outside the site.

8.15.10. Following the operational stage of the development, the site will be restored to agricultural use and will be replanted with hedgerows and native planting.

Conclusion

8.15.11. The site will be significantly altered in character and appearance during the construction and operational phases. However, the site is partially screened from the public road by trees and hedgerows and there are currently no clear views across the site from the public road. Mitigation measures involve providing additional planting along the western boundary and installing berms and mounds between the extraction areas of the site and the sensitive receptors around the site. Following the extraction phase the site will be restored to agricultural land which will be replanted. This will satisfactorily mitigate against the impacts of the operational stage.

8.15.12. I have considered all the written submissions made in relation to landscape as well as the extent of the development and the scale of its output and impact. I am satisfied that potential effects would be avoided, managed, and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative effects on landscape.

8.16. **Traffic & Transport**

8.16.1. Chapter 14 of the EIAR deals with traffic and transport. The issue of traffic was raised by third parties and is fully assessed in Section 7.6 of my assessment above. I recommend that both sections be read in tandem.

Existing Environment -

8.16.2. The R401 regional road runs along the western site boundary and connects with the M4 at Junction 10 approximately 4km to the north the site. The site is bounded by a local road to the north. It is proposed to upgrade an existing agricultural access along the western side of the site boundary to provide access to the development. The existing access is directly opposite the R401 junction with the L5015. The proposed haul route would follow the R401 northwards to the M4 junction.

8.16.3. The PA requested further information from the applicant as to how adequate sightlines could be provided at the proposed entrance. This information was submitted under further information and is shown on the drawing No. 03141/RFI/PL-01, titled 'Access General Layout Arrangement'.

8.16.4. Traffic surveys were carried out at the junction of the R401 and the L5015, near the site entrance and on the R401 to determine baseline traffic levels. Survey data found that the levels of traffic to be low with a low level of HGV's. The average weekday, two-way daily traffic flow on the R401 was 1,706. The average flow between 07.00 and 19.00 was 1,431 vehicles with an even distribution travelling in both directions, (713 travelled northbound and 718 travelled southbound). Of the northbound vehicles (direction of haul route) – 666 were light vehicles (cars and vans) 44 were HGV's and 4 were buses. Of the southbound vehicles, 671 were light vehicles and 43 were HGV's and 4 were buses. The level of HGV traffic on the R401 was approximately 6.4% in both directions.

8.16.5. Traffic turning count surveys for the R401 / L5015 found that the total weekday, two-way traffic flow recorded on the L5015 between 07.00 and 19.00hrs was 106 vehicles, of which 8 were HGV's. There were 50 eastbound movements and 56 westbound movements. The proportion of HGV's using the road was approximately 7.5% of the total traffic, (4 HGV's were counted travelling in each direction).

8.16.6. Peak flows were recorded at both locations between 08.00-09.00hrs and between 17.00-18.00hrs respectively.

8.16.7. Based on the quantity of materials to be excavated and moved from the site and the number of working days per year, (264), the proposed development is likely to generate 30 HGV trips along the haul route per day, (a trip is one HGV movement to the site from the M4 and then back again). The development would generate 3

inbound car movements in the morning and evening to accommodate workers on the site with an additional 5-10 trips generated during the day.

8.16.8. Based on traffic surveys at similar facilities, it is estimated that the typical maximum movements to the site would be in the order of 6 no. movements in and out per hour. Typically, HGV movements are elevated in the mornings and reduce in the mid-afternoon.

8.16.9. Traffic surveys indicated that traffic levels were relatively low for a regional road. The number of movements to be generated by the development is relatively low and would be evenly distributed throughout the day. In consideration of the existing and proposed levels, traffic modelling was not carried out to allow for traffic growth on the surrounding road network or to test the capacity of the network. Traffic modelling was not considered to be necessary as the traffic levels generated would be low and the existing road junctions have no capacity issues.

Predicted Impacts

8.16.10. There will be an increase of HGV traffic on the surrounding road network. This is predicted to be in the order of 5.1% during the hours of opening with an increase in HGV traffic flows from an average of 8 per hour to 14 per hour.

Mitigation Measures

8.16.11. Mitigation measures would include the provision of signage on the regional road in the vicinity of the entrance.

8.16.12. The haulage route would use the regional and national road network and avoid the local roads around the site.

8.16.13. To prevent dust and noise a wheelwash for HGV's will be provided and the portion of the road closest to the R401 will have a hard surface.

8.16.14. Adequate sightlines will be provided at the site access.

Conclusion

8.16.15. Parties to the appeal raised the issue of increased levels of traffic on unsuitable roads because of the proposed development. Given the greenfield nature of the site and the type of development proposed, there will be an increase in the level of traffic using the existing road network. However, this traffic will be directed

away from the local roads and onto the designated haul route along the R401 regional road to the M4. The results of the traffic surveys show that the existing road network has sufficient capacity to absorb the level of traffic predicted from the development and adequate sightlines can be provided at the access.

8.16.16. I have considered all the written submissions made in relation to traffic, including the results of the surveys, as well as the extent of the development and the scale of its output and impact. I am satisfied that potential effects would not be significant and would be managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative effects on traffic in the area.

8.17. Interaction of the Foregoing / In-Combination Effects

8.17.1. Chapter 15 of the EIAR sets out the interactions between impacts of the different environmental aspects and in-combination effects. The interactions are set out in a matrix form in Table 15-1. I have also considered the interactions between the different factors and consider there to be the potential for crossovers between the following elements:

Population and Human Health -

- Noise
- Air Quality / dust
- Traffic, (i.e. additional emissions, road safety and disturbance)
- Water
- Landscape / visual impact

Biodiversity

- Noise
- Air Quality
- Landscape
- Water

Land, Soils & Geology

- Human Health, (i.e. soil stripping and dust generation)
- Water

Water (Hydrology & Hydrogeology)

- Human health, (i.e. potential pollution and domestic water supplies)
- Biodiversity, (surface and ground water pollution)

Air Quality

- Human health
- Traffic, (emissions)
- Biodiversity

Climate

- Human health
- Air Quality, (emissions)
- Traffic, (emissions)
- Water, (flooding, increased water levels)

Noise

- Human health
- Biodiversity

Material Assets

- Traffic
- Water, (quality & supply),
- Cultural Heritage

Cultural Heritage

- Population and Human Health, (amenity)
- Land and soils, (archaeological impacts)

- Landscape, (views & prospects)

Landscape

- Population and Human Health (visual impacts)
- Biodiversity

Traffic

- Human Health
- Noise
- Air Quality
- Climate

8.17.2. I have reviewed each of the elements listed above on an individual basis and how they may interact with each other, and I am satisfied that any significant impacts can be avoided, managed, and mitigated by the measures which form part of the proposed development. I note that many of the mitigation measures proposed serve to mitigate against several impacts.

8.17.3. Cumulative impacts were assessed in each chapter of the EIAR. There are no extant permissions in the vicinity of the site which have the potential for cumulative impacts. I note the presence of a worked-out sand and gravel pit at the south-eastern corner of the site which has not been restored. However, I am satisfied that this would not have the potential to create a cumulative impact with the proposed development.

8.18. **Risks associated with major accidents and/or disasters**

8.18.1. No outstanding risks associated with major accidents or disasters have been identified for the proposed development. The extraction phase of the development would be guided by relevant HSA legislation.

8.19. **Reasoned Conclusion**

8.19.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant,

and the submission from the Planning Authority and prescribed bodies in the course of the application and appeal, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

8.19.2. The project could give rise to minor localised impacts on ***residential amenity and human health*** during the construction and operational phase (noise, dust, traffic safety & general disturbance) phase. These impacts would be mitigated by the implementation of measures related to the protection of air quality, control of noise and dust, traffic management, the erection of screening berms and additional planting, and by the agreement of measures within a Construction Environmental Management Plan and an Environmental Management Plan.

8.19.3. The proposed project would give rise to a minor localised increase ***in vehicle and HGV movements*** and resulting traffic impacts during the construction and operational phases. These impacts would be mitigated by the agreement of measures within a Construction and Environment Management Plan and an Environmental Management Plan.

8.19.4. The proposed development could give rise to a minor localised ***visual impact*** during the operational phase due to the change in the character and topography of the site and by altering the existing agricultural entrance to provide a sufficient access for HGV traffic. These impacts would be mitigated by the implementation of the landscaping measures proposed such as screening berms and additional planting and through the restoration of the site through an agreed Landscaping Plan.

9.0 Recommendation

9.1. Arising from my assessment of this planning application I recommend that planning permission should be granted for the proposed development for the reasons and considerations set down below, and subject to the attached conditions.

10.0 Reasons and Considerations

Having regard to:

- The National Planning Framework – Ireland 2040,

- The Regional Spatial & Economic Strategy for the Eastern & Midlands Region (2019),
- The policies of the planning authority as set out in the Meath County Development Plan 2021 to 2027,
- The distance to dwellings or other sensitive receptors,
- The submissions made in connection with the application,
- The likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites,
- The report and recommendation of the Inspector.
- The nature and scale of the proposed development, as set out in planning application documentation and the pattern of development in the area;

it is concluded that subject to compliance with the conditions set out below, the proposed development would not have unacceptable impacts on the environment, including water and air quality, would not seriously injure the amenities of the area and would be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Environmental Impact Assessment:

The Board completed an environmental impact assessment of the proposed development taking account of:

(a) the nature, scale, location, and extent of the proposed development on a greenfield site,

(b) the Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application,

(c) the submissions received from the prescribed bodies, planning authority and observers, and

(d) the Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development, and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made during the application. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

- Noise and dust during the construction and operational phases would be avoided by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) which includes specific provisions relating to the control of dust and noise.
- The increase in vehicle movements and resulting traffic during the construction and operational phases would be avoided by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR).
- The impacts on residential amenity during the construction and operational phases in terms of disturbance, nuisance and visual impact would be avoided by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) which includes specific provisions relating to the control and management of dust, noise, water quality and traffic movement.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

11.0 **Conditions**

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application on the 23rd day of November 2020, (including the Environmental Impact Assessment Report and Appropriate Assessment Screening report), as amended by the further plans and particulars submitted on the 14th day of July 2021 and the 29th day of July 2021, except as may otherwise be required in order 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 prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars. **Reason:** In the interest of clarity.
2.	This grant of permission shall be for a period of 9 years from the date of this order. Within 8 years from the commencement of development on the site all quarrying related activities, including extracting, processing and operations on site shall cease. The site restoration works described in the application shall be completed within 1 year of the date of cessation of quarrying activities on the site. **Reason:** In the interest of visual amenity and orderly development.
3.	No extraction of rock, sand or gravel shall take place below 1m above the level of the winter groundwater table. **Reason:** To protect groundwater in the area.
4.	The proposals, mitigation measures and commitments set out in the Environmental Impact Assessment Report and additional information received by the planning authority shall be implemented in full as part of the proposed development. **Reason:** In the interest of clarity, to mitigate the environmental effects of the proposed quarry and to protect the amenities of the area and of property in the vicinity.

5.	The developer shall comply with the requirements of the planning authority with regard to traffic management and access arrangements and the details of such works, including general road works, shall be agreed in writing prior to the commencement of development. **Reason:** In order to safeguard local amenities.
6.	Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authority for such works and services and shall be agreed in writing prior to the commencement of development. **Reason:** In the interest of public health.
7.	Restoration shall be carried out in accordance with a restoration plan, which shall include existing and proposed ground levels, landscaping proposals and a timescale for implementation. This plan shall be prepared by the developer, and shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. **Reason:** To ensure the satisfactory restoration of the site, in the interest of visual amenity.
8.	The quarry, and all activities occurring therein, shall only operate between 0700 hours and 1900 hours, Monday to Friday and between 0700 hours and 1430 hours on Saturdays. No activity shall take place outside these hours or on Sundays or public holidays. **Reason:** In order to protect the residential amenities of property in the vicinity.
9.	The development 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 prior to commencement of development. **Reason:** In order to safeguard local amenities.

10.	A wheel-wash facility shall be provided adjacent to the site exit, the location and details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. **Reason:** In the interest of traffic safety and convenience, and to protect the amenities of the area.
11.	All over ground tanks containing liquids (other than water) shall be contained in a waterproof bunded area, which shall be of sufficient volume to hold 110 per cent of the volume of the tanks within the bund. All water contaminated with hydrocarbons, including stormwater, shall be discharged via a grit trap and three-way oil interceptor with sump to a watercourse. 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 groundwater and surface water.
12.	(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). Details of a monitoring programme for dust shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Details to be submitted shall include monitoring locations, commencement date and the frequency of monitoring results, and details of all dust suppression measures. (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 prior to commencement of any quarrying works on the site. 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 and in the interest of the amenity of the area.
13.	During the operation phase of the proposed development, the noise level from within the boundaries of the site measured at noise sensitive locations in the vicinity, shall not exceed (a) an Leq, 1h value of 55 dB(A) between 08.00 and 20.00 hours (b) an Leq, 15 min value of 45 dB(A) at any other time. Night time emissions shall have no tonal component. **Reason:** In order to protect the residential amenities of property in the vicinity.
14.	The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall - a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, b) employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove. In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination. **Reason:** In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.
15.	The developer shall monitor and record groundwater, surface water flow, noise, ground vibration, and dust deposition levels at monitoring and

	recording stations, the location of which and methodology/frequency of monitoring/submission of results shall be submitted to and agreed in writing with the planning authority prior to commencement of development. **Reason:** In the interest of protecting residential amenities and ensuring a sustainable use of non-renewable resources.
16.	Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the satisfactory reinstatement 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 restoration of the site in the interest of visual amenity.
17.	Prior to commencement of development the developer shall submit to and agree in writing with the planning authority a signage scheme warning road uses of the exitance of the quarry. This signage scheme shall be maintained at the developer's expense for the duration of the quarrying activity permitted by this grant of planning permission. **Reason:** In the interests of traffic safety.
18.	Prior to the commencement of development, the Developer shall submit to and agree in writing with the Planning Authority, details of all landscaping mitigation measures to be implemented on the site during the construction and operational phase of the development. This shall include the details and locations of all berms, planting, and overburden areas. Hedges and trees shall not be removed during the nesting season, (i.e. March 1st to August 31st). **Reason:** In the interest of residential and visual amenity.

19.	Where an existing badger sett will be disturbed or destroyed, an artificial sett shall be constructed beforehand and the badgers relocated thereto. Details of any such artificial setts shall be submitted to and agreed in writing with the planning authority, prior to commencement of development. **Reason:** In the interest of wildlife protection.
20.	The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including hours of working, noise management measures and off-site disposal of waste. **Reason:** In the interests of public safety and residential amenity.
21.	The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme. **Reason:** It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

.Elaine Sullivan
Planning Inspector

15th March 2023