Appropriate Assessment (AA) Screening and Natura Impact Statement (NIS)

Proposed Continued Use & Extension of Existing Sand and Gravel Pit at Mounthall & Cummer Townlands, Camross, Co. Laois

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Basis of Report

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Table of Contents

Tables in Text

Appendices

Appendix D Species/Habitats Distribution

1.0 Introduction

1.1 Background

SLR Consulting Ireland (SLR) was commissioned by Breedon Materials Ltd. trading as Breedon Ireland hereafter referred to as "Breedon", to prepare an Appropriate Assessment (AA) Screening report and Natura Impact Statement (NIS) in support of a planning application to Laois County Council in respect of a proposal for the continued use and extension to the existing permitted sand and gravel extraction operation at Mounthall & Cummer townlands, Camross, Co. Laois (hereafter referred to as the 'site').

1.2 Site Description

The overall planning application area is located at approximate ITM coordinate X 626656, Y 698131 and covers approximately 12.2 hectares (ha) and comprises of the existing permitted sand and gravel pit and several agricultural fields currently under pasture with some intervening areas of vegetation. The extent of the site is shown on **Figure 2-1** from Chapter 2 of the EIAR (included in **Appendix B** of this report).

1.3 Project Description

1.3.1 Existing sand and gravel pit

The existing sand and gravel pit is located within the northern portion of the application area and covers c. 1.2 hectares and includes the existing entrance onto the L10317.

The existing pit consists of a single face extraction area typically 8m in height. Ground levels rise from the entrance at c. 194m AOD westwards to the toe of the existing face along the western boundary where ground levels are c. 200-203m AOD. At the site entrance, the existing gate is set back from the edge of the public road, with the area between the gate and road consisting of a concrete hard surface. The internal access route from the entrance gate to the extraction area consists of hardcore road. There are no structures within the existing pit.

No previous planning permissions have been granted on the lands for sand and gravel extraction, and in relation to the existing sand and gravel pit, it is recognised that the pit was in use for sand and gravel extraction prior to October 1, 1964, and the introduction of the Planning and Development Act. The Planners report from the Section 261A quarry review process carried out by all Planning Authorities in 2012 concluded the following:

- Section 261 of Planning & Development Act 2000 (as amended) – Quarry Registration (site ref. QY05/10).

  The subject quarry was registered under Section 261 of the Planning and Development Act, 2000 and conditions were imposed on the quarry in accordance with Section 261(6)(a)(i).

- Pre 1964 Land Use Rights

  The Planning Authority accepted the pre 1964 land use rights of the operators under Section 261 by imposing conditions on the operation of the quarry under subsection 6(a)(i).

  As the quarry operated on site before October 1, 1964 (evidence shown on OS map 11-9, dated 1965) and aerial photographs from 1995, 200 and 2004 along with the GPS survey carried out on site on January 4, 2012 show that an intensification of operations or abandonment of use has not occurred, it is considered that the quarry has retained its

pre 1964 land use rights as defined in Waterford Co. Co. v John A. Wood Lt. (1999) referred to above.

Therefore, as the Planning Authority is satisfied that this quarry commenced operations before October 1, 1964 and that the development is such that in the opinion of the Planning Authority, the activity is consistent with bona fide pre 1964 land use rights and that no intensification or abandonment has taken place in the opinion of the Planning Authority, it therefore considers that the EIA or Habitats Directive which came into force on February 1, 1990 and 26 February 1997, respectively, and the Slieve Bloom SPA, which was advertised on November 5, 2007, do not apply to this quarry and therefore no notice will be issued by the Planning Authority under Section 261A (3)(a), (4)(a) or (5)(a).

- Section 261A of Planning & Development Act 2000 (as amended) – Quarry Review Process Recommendation.

  As the Planning Authority is satisfied that this quarry commenced operations before October 1, 1964 and that the development is such that in the opinion of the Planning Authority, the activity is consistent with bona fide pre 1964 land use rights and that no intensification or abandonment has taken place in the opinion of the Planning Authority, it therefore considers that the EIA or Habitats Directive which came into force on February 1, 1990 and 26 February 1997, respectively, do not apply to this quarry. Accordingly, Section 261A does not apply in this instance.

1.3.2 Extension Lands

The proposed extension and extraction operations (c. 8 hectares) will advance through the existing agricultural lands to the south of the existing pit, as shown on **Figure 2-1** from Chapter 2 of the EIAR (included in **Appendix B**). The extension lands are undulating, and ground levels are variable from c. 205m AOD adjacent to the existing pit to the north, falling south-eastwards to c. 195m AOD, before rising to 205m AOD and again falling away to c. 180m AOD in the southeast corner of the site.

The extension lands are bisected internally with native hedgerows, gorse and bramble scrub and some immature broadleaved woodland mixed with gorse scrub. There is a small pond (c. 20m in diameter) located along the eastern site boundary, outside of the proposed extraction area which will be retained.

Two low-voltage overhead powerline (10kv/20kv) routes bisect the application site which provide power to the local residences and farms. One line runs NW to SE and the other runs NE to SW and they intersect near the centre of the extension extraction area. There are currently 5 no. electricity poles located within the proposed extension extraction area.

The application area includes an extensive deposit of sand and gravel which is proposed to be extracted and processed on site.

1.4 Proposed development

1.4.1 Development overview

The proposed development being applied for under this current planning application is shown in plan on **Figures 2-2** and **2-3**, and in cross section on **Figure 2-4** from Chapter 2 of the EIAR (included in **Appendix B**) and will consist of:

- Continued use and extension to existing permitted sand and gravel pit registered under Section 261 of the Planning & Development Act 2000, as amended (site ref. QY05/10) within an overall application area of c. 12.2 hectares;

- Extraction of sand and gravel (dry working) over an area of c. 8 hectares with processing and washing of material on site (closed loop water recycling system with associated silt storage lagoons 1,952.25m^2), and all ancillary works and structures;
- Site facilities consisting of mobile processing plant, portacabin site office (6.25m^2), portacabin welfare facility (18.9m^2), serviced portaloo toilet, bunded fuel storage and refuelling pad with hydrocarbon interceptor, weighbridge, wheelwash, water supply borehole, perimeter berms, vegetation planting and fencing;
- Access to the site will be via the existing sand & gravel pit entrance;
- Restoration of the site to agricultural lands; and
- The proposed extraction operational period is for 10 years plus 1 year to complete restoration (total duration sought 11 years).

1.4.2 Construction Phase (Provision of Ancillary Facilities, Screening Berms & Fencing & Topsoil Stripping)

The overall extraction development plan is shown in **Figure 2-3** from Chapter 2 of the EIAR (and included in **Appendix B**). It is anticipated that the construction stage works as outlined below would be carried out within a 6-month period.

- Installation of site facilities consisting of mobile aggregate processing plant, weighbridge office, welfare facility, serviced portaloo toilet, refuelling pad with hydrocarbon interceptor, weighbridge and wheelwash.
- Construction of silt storage lagoons associated with the washing plant closed water recycling system.
- Construction of perimeter screening berms using soils stripped from the Phase 1 extraction area. The screening berms will be c. 2m in height and will be located along the northern boundary of Phase 3 adjacent to residence R1, and along the eastern boundary of Phase 2 adjacent to residences R2/R3.
- Provision of acoustic fencing adjacent to residences R1 to the north and R2/R3 to the east. The acoustic timber fencing will be c. 2-3m in height and will be constructed with high quality boards in such a way that eliminates gaps that sound can easily travel through.
- Vegetation planting with native species will be carried out around the periphery of the application area as shown on **Figures 2-3** & **2-5** (and included in **Appendix B**). The planting will be carried out in Year 1 to allow the maximum time for the vegetation to become established. The vegetation will be retained indefinitely following the completion of sand and gravel extraction operations at the site.

1.4.3 Operational Phase (Sand & Gravel Extraction / Processing – Phased Extraction)

The proposed operational phase will see sand and gravel extraction carried out within an overall extraction area of c. 8 hectares. The final extraction scheme is shown in plan on **Figure 2-3** and in cross section on **Figure 2-4** (see **Appendix B**). It is proposed that extraction would be carried out over a 10-year period at an average rate of 80,000 tonnes per annum.

Extraction within the existing pit was carried out as a dry extraction operation above the groundwater table. It is proposed that extraction within the extension area will also be carried out above the groundwater table, with the proposed pit floor sloping from northwest (c. 195m AOD) to southeast (c. 173m AOD). Moreover, the proposed extraction works will cause no discharge off-site.

1.4.4 Restoration Phase (Reinstatement to Agricultural Lands / Beneficial Habitat Areas)

Upon the cessation of extraction operations, it is proposed to return the worked lands to agricultural grazing lands with some dedicated areas for natural habitat after-uses included – refer to **Figure 2-5** in **Appendix B**.

Restoration activities will be carried out after extraction operations have ceased. Redundant pit faces will be regraded from c. 1:1.5 (34°) to a final profile of between c. 1:2.5 (22°) and 1:3.5 (16°). The pit floor and slopes will be grass seeded. Provision is made for a 1-year final restoration period to carry out such works. The EIAR Restoration Plan (**Figure 2-6**) details the restoration measures to be implemented and has been provided in **Appendix B**.

Proposed planting, including 315m of hedgerow and 0.17ha of woodland blocks (as shown on **Figure 2-5** in **Appendix B**) will provide compensation for lost woodland, scrub, hedgerow, and grassland habitats. The proposed planting will occur in year 1, to allow the maximum time for the vegetation to become established. The vegetation will be retained indefinitely following the completion of sand and gravel extraction operations at the site.

The proposed native woodland planting includes the following:

- 75 silver birch Betula pendula;
- 150 hazel;
- 75 hawthorn;
- 150 holly;
- 75 blackthorn;
- 75 pedunculate oak Quercus robur;
- 75 sally willow Salix cinerea; and
- 75 elder.

The proposed 315m hedgerow will be made up of the following native species:

- 120 hazel;
- 160 hawthorn;
- 160 holly;
- 140 blackthorn;
- 120 pedunculate oak;
- 80 sally willow; and
- 80 elder.

Trees and hedges to be planted will comprise native species including seed-producing or fruit producing species to provide foraging opportunities for local fauna. In addition, species that are attractive to pollinating invertebrates will be included. Proposed planting will also compensate for habitat loss for nesting passerine and farmland birds.

Figure 2-6 in **Appendix B** provides the restoration plan for the site and demonstrates that in addition to the above c. 370 m of new hedgerow will be planted during this phase and will be made up of the following native species:

- 140 hazel;
- 190 hawthorn;

- 190 holly;
- 140 blackthorn;
- 90 pedunculate oak;
- 90 sally willow; and
- 90 elder.
- c. 7.83 ha of the proposed extension lands will be restored to agricultural land use following the completion of the proposed extraction operations.

The only material requirements in respect of the planned restoration scheme are those topsoils and subsoils already present on site and which will remain on site for restoration purposes.

Please note it is not proposed to import material onto the site for operational or restoration purposes.

1.5 Purpose of this report

The purpose of this report is to provide supporting information to assist the competent authority, in this case Laois County Council, to carry out a stage 1 Appropriate Assessment screening and, if deemed necessary, a stage 2 Appropriate Assessment for adverse effects on the integrity of European sites (i.e., an NIS) resulting from the Project at Mounthall & Cummer townlands, Camross, Co. Laois.

1.6 Relevant Legislation and Policy

1.6.1 Legislation

The requirement for AA screening and AA is set out in the Habitats Directive (Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, which is transposed into Irish law primarily through the European Communities (Birds and Natural Habitats) Regulations 2011 –21, (S.I. 477 of 2011, as amended) ("Birds and Natural Habitats Regulations")) and the Planning and Development Acts 2000 (as amended). Further details are provided in **Appendix A**.

1.6.2 Policy

The Laois County Development Plan 2021-2027 contains local policies that state the requirement for developments to undergo an AA. Local policies that detail this are provided in **Table 1**.

Table 1: Local policies regarding appropriate assessments

Reference	Policy
EM02	To ensure that planning permission will only be granted for a development proposal that, either individually or in combination with existing and/or proposed plans or projects, will not have a significant effect on a European site, or where such a development proposal is likely or might have such a significant effect (either alone or in combination), the planning authority will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92/43/EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having ascertained that the development proposal will not adversely affect the integrity of any European site, will the planning authority agree to the development and impose appropriate mitigation measures in the form of planning conditions. A development proposal which could adversely affect the integrity of a European site may only be permitted in exceptional circumstances,

Reference	Policy
	as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation.
EM04	To ensure that plans, including land use plans, will only be adopted, if they either individually or in combination with existing and/or proposed plans or projects, will not have a significant effect on a European Site, or where such a plan is likely or might have such a significant effect (either alone or in combination), Wexford County Council will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92/43/EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having ascertained that the plan will not adversely affect the integrity of any European site, will Wexford County Council adopt the plan, incorporating any necessary mitigation measures. A plan which could adversely affect the integrity of a European site may only be adopted in exceptional circumstances, as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation.
NH08	To ensure that any plan/project and any associated works, individually or in combination with other plans or projects, are subject to Screening for Appropriate Assessment to ensure there are no likely significant effects on any Natura 2000 site(s) and that the requirements of Article 6(3) and 6(4) of the EU Habitats Directive are fully satisfied. Where a plan/project is likely to have a significant effect on a Natura 2000 site or there is uncertainty with regard to effects, it shall be subject to Appropriate Assessment. The plan/project will proceed only after it has been ascertained that it will not adversely affect the integrity of the site or where, in the absence of alternative solutions, the plan/project is deemed by the competent authority imperative for reasons of overriding public interest.

1.7 Statement of Authority

This report was prepared by SLR Project Ecologist Jake Matthews and SLR Graduate Ecologist Lorcan Kelly. SLR Associate Ecologist Michael Bailey carried out the technical review.

Jake Matthews is an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM) and holds and MSc in ecology and environmental management from Liverpool Hope University and a BSc in wildlife conservation from the University of Salford. Jake has over five years' experience as a consultant ecologist and has worked on a variety of developments including EIAR chapters, AA screenings and NIS reports.

Lorcan Kelly holds a BSc. in Science (Zoology) from University College Dublin and an MSc. in Applied Ecology and Conservation from the University of East Anglia. He has recently joined SLR having previously worked as a Field Assistant for The Ecology Consultancy, Norwich, UK. He is a qualifying member of CIEEM.

Michael Bailey holds a BSc. in Biology and Ecology from the University of Ulster and an MSc. in Quantitative Conservation Biology from the University of the Witwatersrand in Johannesburg. He has extensive experience in ecological studies and assessments across a range of sectors in Ireland and of agricultural, mining and renewable energy projects across Africa. He is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

2.0 METHODOLOGY

2.1 General Approach

The methodology used in this report is based on and in accordance with guidance provided by the National Parks and Wildlife Service (NPWS, 2010), the Office of the Planning Regulator (OPR, 2021) and EC Guidance (EC, 2018) (EC, 2020) (EC, 2021) on the application of Article 6 of the Habitats Directive and all relevant case law.

The 2021 EC guidance describes a series of stages and steps which should be completed when carrying out the assessment and these are followed here with the addition of sub-headings for further clarity. The assessment applies only to European sites (SPAs and SACs). More specifically, it only applies to the qualifying interest features of such sites i.e., the features which are the reason that the site was designated.

2.2 Baseline Information

2.2.1 Ecological Desk Study

An ecological desk study comprising an online search for: (i) SACs and SPAs within 15km of the project site; (ii) Annex I habitats and Annex II species (of the Habitats Directive) within 10km of the Project site; and (iii) Annex I bird species (of the Birds Directive) within 15km of the Project site. The desk study area was extended where possible links to European sites and species populations were identified due to emissions to air and water, changes to hydrology, or mobile or migratory species populations by utilising the Source-Pathway-Receptor (S-P-R) model.

Online resources included ecology data held by the National Biodiversity Data Centre, the National Parks and Wildlife Service, the Environmental Protection Agency, the Ireland Wetland Bird Survey (IWeBS) and Ordnance Survey Ireland (Geohive).

2.2.2 Habitat and Species Surveys

Several ecological field surveys were conducted on the site, including an initial habitat survey, updated habitat survey, breeding bird surveys, hen harrier surveys, and bat surveys. These surveys are detailed fully in **Table 2**.

2.2.3 Hydrology Surveys

Chapter 7 - Water of the accompanying EIAR is enclosed as **Appendix B** and details fully the methodology and assessments conducted at the site for existing surface water and groundwater within 2 km of the application area and predicts potential impacts of the proposed sand and gravel extraction on both of these.

Existing information on the geology, hydrogeology and hydrological features of the Mounthall area and its surrounds was collated and evaluated.

Extensive data gathering was undertaken at the site. The methodology for assessing hydrology and hydrogeology in the Mounthall area is outlined as follows:

- A desk study, in which existing data and relevant regional data sources for the area were examined.
- Installation of 9 no. groundwater monitoring boreholes across the proposed development area.
- Installation of 5 no. data loggers and monitoring of water levels via manual dipping from 9 no. on-site groundwater monitoring boreholes on a weekly basis.

- 5 no. rising head tests.
- Installation of rain gauge.
- Measurement of surface water flow values at 3 no. locations over 3 rounds of monitoring.
- 3 no. rounds of surface water quality monitoring at 3 no. monitoring points in the vicinity of the proposed development area.
- 3 no. rounds of groundwater quality from 9 no. on-site groundwater monitoring boreholes; and analysis of the information gathered.
- Well survey of private wells within 500m of the proposed development area.

2.2.4 Noise Assessments

Chapter 10 of the accompanying EIAR details fully the methodology and assessments conducted at the site for noise. Surveys included:

- An environmental noise survey was completed to establish the prevailing noise levels in the vicinity of the nearest noise sensitive receptors to the site and associated haul routes.
- The survey was conducted by SLR Consulting Personnel in accordance with the procedures outlined in ISO 1996-2:2017 *Acoustics — Description, measurement and assessment of environmental noise - Determination of sound pressure levels*.

2.2.5 Air Quality Assessments

Chapter 8 of the accompanying EIAR (enclosed as **Appendix B**) details fully the methodology and assessments conducted at the site for air quality. Surveys included:

- Baseline dust monitoring using the 'Bergerhoff method' referred to in the TA Luft Air Quality Standard. The 'Bergerhoff' dust deposition gauge used in the survey comprises a plastic collection bottle with protective basket, mounted on a post and set at 1500 mm above ground level. The input of atmospheric borne particulate material into the collection bottle takes place over a pre-determined measurement period (usually one month) by exposing it to the environment. The total dust collected in the bottle is expressed as deposition of total particulate matter ($mg/m^2/day$) arising from human activity in the area surrounding the application site.
- PM_{10} monitoring using an appropriate dataset available for assessment of air quality baseline concentrations within the study area.

Table 2: Surveys on the site

Date	Survey type	Surveyor	Weather	Scope of survey and relevant guidance followed
16/01/2024	Preliminary ecological appraisal	Jake Matthews	Temp.[1] -1 - 2 Wind speed[2] 1 Cloud cover[3] 0 Precipitation None	• Identify initial ecological constraints to the Site and scope for the need for further (Phase 2) surveys. • Habitat mapping following the guidance set out in *A guide to habitats in Ireland* (Fossitt, 2000). • Potential roost assessment (PRA) following guidance laid out in Bat surveys for professional ecologists (Collins, 2023), which was undertaken to assess the overall site suitability to support roosting, foraging and commuting bats. All trees that were to be impacted were assessed for their potential to support bat roosts. • Assess the hedgerows within the Site for their significance and their condition following the current guidance laid out in the *Hedgerow Appraisal System - Best Practise Guidance on Hedgerow Survey, Data Collation and Appraisal* (Foulkes et al, 2013).
03/07/2024	Updated habitat survey including hedgerow assessment	Jake Matthews	Temp. 12 Wind speed Cloud cover 4 Wind speed 3/8 Precipitation None	
05/03/2024	Breeding bird survey 1	Jake Matthews	Temp. 5 Wind speed 3 Cloud cover 8/8	• Assess the site for breeding birds by determining species territories and breeding behaviours following the guidance set out under the current Bird Survey Guidelines (n.d.) and using British Trust for Ornithology (BTO) species and behaviour codes (BTO, n.d.).

[1] Measured in ºC
[2] Measured on the Beaufort scale
[3] Measured in Oktas

Date	Survey type	Surveyor	Weather		Scope of survey and relevant guidance followed
			Precipitation	Moderate at times	
11/04/2024	Breeding bird survey 2	Jake Matthews	Temp. Wind speed Cloud cover Precipitation	12 1 8 None	
18/04/2024	Breeding bird survey 3	Jake Matthews	Temp. Wind speed Cloud cover Precipitation	7 2 8 Short shower mid-survey	
02/05/2024	Breeding bird survey 4	Jake Matthews	Temp. Wind speed Cloud cover Precipitation	8 4 8 Short shower at start of survey	
04/04/2024	Hen harrier survey	Hugo Brooks	Temp. Wind speed Cloud cover	6 - 9 1 - 2 8/8	• Assess the site for nesting/breeding hen harrier following guidelines set out in *Raptors*: *A field guide for surveys and monitoring* (Hardey et al., 2013).

Date	Survey type	Surveyor	Weather	Scope of survey and relevant guidance followed
			Precipitation None	
16/05/2024	Hen harrier survey 2	Hugo Brooks	Temp. 10 - 16 Wind speed 2 Cloud cover 1 - 4 Precipitation None	
17/04/2024	Bat activity survey	Alice Magee & Hugo Brooks	Temp. 9 Wind speed 2 - 6 Cloud cover 6/8 Precipitation None	• Assess the site for commuting and foraging bats following guidance laid out in Bat surveys for professional ecologists (Collins, 2016 and Collins, 2023).
03/07/2024	Bat roost survey	Jake Matthews & Hugo Brooks	Temp. 10 - 12 Wind speed 4 – 6 Cloud cover 2 – 3/8 Precipitation None	• Assess trees identified during the PRA as having bat roosting potential to confirm if bat roosts are present, following guidance laid out in Bat surveys for professional ecologists (Collins, 2016 and Collins, 2023).
05/06/2024 - 03/07/2024	Pine marten & other mammals monitoring	Jake Matthews	N/A	• Assess whether the Site and adjacent woodland support pine marten and other rare and protected species such as red squirrel.

2.3 Stage One: AA Screening

The methodology for the screening assessment follows that set out in EC (and other) guidelines and be based on the data, surveys and assessments described in Section 2.2. In summary this will comprise:

2.3.1 Step 1

Ascertaining whether the Project is directly connected with or necessary to the management of a European site. Typically, this applies only to a management plan, or parts thereof, which has the purpose of maintaining or restoring the conservation interest of a European site, and which would not have a negative effect on any other European site.

2.3.2 Step 2

Identifying the relevant elements of the Project and their likely impacts, which is subdivided into:

2.3.2.1 Step 2, Part 1

An outline description of the Project, including construction, operation and decommissioning, containing enough information for potential impact pathways to be understood, and the Project site and its surroundings, focussing on the habitats and species that may form part of the qualifying interest of a European site.

2.3.2.2 Step 2, Part 2

An identification of the aspects of the project which have the potential to affect European sites, either alone or in combination with other Projects and Plans. This may include for example emissions to air and water, noise and increases in recreational activity (Sources).

2.3.3 Step 3

Identifying which (if any) European sites may be affected, considering the potential effects of the Project alone or in combination with other plans or projects, which is subdivided into:

2.3.3.1 Step 3, Part 1

Generating an initial list of European sites to be considered in the screening process, which are those which are potentially connected (via a Pathway) to the Project site including (i) any which overlap with the Project site or are close enough to experience increased noise, vibration, light, visible human activity or invasive species; (ii) those that may have downstream connectivity via watercourses or groundwater to the Project site or transport routes; (iii) those that may receive deposition of pollutants as a result of emissions to air from the Project or transport routes; (iv) those which may support migratory or mobile species populations which may also use the Project site or its environs; and (v) those which may receive additional recreational activity once the Project site is inhabited.

2.3.3.2 Step 3, Part 2

Compiling basic information on the European sites identified in Part 1, including a list of qualifying interest features/special conservation interest (the Receptors), their conservation objective if known (maintain or restore), the distance and direction from the Project site (including transport routes) and how it is or is not connected, using the S-P-R model, to the Project site (including transport routes). Likely Significant Effects (LSE) can be immediately excluded for any European sites and any qualifying /special conservation interest features

which clearly lack a pathway or were it can be demonstrated there is a very weak pathway, such that any effects would not be appreciable.

2.3.4 Step 4

Assessing whether LSE on all European sites can be ruled out, in view of their conservation objectives.

2.3.4.1 Step 4, Part 1

Assessing LSE for the project alone, determining whether there is a risk that the project could undermine the conservation objectives for the qualifying interest features/special conservation interest for those European sites for which a pathway has been identified. This is a scientific determination which considers whether the maintain or restore objective applies and both direct and indirect effects. If there is any uncertainty or detailed investigation or mitigation are required, LSE are assumed.

2.3.4.2 Step 4, Part 2

Assessing LSE for the project in combination with other Projects and Plans. Along the same lines as Part 1, this considers whether the effects of the Project, if not capable of undermining the conservation objectives on their own, could do so cumulatively with other projects and plans. It also considers whether the risk of undermining conservation objective is elevated when cumulative effects are considered.

2.3.5 Conclusion

Stating whether LSE arising from the Project, alone and in-combination with projects and plans, on European sites can be excluded, and if they cannot, which European sites and which qualifying interest features/special conservation interest are at risk from significant effects, and the relevant impact sources and pathways. If the latter, an AA will be required. The conclusion will not consider any mitigation measures designed to avoid LSE on a European site.

2.4 Stage Two: Appropriate Assessment (Natura Impact Statement)

Stage Two is a more detailed assessment, known as an “Appropriate Assessment” due to the terminology in the legislation. This essentially repeats the second test of the screening assessment but in more detail and considering mitigation measures before reaching a conclusion. At this stage, the test is whether the project or plan will have an adverse effect on the integrity of any European site. This must be done in the light of the conservation objectives for each of the sites and qualifying interest features that have been ‘screened in’ by the earlier stage of assessment. Any effect which could undermine the conservation objectives is considered an adverse effect on the integrity of the site, and vice versa. If the project is predicted to lead to adverse effects upon the integrity of the site, further stages of assessment are required before the project can be authorised.

DoEHLG (2010) guidance for planning authorities states “If the effects are deemed to be significant, potentially significant, or uncertain, or it the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.” This approach is adopted in this report when considering LSE of the project.

LSE of the project are also assessed in combination with other plans and projects for cumulative effects. Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

Other plans and projects that should be considered when establishing cumulative effects are:

- proposals for which consent has been applied but which are awaiting determination;
- projects which have been granted consent, but which have not yet been started or which have been started but are not yet completed (i.e., under construction);
- proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined;
- constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
- developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

2.5 Sources of Information

2.5.1 For the Project Alone

2.5.1.1 Desk Study

Sources of information for the assessment of the project 'alone' include:

- Article 17 and Article 12 reports completed by the National Parks and Wildlife Service[4];
- Site Synopses, conservation objectives and standard data forms for the European sites[5];
- Environmental Protection Agency (EPA) Maps[6].

2.5.1.2 Surveys and Assessments

The field surveys and assessments conducted at the site as detailed in the EIAR and summarised above were used for the assessment of the project 'alone', including for ecology/biodiversity, hydrology, noise, and air quality.

2.5.1.3 Legislation

The requirement for AA screening and AA is set out in the Habitats Directive (Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, which is transposed into Irish law primarily through the European Communities (Birds and Natural Habitats) Regulations 2011 –21, (S.I. 477 of 2011, as amended) ("Birds and Natural

[4] Article 17 Reports | National Parks & Wildlife Service (npws.ie) (last accessed November 2023)
[5] Protected Sites in Ireland | National Parks & Wildlife Service (npws.ie) (last accessed November 2023)
[6] Environmental Protection Agency, Ireland (EPA) Geoportal (last accessed November 2023)

Habitats Regulations")) and the Planning and Development Acts 2000 (as amended). Further details are provided in **Appendix A**.

2.5.2 For the Project in Combination

Sources of information for the plans and projects for the 'in-combination' assessment were as above and also include:

- Local knowledge of the existing development.
- Laois County Development Plan 2021-2027.
- Offaly County Development Plan 2021-2027.
- Laois County Council planning portal[7], Offaly County Council planning portal[8] and myplan.ie[9] was accessed for information on other projects and plans.

[7] Carry out a planning search – Laois County Council.
[8] Planning Search - Offaly County Council.
[9] Home - My Plan.

3.0 STAGE ONE: SCREENING

3.1 Step One: Management of European Sites

The Project is a sand and gravel extraction operation at Mounthall and Cummer townlands, Camross, Co. Laois. It is not a part of the management of any European Site. However, it is situated adjacent to one European site: Slieve Bloom Mountains SPA.

3.2 Step Two, Part One: Project Description

3.2.1 The Project

This section describes each phase of the project. It also details the outline programme. Including the timing and duration of each of the proposed phases.

3.2.1.1 Construction Phase (Provision of Ancillary Facilities, Screening Berms & Fencing & Topsoil Stripping)

The overall extraction development plan is shown in **Figure 2-3** of the EIAR (see **Appendix B**). It is anticipated that the construction stage works as outlined below would be carried out within a 6-month period.

- Installation of site facilities consisting of mobile aggregate processing plant, portacabin site office, portacabin welfare facility, serviced portaloo toilet, refuelling pad with hydrocarbon interceptor, weighbridge, wheelwash and water supply borehole.
- Construction of silt storage lagoons associated with the washing plant closed loop water recycling system.
- Construction of perimeter screening berms using soils stripped from the extraction area. The screening berms will be c. 2m in height.
- Provision of acoustic fencing adjacent to residences R1 to the north and R2/R3 to the east. The acoustic timber fencing will be c. 2-3m in height and will be constructed with high quality boards in such a way that eliminates gaps that sound can easily travel through.
- Vegetation planting with native species will be carried out around the periphery of the application area as shown on **Figure 2-3** and **Figure 2-5** of the EIAR (see **Appendix B**). The planting will be carried out in Year 1 to allow the maximum time for the vegetation to become established. The vegetation will be retained indefinitely following the completion of sand and gravel extraction operations at the site.
- Re-routing of the 5 no. electricity poles located within the proposed extension extraction area to traverse the periphery of the site. These works would be carried out by ESB Networks.

3.2.1.2 Operational Phase (Sand & Gravel Extraction / Processing)

The proposed operational phase will see sand and gravel extraction carried out within an overall extraction area of c. 8 hectares. The final extraction scheme is shown in plan on **Figure 2-3** and in cross section on **Figure 2-4** (see **Appendix B**). It is proposed that extraction would be carried out over a 10-year period at an average rate of 80,000 tonnes per annum.

Extraction within the existing pit was carried out as a dry extraction operation above the groundwater table. It is proposed that extraction within the extension area will also be carried out above the groundwater table, with the proposed pit floor sloping from northwest (c. 195m AOD) to southeast (c. 173m AOD).

To minimise the visual impact and mitigate any potential impacts from noise and dust emissions it was decided that the deposit itself could provide maximum screening to outside views and adjoining land uses from the working area

3.2.1.3 Restoration Phase (Reinstatement to Agricultural Lands / Beneficial Habitat Areas)

Upon the cessation of extraction operations it is proposed to return the worked lands to agricultural grazing lands with some dedicated areas for natural habitat after-uses included – refer to **Figure 2-5** of the EIAR (see **Appendix B**).

Restoration activities will be carried out after extraction operations have ceased. Redundant pit faces will be regraded from c. 1:1.5 (34°) to a final profile of between c. 1:2.5 (22°) and 1:3.5 (16°). The pit floor and slopes will be grass seeded. Provision is made for a 1-year final restoration period to carry out such works.

The only material requirements in respect of the planned restoration scheme are those topsoils and subsoils already present on site and which will remain on site for restoration purposes.

Please note it is not proposed to import material onto the site for operational or restoration purposes.

3.2.2 The Project Site

3.2.2.1 Habitats (Annex I) Summary

No Annex I habitat is located within the site.

3.2.2.2 Species (Annex I Birds and Annex II others) Summary

Annex I birds and Annex II species identified and assessed in **Chapter 5** of the EIAR as being present on or likely to use the site or the surrounding area include the following:

Annex I Birds

- Annex I listed hen harrier *Circus cyaneus* associated with the adjacent Slieve Bloom Mountains SPA were observed close to the site and are assessed to likely use the site for foraging.
- The Slieve Bloom Mountains SPA is also known to support merlin *Falco columbarius* and peregrine *Falco peregrinus*, although these two species are not Qualifying Interests (QI) for the SPA. However, no instances of either species were recorded on the site during breeding bird surveys or any other surveys. The site does support various other birds, which provide suitable prey for these species.
- Annex I listed kingfisher *Alcedo atthis* were not observed during the surveys. However, offsite river/stream habitat located south of the site may support this species as suitable foraging habitat. No area suitable for breeding were observed.

Annex II Species

- Annex II listed otter were not observed on the site, nor were any holts recorded. However, the offsite river/stream habitat located south of the site is anticipated to support this species.

3.2.2.3 Ecological Connections Summary

The site borders the Slieve Bloom Mountains SPA, with woodland that is located within the SPA located immediately adjacent (north-east) of the existing sand and gravel pit.

3.2.2.4 Environmental Connections Summary

The offsite stream located south of the site provides hydrological connectivity between the site and the River Killeen, located ca. 110m northeast of the site. Moreover, the River Barrow & River Nore SAC 000412 located 2 km east of the site is downstream of the Killeen River.

3.3 Step Two, Part Two: Potential Impact Factors

The Project has the potential to result in the following impacts:

3.3.1.1 Construction and Operation Phase

- Habitat loss within the project footprint which may be part of and/or support the Qualifying Interests (QIs) or Species of Conservation Interest (SCIs) of European sites;
- Indirect pollution of water bodies (rivers or stream) which may reduce surface and/or groundwater quality and negatively affect the QIs, or SCIs of European sites close to or downstream of the project site;
- Construction and operational phase noise and / or vibration which may disturb some of the QIs or SCIs of European sites;
- Emissions to air (fugitive dust emissions and particulate matter) arising from the stone extraction activities which could lead the smothering of vegetation and restricting growth and reduce potential foraging sources for some of the QIs or SCIs of European sites.

The habitats and species listed as features of interest of any European sites within the zone of influence of the project must therefore be assessed for effects from habitat loss, polluted discharge, dust and noise.

3.3.1.2 Restoration Phase

- Indirect pollution of water bodies (rivers or stream) which may reduce surface and/or groundwater quality and negatively affect the QIs, or SCIs of European sites close to or downstream of the project site.

3.4 Step Three: Identification of European Sites

The relevant European sites are identified through a review of the nature and scale of the project, the project location relative to European sites, presence of ecological (including mobile and migratory species) and landscape connectivity, such as along waterways, hedgerows and treelines between the Site and the European sites, known impacts and effects likely to arise as a result of this type of project, distance from European sites and the qualifying interests of the European sites.

As per AA guidance, Natura 2000 sites within 15 km of the proposed works, and those greater than 15 kilometres away with a direct pathway and biodiversity connections to the works location, must be considered**.** This 15 km zone is often referred to as the 'Zone of Influence', which can change depending on the nature of the project, it's location, environmental receptors and various other factors. When considering potential impacts such as noise and direct disturbance, it is expected that the potential ZOI is less than 15 km; whereas, for hydrological impacts the Zone of Influence can be greater than 15 km. If a hydrological pathway exists between works and a Natura 2000 site, the conservation objectives of protected sites beyond 15km should therefore be considered.

3.4.1 European Sites within the Zone of Influence

Table 3 and **Figure 2** show all European sites identified within 15 km of the Site that will be assessed as part of the screening process. Sites beyond this distance were considered outside the potential zone of influence for the project due to sufficient distance.

Table 3: European Sites within the Zone of Influence of the Project.

European Site	Site Code	Location at Closest Point to the Project Site[10]	Zone of Influence
Slieve Bloom Mountains SPA	004160	0 km (north) – bounds existing pit	The works are within the 15 km Zone of Influence.
Slieve Bloom Mountains SAC	000412	1.5 km (north)	The works are within the 15 km Zone of Influence.
River Barrow and River Nore SAC	002162	2.4km (east)	The works are within the 15 km Zone of Influence and has hydrological connectivity (downstream) to the Site.
Coolrain Bog SAC	002332	5.8 km (south)	The works are within the 15 km Zone of Influence.
River Nore SPA	004233	6 km (southeast)	The works are within the 15 km Zone of Influence and has hydrological connectivity (downstream) to the Site.
Knockacoller Bog SAC	002333	7.3 km (southeast)	The works are within the 15 km Zone of Influence.
Clonaslee Eskers and Derry Bog SAC	000859	12.5 km (north)	The works are within the 15 km Zone of Influence.
Island Fen SAC	002236	14.4 km (northwest)	The works are within the 15 km Zone of Influence.

3.4.2 Source-Pathway-Receptor Links

All European sites **Table 3** were assessed for S-P-R links to the Site. **Table 4** provides further details of each site and details any potential S-P-R links (if applicable). Details of any LSE that have been scoped in for further assessment is also provided in this table. Any sites with no S-P-R have been scoped out from further assessment.

[10] When measured in a straight line over the shortest distance between the Site and European site

Table 4: Designated Sites within Zone of Influence of the Project

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
Slieve Bloom Mountains SPA [004160]	0km	Birds • Hen harrier *Circus cyaneus* [A082]	• To restore the favourable conservation condition of hen harrier in Slieve Bloom Mountains SPA. • CO004160.pdf (npws.ie)	The Slieve Bloom Mountains SPA is situated on the border between Counties Offaly and Laois, and runs along a north-east/south-west aligned ridge for approximately 25 km. Much of the site is over 200m in altitude, rising to a maximum height of 527m at Arderin. The mountains are of Old Red Sandstone, flanked by Silurian rocks. Several important rivers rise within the site, including the Barrow, Delour and Silver. The mountains have a near continuous ridge of mountain blanket bog, with wet and dry heaths also well represented. The SPA is of ornithological importance because it provides excellent nesting and foraging habitat for breeding Hen Harrier and is one of the top sites in the country for the species. The presence of three species, Hen Harrier, Merlin and Peregrine, which are listed on Annex I of the E.U. Birds Directive is of note. The SPA is a Ramsar Convention site and a Biogenetic Reserve. Part of the Slieve Bloom Mountains SPA is a Statutory Nature Reserve.	<u>Loss of habitat</u> No loss of habitat is planned to this SPA habitat. However, the site borders this SPA at the north-eastern boundary and there is a risk of incidental damage or loss to this woodland habitat during the construction and operation phases, which could be used be foraging hen harriers. Therefore, there is a pathway for potential LSE to this SPA as a result of potential habitat loss.	YES
					<u>Changes in water quality</u> Changes in water quality will not affect the SCI for this SPA: hen harrier. The project and this SPA are located within the same Water Framework Directive (WFD) sub-catchment and groundwater catchment. However, the Project is located downstream of the SPA (refer to **Figure 2** and **Figure 7-8** included in **Appendix B**). Therefore, the Site and this SPA are not hydrologically connected and there is no pathway for potential LSE to this SPA as a result of changes in water quality.	NO
					<u>Noise and vibration</u> The proposed works will create noise and vibrations through the use of heavy machinery. The Project borders this SPA at the northeastern boundary. Therefore, there is a pathway for potential LSE to this SPA as a result of noise and vibration.	YES
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The site borders this SPA at the north-eastern boundary. Therefore, there is a pathway for potential LSE to this SPA through the degradation of suitable habitat used by its' SCI as a result of emissions to air (dust).	YES
Slieve Bloom Mountains SAC [000412]	1.5 km (north)	• Habitats • Northern Atlantic wet heaths with *Erica tetralix* [4010]	• To restore the favourable conservation condition of Northern Atlantic wet heats with *Erica tetralix* in Slieve Bloom Mountains SAC.	The Slieve Bloom Mountains SAC are situated on the Offaly-Laois border, starting about 8 km north-east of Roscrea and running about 24 km north-east, towards Clonaslee.	<u>Loss of habitat</u> **T**he project site does not overlap with the SAC. Therefore, there is no pathway for loss of habitat within the SAC.	NO

[11] When measured in a straight line over the shortest distance between the Site and European site

[12] For SPAs, the bird species that are the reason for designation are Species of Conservation Interest (SCIs) and for SACs the habitats and species that are the reason for designation are its Qualifying Interests (QIs). For convenience, the term qualifying interest or QI is used here for both SPAs and SACs

[13] Protected Sites in Ireland | National Parks & Wildlife Service (npws.ie) (last accessed November 2023)

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
		• Blanket bogs (*if active bog) [7130] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, Salicion albae) [91E0]	• To restore the favourable conservation condition of Blanket bogs in Slieve Bloom Mountains SAC. • To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)* in Slieve Bloom Mountains SAC. • ConservationObjectives.rdl (npws.ie)	The mountains are of Old Red Sandstone, flanked by Silurian rocks. The site extends from approximately 180 m to 529 m O.D. The Slieve Bloom Mountains are an important link in the east-to-west gradient of bogs in Ireland and are floristically linked to the midland raised bogs north of the site. The intactness of the blanket bog here is remarkable and is echoed in few other areas in Ireland, making this site of unique conservation value. Also of conservation importance is the presence of wet heath and an example of alluvial forest.	Changes in water quality Changes in water quality will not affect QI habitats within the SAC. The project and this SAC are located within the same Water Framework Directive (WFD) sub-catchment and groundwater catchment. However, the Project is located downstream of the SAC (refer to **Figure 2** and **Figure 7-8** included in **Appendix B**). Therefore, the Site and this SAC are not hydrologically connected and there is no pathway for potential LSE to this SAC as a result of changes in water quality.	NO
					Emissions to air (dust) Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016).	NO
					Noise and vibration **T**his SAC is designated for habitats only. Therefore, there is no potential pathway for potential LSE to this SAC as a result of noise and vibration. The SAC is located 1.5 km from the site with no hydrological connectivity, and therefore there is no pathway between the site and the SAC as a result of emissions to air (dust).	NO
River Barrow and River Nore SAC [002162]	2.4km east	• Habitats • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Reefs [1170] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (*Juncetalia maritimi*) [1410]	• To maintain the favourable conservation condition of Desmoulin's whorl snail in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of the Nore freshwater pearl mussel in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of White-clawed crayfish in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Sea lamprey in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Brook lamprey in the River Barrow and River Nore SAC.	This SAC consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The SAC passes through eight counties – Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. Major towns along the edge of the site include Mountmellick, Portarlington, Monasterevin, Stradbally, Athy, Carlow, Leighlinbridge, Graiguenamanagh, New Ross, Inistioge, Thomastown, Callan, Bennettsbridge, Kilkenny and Durrow. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow, and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore.	Loss of habitat The project site does not overlap with the SAC. Therefore, there is no pathway for loss of habitat within the SAC.	NO
					Changes in water quality The nearest stream is located immediately south of the Site. The stream flows downstream into the Delour River, which is part of the SAC. Therefore, there is a direct hydrological pathway between the proposed development and the River Barrow and River Nore SAC via the shallow groundwater in the sands and gravels and the adjacent surface water courses (refer to **Figure 2** and **Figure 7-8** included in **Appendix B**). Extraction will remain above the water table level, and hence flow paths that may be contributing to the adjacent streams will not be impacted.	YES

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
		• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] • European dry heaths [4030] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Petrifying springs with tufa formation (*Cratoneurion*) [7220] • Old sessile oak woods with Ilex and *Blechnum* in the British Isles [91A0] • Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • Species • *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Alosa fallax fallax* (Twaite Shad) [1103] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355] • *Trichomanes speciosum* (Killarney Fern) [1421]	• To restore the favourable conservation condition of River lamprey in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Twaite shad in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Salmon in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of Estuaries in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of the mudflats and sandflats not covered by seawater at low tide in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Atlantic salt meadows in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of otter in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Mediterranean salt meadows in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of Killarney Fern in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of European dry heaths in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of Hydrophilus tall herb communities of plains and of the montane to alpine levels in the River Barrow and River Nore SAC. • To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion*) in the River Barrow and River Nore SAC. • To restore the favourable conservation condition of Old oak woodland with *Ilex* and *Blechnum* in the River Barrow and River Nore SAC.	Overall, the SAC is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive. Furthermore, it is of high conservation value for the populations of bird species that use it. The occurrence of several Red Data Book plant species including three rare plants in the salt meadows and the population of the hard water form of the freshwater pearl mussel, which is limited to a 10 km stretch of the Nore, add further interest to this site	<u>Noise and vibrations</u> The EIAR **Chapter 10** assesses that noise levels for Receptor R09 and beyond will be negligible. R09 is approximately 500m from the site boundary and the River Barrow and River Nore SAC is located approximately 2.4 km from the site. Therefore, there is no pathway between the site for noise impact to this SAC.	NO
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The SAC is located 2.4 km from the site. However, the dust particles may enter the stream, located immediately south of the site and travel downstream to reach the SAC. This may impact water quality and affect QI species and QI aquatic habitats. Therefore, there is a pathway for potential LSE to this SPA through the degradation of suitable habitat used by its SCI as a result of emissions to air (dust).	YES

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
			• To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) in the River Barrow and River Nore SAC. • Site_specific_cons_obj (npws.ie)			
Coolrain Bog SAC [002332]	5.8 km (south)	• Habitats • Active raised bogs [7110] • Degraded raised bogs still capable of natural regeneration [7120] • Depressions on peat substrates of the *Rhynchosporion* [7150]	• To restore the favourable conservation condition of Active raised bogs in Coolrain Bog SAC. • ConservationObjectives.rdl (npws.ie)	Coolrain Bog is situated in Co. Laois, approximately 4 km north-east of Borris-in-Ossory, mainly within the townlands of Derries, Rossnaclonagh Outside, Coolrain and Caher. The SAC comprises a raised bog that includes both areas of high bog and cutover bog. The northern margin of the site is bounded by the Tonet River and the eastern boundary by forestry on old cutover. Coolrain Bog is a site of considerable conservation significance as it comprises a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This SAC supports a good diversity of raised bog microhabitats, including hummock/hollow complexes and flushes. Unlike most other raised bogs, Coolrain Bog developed over Old Red Sandstone rather than limestone, a factor that will have affected the water chemistry of the site and the early development of the bog. Its geographical location is important as, along with the nearby Knockacoller Bog, it is at the most southerly edge of the range of the true Midland Raised Bog type. Active raised bog is listed as a priority habitat on Annex I of the E.U. Habitats Directive.	<u>Loss of habitat</u> The project site does not overlap with the SAC. Therefore, there is no pathway for loss of habitat within the SAC.	NO
					<u>Changes in water quality</u> The site and this SAC are located within the same WFD sub-catchment. However, the two streams nearest to the site do not have a direct hydrological connection with this SAC (refer to **Figure 2** and **Figure 7-8** included in **Appendix B**).. The site and this SAC are not located within the same WFD groundwater catchment. Therefore, there is no pathway for potential LSE to this SAC as a result of changes in water quality.	NO
					<u>Noise and vibrations</u> This SAC is designated for habitats only. Therefore, there is no potential pathway for potential LSE to this SAC as a result of noise and vibration.	NO
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The SAC is located 5.8 km from the site with no hydrological connectivity, and therefore there is no pathway between the site and the SAC as a result of emissions to air (dust).	NO
River Nore SPA	6 km (southeast)	Birds • A229 Kingfisher *Alcedo atthis*	• To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. • (No specific attributes or targets have been set for this SPA). • CO004233.pdf (npws.ie)	The River Nore SPA is a long, linear site that includes the following river sections: the River Nore from the bridge at Townparks, (north-west of Borris in Ossory) to Coolnamuck (approximately 3 km south of Inistioge) in Co. Kilkenny; the Delour River from its junction with the River Nore to Derrynaseera bridge (west of Castletown) in Co. Laois; the Erkina River from its junction with the River Nore at Durrow Mills to Boston Bridge in Co. Laois; a 1.5 km stretch of the River Goul upstream of its junction with the Erkina River; the Kings	<u>Loss of habitat</u> The Site does not overlap with this SPA. There is no suitable habitat within the Site for the SCI of this SPA. Therefore, there is no pathway for loss of habitat within the SPA.	NO
					<u>Changes in water quality</u> The nearest stream is located immediately south of the Site. The stream flows downstream into the Delour River, which is part of the SPA. Therefore,	YES

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
				River from its junction with the River Nore to a bridge at Mill Island, Co. Kilkenny. The river includes the river channel and marginal vegetation. The River Nore SPA is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the E.U. Birds Directive.	there is a direct hydrological pathway between the proposed development and the River Barrow & River Nore SPA via the shallow groundwater in the sands and gravels and the adjacent surface water courses (refer to **Figure 2** and **Figure 7-8** included in **Appendix B**) Extraction will remain above the water table level, and hence flow paths that may be contributing to the adjacent streams will not be impacted.	
					<u>Noise and vibrations</u> Chapter 10 of the EIAR assesses that noise levels caused by traffic relating to the site will be negligible. Therefore, there is no pathway for LSE relating to noise to the QI of this SPA.	NO
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The SPA is located 6 km from the site. However, the dust particles may enter the stream, located immediately south of the site and travel downstream to reach the SPA. This may impact water quality and affect SCI species. Therefore, there is a pathway for potential LSE to this SPA through the degradation of suitable habitat used by its' SCI species as a result of emissions to air (dust).	YES
Knockacoller Bog SAC [002333]	7.3 km (southeast)	• Habitats • Active raised bogs [7110] • Degraded raised bogs still capable of natural regeneration [7120] • Depressions on peat substrates of the *Rhynchosporion* [7150]	• To restore the favourable conservation condition of Active raised bogs in Knockacoller Bog SAC. • ConservationObjectives.rdl (npws.ie)	Knockacoller Bog is situated approximately 2 km south-west of Castletown in Co. Laois, and lies mainly within the townlands of Butterisland, Rush Hall and Knockacoller. The SAC comprises a raised bog that includes both areas of high bog and cutover bog. Knockacoller Bog is a site of considerable conservation significance as it comprises a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This SAC supports a good diversity of raised bog microhabitats, including hummock/hollow complexes, pools and regenerating cutover. Knockacoller Bog, along with the adjacent Coolrain Bog, is important because it represents the extreme southern range of the true Midland Raised Bog type. Active raised bog is listed as a priority habitat on Annex I of the E.U. Habitats Directive.	<u>Loss of habitat</u> The project site does not overlap with the SAC. Therefore, there is no pathway for loss of habitat within the SAC.	NO
					<u>Changes in water quality</u> The Site and this SAC are not hydrologically connected. Therefore, there is no pathway for potential LSE to this SAC as a result of changes in water quality.	NO
					<u>Noise and vibrations</u> **T**his SAC is designated for habitats only. Therefore, there is no potential pathway for potential LSE to this SAC as a result of noise and vibration.	NO
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The SAC is located 7.3 km from the site with no hydrological connectivity, and therefore there is no	NO

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
					pathway between the site and the SAC as a result of emissions to air (dust).	
Clonaslee Eskers and Derry Bog SAC [000859]	12.5 km (north)	• Habitats • Petrifying springs with tufa formation (*Cratoneurion*) [7220] • Alkaline fens [7230] • *Vertigo geyeri* (Geyer's Whorl Snail) [1013]	• To restore the favourable conservation condition of Alkaline fens in Clonaslee Eskers and Derry Bog SAC. • To restore the favourable conservation condition of Geyer's Whorl Snail in Clonaslee Eskers and Derry Bog SAC. • ConservationObjectives.rdl (npws.ie)	Located approximately 5 km west of the town of Clonaslee, and largely in Co. Laois, this SAC consists of a series of morainic hills and esker ridges which are the legacy of the last period of glaciation. To the northwest, the Derry Hills are two isolated hills situated in a bog, which forms part of the site. The main esker ridge runs along the southern part of the site. This SAC is of conservation importance for the presence of alkaline fen vegetation, with petrifying springs, and is considered one of the best sites in the south-east region for this habitat. Also of interest is the extremely unusual assemblage of plants associated with the esker ridges, which includes three rare plants, two of which are legally protected in Ireland. Of further conservation importance is the presence of the rare snail *Vertigo geyeri*.	<u>Loss of habitat</u> The project site does not overlap with the SAC. Therefore, there is no pathway for loss of habitat within the SAC.	NO
					<u>Changes in water quality</u> The Site and this SAC are not hydrologically connected. Therefore, there is no pathway for potential LSE to this SAC as a result of changes in water quality.	NO
					<u>Noise and vibrations</u> Chapter 10 of the EIAR assesses that noise levels caused by traffic relating to the site will be negligible. Therefore, there is no pathway for LSE relating to noise to the QI of this SPA.	NO
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The SAC is located 12.5 km from the site with no hydrological connectivity, and therefore there is no pathway between the site and the SAC as a result of emissions to air (dust).	NO
Island Fen SAC [002236]	14.4 km (northwest)	• Habitats • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Alkaline fens [7230]	• To maintain the favourable conservation condition of *Juniperus communis* formations on heaths or calcareous grasslands in Island Fen SAC. • To maintain the favourable conservation condition of Alkaline fens in Island Fen SAC. • ConservationObjectives.rdl (npws.ie)	Island Fen SAC is located in a small valley in the foothills of the Slieve Bloom Mountains, southwest of Clareen village in Co. Offaly. The geology of the area is Lower Carboniferous Limestone and the principal soil is grey brown podzolic with brown earths, gleys, basin peat and limestone gravels and sands. The site overlies an old lakebed lined with shelly marl. Soil cover is generally thin, with some rocks protruding locally. This wetland site is relatively small but is quite species-diverse. This SAC is important for the occurrence of excellent examples of upright Juniper scrub formations, on a species rich calcareous grassland/heath, and alkaline fen, both habitats listed on Annex 1 of the E.U. Habitats Directive.	<u>Loss of habitat</u> **T**he project site does not overlap with the SAC. Therefore, there is no pathway for loss of habitat within the SAC.	NO
					<u>Changes in water quality</u> The Site and this SAC are not hydrologically connected. Therefore, there is no pathway for potential LSE to this SAC as a result of changes in water quality.	NO
					<u>Noise and vibrations</u> This SAC is designated for habitats only. Therefore, there is no potential pathway for potential LSE to this SAC as a result of noise and vibration. Additionally, there is sufficient distance between the Project and this SAC for noise and vibrations to affect this site.	NO
					<u>Emissions to air (dust)</u> Large dust particles (greater than 30 µm) will largely deposit within 100m of sources, with	NO

European Site Name and Code	Distance[11]	Qualifying Interests[12]	Conservation Objectives	Brief Description[13]	Source-Pathway-Receptor for each Potential Impact	LSE
					intermediate particles (10 – 30 µm) likely to travel up to 200 – 500m (IAQM, 2016). The SAC is located 14.4 km from the site with no hydrological connectivity, and therefore there is no pathway between the site and the SAC as a result of emissions to air (dust). Additionally, there is sufficient distance between the Project and this SAC for noise and vibrations to affect this site.	

3.5 Step Four, Part One: Likely Significant Effects

Three European site(s) were screened in and are subject to potential likely significant effects (LSEs) arising from the project:

- Slieve Bloom Mountains SPA;
- River Barrow and River Nore SAC; and
- River Nore SPA.

The impacts with potential pathways have been identified as (i) habitat loss; (ii) indirect pollution of water bodies (rivers or stream) which may reduce surface and/or groundwater quality; (iii) construction and operational phase noise; and (iv) emissions to air (fugitive dust emissions and particulate matter) arising from the sand and gravel extraction activities, on these European sites and are detailed further for each Natura 2000 site below.

3.5.1 For the Project 'Alone'

3.5.1.1 Slieve Bloom Mountains SPA (004160)

Habitat loss

The Slieve Bloom Mountains SPA borders the northeastern part of the Site. The current proposals provided on **Figure 2-3** – (see **Appendix B)** demonstrate the extent of the planned excavation area that will require habitat removal. This is located to the south of the existing pit and will not impact the SPA. Only minor construction is required for the welfare facilities, office and weighbridge, paved surface, and settlement lagoons.

Therefore, no direct loss of habitats within the SPA is anticipated as a result of the project. However, there is potential for incidental habitat loss to occur during the construction phase without appropriate mitigation measures being implemented.

Any incidental habitat losses would cause a reduction in habitat for potential prey species for the SCI species hen harrier, leading to a potential reduction in the population of hen harrier within the SPA. This has the potential to affect the SCI species, hen harrier, through direct loss of foraging habitat and a reduction of available prey. It should be noted that the risk of this impact is considered so small it considered imperceptible and would not have LSE to the hen harrier.

Due to the lack of LSE, incidental habitat loss or damage would **not undermine the conservation objectives** set out for this SCI species. Therefore, this impact is scoped out and will not be carried forward into the Stage 2 Assessment.

Noise and Vibrations

The project will create noise levels, which may impact nearby birds, including SCI species hen harrier. According to the EAIR Chapter 10 – Noise, the noise levels are predicted to be 70 dB(A) during the construction phase and 55 dB(A) during the operational phase.

Disturbance may adversely affect breeding hen harrier, for example, disturbance from forestry operations has resulted in the failure of at least two nests (O'Donoghue, 2010). Furthermore, noise may impact prey species for hen harrier, within 50m of the noise source (Currie and Elliot, 1997). This may reduce the populations of prey species for hen harrier as they disperse away from the noise source and potentially away from the SPA and hen harrier territories.

Disturbance to prey species may lead to a reduction in their populations. This could have a knock-on effect on the hen harrier by reducing their population and result in the conservation

objectives for this SCI species being undermined and leading to LSE for the SCI species hen harrier. Therefore, this impact should be carried forward into the Stage 2 Assessment.

Emissions to Air (Dust)

The project will create dust through the proposed extraction works. Guidance states that large dust particles (greater than 30 µm), which make up the greatest proportion of dust emitted from minerals workings, will largely deposit within 100m of sources. Intermediate-sized particles (10-30 µm) are likely to travel up to 200-500 m (IAQM, 2016). Furthermore, the prevailing wind direction in Ireland is from the south-west, which may allow dust particles to travel in the direction of the SPA.

This could lead to minor habitat degradation as dust may cover vegetation and may affect photosynthesis, respiration, transpiration and allow the penetration of phytotoxic gaseous pollutants (Farmer, 1991). This may indirectly impact hen harrier by reducing the quality of their breeding and foraging habitat within the SPA, although the pathway is considered very weak.

Habitat degradation via dust within the SPA may undermine the conservation objective, specifically, to maintain the extent and quality of key habitats that are of importance to hen harrier. Therefore, this impact should be carried forward into the Stage 2 Assessment.

3.5.1.2 River Barrow and River Nore SAC (002162)

The conservation objectives for River Barrow and River Nore SAC (002162) are:

- "To maintain the favourable conservation condition of Estuaries in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of the Mudflats and sandflats not covered by seawater at low tide in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of Desmoulin's whorl snail in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of White-clawed crayfish in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Sea lamprey in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Brook lamprey in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of River lamprey in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Twaite shad in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Salmon in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of Salicornia and other annuals colonizing mud in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Atlantic salt meadows in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Otter in the River Barrow and River Nore SAC.

- To restore the favourable conservation condition of Mediterranean salt meadows in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of Killarney Fern in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of the Nore freshwater pearl mussel in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of European dry heaths in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of Hydrophilus tall herb communities of plains and of the montane to alpine levels in the River Barrow and River Nore SAC.
- To maintain the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion) in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Old oak woodland with Ilex and Blechnum in the River Barrow and River Nore SAC.
- To restore the favourable conservation condition of Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) in the River Barrow and River Nore SAC."

Changes in water quality

The River Barrow and River Nore SAC is located ca. 2.4 km downstream from the Site with a hydrological link via the stream located immediately south of the site boundary and the Killeen and Delour rivers.

Any pollution caused (for example, spillages and surface water runoff) entering the water of these surface waters has the potential to travel downstream and affect the habitats and species designated for these Natura 2000 sites.

This may affect the QI species by altering the chemical composition of the water and potentially reducing their population and/or range. Similarly, the QI habitats may also be affected by and change to the chemical composition of the water and may be harmed as a result.

Therefore, changes in water quality should be carried forward into the Stage 2 Assessment as it might undermine the conservation objectives for the qualifying features of River Barrow and River Nore SAC and River Nore SPA.

Emissions to Air (Dust)

The River Barrow and River Nore SAC is located ca. 2.4 km downstream from the Site with a hydrological link via the stream located immediately south of the site boundary and the Killeen and Delour rivers.

Any pollution caused by dust creation entering the water of these surface waters has the potential to travel downstream and affect the habitats and species designated for these Natura 2000 sites.

This may affect the QI species by altering the chemical composition of the water and potentially reducing their population and/or range. Similarly, the QI habitats may also be

affected by and change to the chemical composition of the water and may be harmed as a result.

Therefore, changes in emissions to air (dust) should be carried forward into the Stage 2 Assessment as it might undermine the conservation objectives for the qualifying features of River Barrow and River Nore SAC and River Nore SPA.

3.5.1.3 River Nore SPA (000677)

The conservation objectives for River Nore SPA (000677) are:

- "To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA (No specific attributes or targets have been set for this SPA)."

Changes in water quality

The River Nore SPA is located ca. 6 km downstream from the Site with a hydrological link via the stream located immediately south of the site boundary and the Killeen and Delour rivers.

Any pollution caused (for example, spillages and surface water runoff) entering the water of these surface waters has the potential to travel downstream and affect the habitats and species designated for these Natura 2000 sites.

This may affect the SCI species kingfisher indirectly by affecting their prey through chemical alterations to the water. Any reduction in prey would have a knock-on effect to the SCI species.

Therefore, likely significant effects on these European sites will be carried forward to Stage 2 Assessment as the Project may undermine the conservation objectives for QIs and SCIs of this European sites.

Emissions to Air (Dust)

The River Nore SPA is located ca. 6 km downstream from the Site with a hydrological link via the stream located immediately south of the site boundary and the Killeen and Delour rivers.

Any pollution caused by dust creation entering the water of these surface waters has the potential to travel downstream and affect the habitats and species designated for these Natura 2000 sites.

This may affect the SCI species kingfisher indirectly by affecting their prey through chemical alterations to the water. Any reduction in prey would have a knock-on effect to the SCI species.

Therefore, changes in emissions to air (dust) should be carried forward into the Stage 2 Assessment as it might undermine the conservation objectives for the qualifying features of River Barrow and River Nore SAC and River Nore SPA.

3.6 Step Four, Part Two: Likely Significant Effects for the Project 'In Combination'

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects (CIEEM, 2018).

This project is not part of any county development plan.

In addition to a review of local knowledge, a GIS search was undertaken of available online planning search facilities provided by the prevailing local planning authorities, An Bord

Pleanála and the EIA Portal, as well as the Laois County Development Plan (2021-20237) and Kilkenny City & County Development Plan (2021-2027) and the on-line planning portal for these counties. The GIS search covered a radius of c. 5km from the application site. Planning applications located beyond this 5 km buffer were also considered where it was assessed that they may affect the River Barrow and River Nore SAC and River Nore SPA (i.e., projects in close proximity to the catchment - WFD 15 catchment area). These are provided in **Table 5**.

All potential impacts that were initially screened in for LSE for the three Natura 2000 sites are assessed and have been considered further for assessment at Stage Two. Cumulative impacts are also considered at Stage Two, as any LSE caused from the project 'alone' could be exacerbated by in combination effects.

Table 5: Granted planning applications within 5 km of the site and projects that may affect the River Barrow and River Nore SAC and River Nore SPA

Planning Ref / Link	Brief Description	Approximate Distance from Site	Planning Status
20154 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/20154/0	Construction of: 1. A slatted cattle house, 2. The conversion of an existing hayshed to a slatted cattle house, (3) a cattle handling area and all ancillary works and services.	Adjacent	Permission granted 27/07/20
Unknown	Quarry Mounthall - Google Maps.	c. 1.2 km SW	N/A
22740 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/22740/0	New single storey National Mountain Bike Trail Head Building consisting of a Café, Bike Hire Facility, Toilets, car park and all associated site works, demolition of an existing building at Baunreagh, Co. Laois.	c. 4 km NE	Permission granted 14/03/23
21423 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/21423/0	upgrade Castletown wastewater treatment plant.	c. 8 km SE	Permission granted 07/09/21
2460078 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/2460078/0	Upgrade of the Ballyroan Wastewater Treatment Plant.	c. 10km SE	RFI
Tipperary https://www.eplanning.ie/TipperaryCC/AppFileRefDetails/2360677/0	4.11 ha / 84.28-acre solar farm at lands known as Brehony's Bog.	c. 14 km SW	Permission granted 21/05/24
19/530 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/19530/0	Renewable Gas Facility, associated peat deposition area and external and internal road upgrades at Cúil Na Móna Bog... The total area of the proposed development is 17.34 ha.	c. 17 km E	Permission granted 23/05/22 (ABP)

Planning Ref / Link	Brief Description	Approximate Distance from Site	Planning Status
19328 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/19328/0	Upgrade to the existing wastewater treatment plant.	c. 20 km SE	Permission granted 03/06/20
21459 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/21459/0	Infill of land (2.2 ha).	c. 20 km SE	Permission granted 20/12/21
2078 ePlan - Online Planning Details	Construction of 8 no. wind turbines with a tip height of up to 185 metres and all associated foundations and hardstanding areas; 1 no. on-site electrical substation; 1 no. temporary construction compound; all associated underground electrical and communications cabling connecting the turbines to the proposed on-site electrical substation.	c. 20 km NE	Under judicial review
2360390 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/2360390/0	Extraction of sand and gravel (c. 787,310m3 total or c. 1.57 million tonnes total, at a maximum extraction rate of c. 200,000 tonnes per annum) over the proposed 10-year permission sought (Booth Precast).	c. 22 km SE	RFI
21599 https://planning.kilkennycoco.ie/AppFileRefDetails/21599/0	Galmoy – Reopening of underground zinc and lead mine.	c. 25 km S	Permission granted 02/08/22
VA11.308448 308448 | An Bord Pleanála (pleanala.ie)	A substation, electricity lines, on-site access tracks and all associated site development works to connect to Pinewoods Wind Farm, Co. Laois.	c. 27 km SE	Permission granted 22/11/21
21700 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/21700/0	Continued use and operation of existing quarry including deepening of the quarry. Extraction will be confined to the existing permitted quarry area (P.A. Ref. 10/383) comprising an extraction area of c. 14.5 ha within the full landholding of c. 19.6 ha.(Lagan).	c. 30 km SE	Permission granted 01/07/2024
PA11.317809 https://www.pleanala.ie/en-ie/case/317809	Coolglass Wind Farm (Co. Laois).	c. 30 km SE	Under Consideration

Planning Ref / Link	Brief Description	Approximate Distance from Site	Planning Status
2073 https://planning.kilkennycoco.ie/AppFileRefDetails/2073/0	Upgrade Ballyragget Wastewater Treatment Plant.	c. 30 km SE	Permission granted 26/06/20
https://planning.kilkennycoco.ie/AppFileRefDetails/22687/0	2 Anaerobic Digester Plants.	c. 30 km SE	At appeal
22687 ePlan - Online Planning Details (kilkennycoco.ie)	Installation of 31.49km of a 38kV underground electrical cabling connecting to 9 turbine Farranrory wind farm (plus ref 211620 2.25km).	c. 35 km SE	Permission granted 26/09/22
2360097 https://planning.kilkennycoco.ie/AppFileRefDetails/2360097/0	Threecastles Quarry Extension.	c. 40km SE	Permission granted 26.04.24
19/887 ePlan - Online Planning Details (kilkennycoco.ie)	mixed use of 266 no. residential units, 2 no. office blocks, nursing home, 2 no. retail/commercial units with offices overhead, creche and delivery of 3.96 hectares of open parkland.	c. 45 km SE	Permission granted 23/04/21 (ABP)
20180 ePlan - Online Planning Details and 318295 | An Bord Pleanála (pleanala.ie) 5 turbines	or the installation of approximately 4.6 kilometres (km) of underground cables within the Carlow County Council boundary and approximately 2.0 km within the Laois County Council (LCC) boundary with a voltage of up to 38 kilovolts and associated works, including a new substation within LCC, for the connection of the consented Bilboa Wind Farm upgrading of an existing forestry track construction of two new onsite access tracks.	c. 45 km SE	Permission granted 13/08/21
JA10.307796 307796 | An Bord Pleanála (pleanala.ie)	The proposed Kilkenny Urban Park and Street will cover an area of c.1.44ha. The Park will comprise of a variety of grassed areas, trees, paved surfaces, water feature and meeting points. The Street will be a pedestrian and cyclist dominated space.	c. 45 km SE	Permission granted 22/02/21

Planning Ref / Link	Brief Description	Approximate Distance from Site	Planning Status
20972 ePlan - Online Planning Details	The entirety of the development constitutes the provision of a 9-turbine Farranrory wind farm and all associated works on lands in both Counties Tipperary and Kilkenny.	c. 45 km S	Permission granted 30/03/21
21348 https://planning.kilkennycoco.ie/AppFileRefDetails/21348/0	Housing development on a site of c. 3.2 ha. The development will consist of: Construction of 77 no. residential units.	c. 45 km SE	Permission granted 15/10/21
22644 https://planning.kilkennycoco.ie/AppFileRefDetails/22644/0	Brownstown Solar Farm.	c. 45 km SE	At appeal
PA01.315365 315365 | An Bord Pleanála (pleanala.ie)	Wind energy development consisting of 7 no. wind turbines and all associated works. White Hill Wind Farm.	c.45 km SE	Permission granted 21/11/23
22662 ePlan - Online Planning Details	Industrial building (for the purpose of medical device manufacturing), with a gross floor area (GFA) of 29,490.	c. 50 km NE	Permission granted 11/01/2023
22487 https://planning.kilkennycoco.ie/AppFileRefDetails/22487/0	underground cable is intended to connect the permitted 38kV substation in permitted Clashwilliam Solar Farm.	c. 50 km SE	Permission granted 30/01/23
2360562 https://planning.kilkennycoco.ie/AppFileRefDetails/2360562/0	Upgrade of the Kilmoganny Wastewater Treatment Plant.	c. 50 km S	Permission granted 11/03/24
21/508 http://idocsweb.kilkenny.ie/listFiles.aspx?catalog=planning&id=21508	Continuation of use of the existing pit consisting of 6.8 Ha. as previously granted planning permission under P04/136, P10/601 and P12/604; Extension of the pit into an adjoining greenfield area consisting of 8.9 Ha. which will be subject to extraction and occasional processing of material (P. Hennessy & Co. Ltd).	c. 55 km SE	Permission granted 18/01/22

Planning Ref / Link	Brief Description	Approximate Distance from Site	Planning Status
20899 https://planning.kilkennycoco.ie/AppFileRefDetails/20899/0	grid connection from the consented Ballytobin Solar Farm to the existing 38kV ESB substation south of Callan Co. Kilkenny.	c. 55 km S	Permission granted 18/06/21
2360069 https://planning.kilkennycoco.ie/AppFileRefDetails/2360069/0	Castlegarden Solar PV energy development 103.64 ha.	c. 60 km SE	At appeal
JA10.317082 317082 | An Bord Pleanála (pleanala.ie)	Flood Relief Scheme.	c. 65 km SE	Under Consideration
PA10.309306 http://www.pleanala.ie/casenum/309306.htm	The construction of 21 wind turbines and ancillary works at Castlebanny Wind Farm, Co. Kilkenny.	c.73 km SE	Permission granted 26/09/22

3.7 Stage One: Conclusions and Recommendations

This screening report for Appropriate Assessment, based on the best available scientific information, shows that the Project at Mounthall & Cummer townlands, Camross, Co. Laois, in the absence of the implementation of suitable mitigation, could pose a risk of LSE on the Slieve Bloom Mountains SPA, River Barrow and River Nore SAC and River Nore SPA and these sites will be assessed further at Stage Two (refer to **Table 6**). This can be found in the next section of this document.

In relation to the following 5 no. sites: Slieve Bloom Mountains SAC [000412], Coolrain Bog SAC [002332], Knockacoller Bog SAC [002333], Clonaslee Eskers and Derry Bog SAC [000859], and Island Fen SAC [002236], it has been objectively concluded by SLR, beyond reasonable scientific doubt that:

- The proposed development is not directly connected with, or necessary to the conservation management of these European sites.
- The proposed development is not likely to either directly, or indirectly significantly affect the Qualifying interests or conservation objectives of these European sites.
- The proposed development, either alone or in combination with other plans or projects, is not likely to have significant effects on the European site.
- It is possible to conclude that LSE can be excluded for these sites at the screening stage.

Table 6: Summary of European sites scoped in or scoped out of further assessment.

European site Name and Code	Scoped In/Out	Justification	Progress to Stage Two?
Slieve Bloom Mountains SPA [004160]	Scoped in	S-P-R and LSE identified for: • Loss of habitat • Noise and vibration • Emissions to air (dust)	**Yes**
Slieve Bloom Mountains SAC [000412]	Scoped out	No S-P-R and no LSE identified.	**No**
River Barrow and River Nore SAC [002162]	Scoped in	S-P-R and LSE identified for: • Noise and vibration • Emissions to air (dust)	**Yes**
Coolrain Bog SAC [002332]	Scoped out	No S-P-R and no LSE identified.	**No**
River Nore SPA [004233]	Scoped in	S-P-R and LSE identified for: • Noise and vibration • Emissions to air (dust)	**Yes**
Knockacoller Bog SAC [002333]	Scoped out	No S-P-R and no LSE identified.	**No**

European site Name and Code	Scoped In/Out	Justification	Progress to Stage Two?
Clonaslee Eskers and Derry Bog SAC [000859]	Scoped out	No S-P-R and no LSE identified.	**No**
Island Fen SAC [002236]	Scoped out	No S-P-R and no LSE identified.	**No**

4.0 STAGE TWO: APPROPRIATE ASSESSMENT (NATURA IMPACT STATEMENT)

This Natura Impact Statement (NIS) was prepared as part of a planning application by Breedon Materials Ltd. to Laois County Council in respect of the proposed Project at Mounthall & Cummer townlands, Camross, Co. Laois.

This NIS presents information on the project and on the European sites for which LSEs have been identified, in order for the competent authority, in this case Laois County Council, to carry out a Stage Two Appropriate Assessment. The purpose of the Stage Two AA is to determine whether the project would lead to any adverse effects on the integrity of Slieve Bloom Mountains SPA, River Barrow and River Nore SAC, and River Nore SPA. The integrity of a European site can be defined as 'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and / or populations of species for which the site is or will be classified'.

The headings within the appropriate assessment report template provided in the European Commission guidance document on the assessment of plans and projects significantly affecting European sites (EC, 2021) have been used to provide a framework to examine the potential impacts of the project. This section of the report sets out the potential implications of the plan or project (both alone or in combination with other projects or plans) on the integrity of the European site with respect to the conservation objectives of the site and to its structure and function. The precautionary principle should be applied when considering the potential implications and the focus should be on demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of Slieve Bloom Mountains SPA, River Barrow and River Nore SAC, and River Nore SPA. Where this is not the case, adverse effects must be assumed.

4.1 Step One, Part One: Information on the Project and on the European sites concerned

4.1.1 The Project

A full project description is provided in **Section 1.3** above. In summary, the Project comprises of the continued use and extension to an existing sand & gravel pit. The site will be returned to agricultural use following the completion of the sand and gravel extraction.

Each phase is detailed further below:

4.1.1.1 Construction Phase

Construction works will be carried out over a 6-month period and will involve:

- Installation of site facilities consisting of mobile aggregate processing plant, portacabin site office, portacabin welfare facility, serviced portaloo toilet, refuelling pad with hydrocarbon interceptor, weighbridge, wheelwash and water supply borehole.
- Construction of silt storage lagoons associated with the washing plant closed loop water recycling system.
- Construction of perimeter screening berms using soils stripped from the extraction area.
- Provision of acoustic fencing adjacent to residences R1 to the north and R2/R3 to the east. The acoustic timber fencing will be c. 2-3m in height and will be constructed with high quality boards in such a way that eliminates gaps that sound can easily travel through.

- Vegetation planting with native species will be carried out around the periphery of the application area. Planting will be carried out in Year 1 to allow the maximum time for the vegetation to become established. The vegetation will be retained indefinitely following the completion of sand and gravel extraction operations at the site.
- Re-routing of the 5 no. electricity poles located within the proposed extension extraction area to traverse the periphery of the site. These works would be carried out by ESB Networks.

4.1.1.2 Operational Phase

The proposed operational phase will see sand and gravel extraction carried out within an overall extraction area of c. 8 hectares. It is proposed that extraction would be carried out over a 10-year period at an average rate of 80,000 tonnes per annum.

Extraction within the existing pit was carried out as a dry extraction operation above the groundwater table. It is proposed that extraction within the extension area will also be carried out above the groundwater table, with the proposed pit floor sloping from northwest (c. 195m AOD) to southeast (c. 173m AOD).

4.1.1.3 Restoration Phase (Reinstatement to Agricultural Lands / Beneficial Habitat Areas)

Upon the cessation of extraction operations, it is proposed to return the worked lands to agricultural grazing lands with some dedicated areas for natural habitat after-uses included.

Restoration activities will be carried out after extraction operations have ceased. Redundant pit faces will be regraded from c. 1:1.5 (34°) to a final profile of between c. 1:2.5 (22°) and 1:3.5 (16°). The pit floor and slopes will be grass seeded. Provision is made for a 1-year final restoration period to carry out such works.

The only material requirements in respect of the planned restoration scheme are those topsoils and subsoils already present on site and which will remain on site for restoration purposes.

Please note it is not proposed to import material onto the site for operational or restoration purposes.

4.1.2 The Project Site

4.1.2.1 Habitats (Annex I) Summary

No Annex I habitat is located within the site.

4.1.2.2 Species (Annex I Birds and Annex II others) Summary

Annex I birds and Annex II species identified and assessed in **Chapter 5** of the EIAR (enclosed as **Appendix B**) as being present on or likely to use the site or the surrounding area include the following:

Annex I Birds

- Annex I listed hen harrier associated with the adjacent Slieve Bloom Mountains SPA were observed close to the site and are assessed to likely use the site for foraging.
- The Slieve Bloom Mountains SPA is also known to support merlin and peregrine, although these two species are not Qualifying Interests (QI) for the SPA. However, no instances of either species were recorded on the site during breeding bird surveys or any other surveys. The site does support various other birds, which provide suitable prey for these species.

- Annex I listed kingfisher were not observed during the surveys. However, offsite river/stream habitat located south of the site may support this species as suitable foraging habitat. No area suitable for breeding were observed.

Annex II Species

- Annex II listed otter were not observed on the site, nor were any holts recorded. However, the offsite river/stream habitat located south of the site is anticipated to support this species.

4.1.2.3 Ecological Connections Summary

The site borders the Slieve Bloom Mountains SPA, with woodland that is located within the SPA located immediately adjacent (north-east) of the existing sand and gravel pit.

4.1.2.4 Environmental Connections Summary

The offsite stream located south of the site provides hydrological connectivity between the site and the River Killeen, located ca. 110m northeast of the site. Moreover, the River Barrow & River Nore SAC 000412 located 2 km east of the site is downstream of the Killeen River (refer to **Figure 2** and **Figure 7-8 included in Appendix B)**.

4.2 Step One, Part Two: Information on European Sites

Further information for each of the Natura 2000 sites that have been screening in for further assessment have been provided in **Appendix D** of this report, detailing the QI, conservation objectives, as well as details of populations and distributions, and threats.

4.3 Step Two, Part One: Effects of the Project Alone

The Appropriate Assessment Screening process showed that the elements of the project alone were identified as having the potential for LSEs on the Slieve Bloom Mountains SPA, River Barrow and River Nore SAC, and River Nore SPA. The following sections assess the impacts to these SAC/SPA likely to be caused by the project alone.

4.3.1 Slieve Bloom Mountains SPA

The project has the potential to cause LSE to the Slieve Bloom Mountains SPA and the SCI species hen harrier through the following:

- Noise and vibration caused during the construction and operational phases causing disturbance either directly to the SCI species hen harrier, or indirectly via disturbance to potential prey species, which may have a knock-on effect to hen harrier foraging behaviour.
- Emissions to air through dust, caused during the construction and operational phases, impacting important habitats within the SPA to hen harrier.

4.3.1.1 Noise and Vibrations

Noise and vibrations caused as a result of the construction and operational phases of the project may directly affect the SCI species hen harrier, causing potential direct disturbance or displacement.

According to the EAIR Chapter 10 – Noise, the noise levels are predicted to be between 50 and 70 dB(A) during the construction and operational phases. This noise will be regular over the duration of the construction and operational phases of the project.

As part of the site surveys, no breeding hen harrier were recorded within the vicinity of the site. Only one hen harrier was identified passing the site and was assessed to not be using the site of immediate surrounding habitat for breeding. Therefore, the site is likely used by hen harrier only for foraging purposes, with breeding hen harrier restricted mainly to the SPA.

Whilst the SPA does adjoin to the north-east of the site, the habitat here comprises mixed broadleaved woodland with dense scrub understorey. This is unlikely to support breeding hen harriers, which generally use dry, well-drained heather for breeding (Hardey et al., 2013) and is supported by the two hen harrier surveys conducted on the site in 2024 (SLR, 2024).

NPWS 2019 spatial data[14] was consulted to identify areas of suitable breeding habitat for hen harrier (i.e., dry heath). Most of the dry heath within the SPA was located ca. 1.8 km from the site boundary, comprising the upper areas of the Slieve Bloom Mountains. It is anticipated that these areas offer the most likely breeding sites for hen harrier within the SPA.

It should be noted that one relatively small area (ca. 2 ha) was located ca. 250m west of the site boundary. However, this area is relatively small and surrounded by agricultural land. It is considered unlikely that hen harriers would use this area for breeding, with studies stating that hen harriers will avoid nesting in areas close to areas with high levels of human disturbance, including nearby hiking trails and buildings (Tapia et al., 2004). A second ca. 21 ha area of dry heath was also located ca. 580m from the site boundary, which offers greater potential for breeding hen harrier.

Breeding hen harrier can tolerate disturbance distances of 1 km (Coillte, 2020), with recommended buffer zones for various activities (Goodman and Furness, 2022) including:

- Forestry operations in the UK: Safe working distance = 500 to 1000m;
- Forestry operations in the UK: Disturbance free zone = 500 to 600m;
- Operational onshore wind farm in the UK: Distance to nearest nest = 200 to 300m; and
- Aircraft disturbance in Scotland: Safe working distance = 500-750m (lateral), 500m (altitudinal).

Therefore, the noise and vibrations occurring on the site are not anticipated to directly affect the majority of the likely hen harrier nest locations, with only the area to the west (located ca. 500m at the closest point) likely to experience noise. Additionally, there is a minor risk of disturbance of foraging hen harrier closer to the site. However, the noise created during both the construction and operation phases will be regular occurring noise which birds, including hen harrier, will quickly adapt to.

The closest realistic breeding location for hen harrier (i.e., dry heath) is located ca. 500m west of the site at the closest point. Goodship and Furness (2022) recommend a buffer zone between 300-750m. They state that habituation to disturbance influences the size of the buffer required, and a buffer zone at the lower end of this range may be sufficient to protect individuals that have some habituation to disturbance.

The noise caused by the construction and operational phases of the development will initially cause disturbance in the short-term. However, hen harrier will quickly habituate to this and a buffer of approximately 500m to the nearest breeding habitat will be sufficient to avoid undermining the conservation objectives for hen harrier.

The potential of noise disturbance affecting general passerine birds within the closest SPA habitats to the site has been considered, with the potential that noise cause disturbance and possible displacement of passerine birds. This may have a knock-on effect to hen harrier, by

[14] Obtained from https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17/2019/habitats/heath-and-scrub. Accessed: July 2024.

reducing their prey availability. However, this will be limited to only 50m of the project, with Currie and Elliot (1997) suggesting disturbance distances of 50m for general passerines. Most of the extraction works will occur outside this buffer. Only minor disturbance through traffic and staff is expected to the north-east of the site, where the SPA is closest. As such, this impact is considered imperceptible and will not undermine the conservation objectives of the SPA.

4.3.1.2 Emissions to Air (Dust)

Construction Phase

Dust will be created during the construction phase of the project during earthworks, construction and trackout activities (i.e., the transport of dust and dirt from the mineral site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network (IAQM, 2016). These will have a low to negligible risk to ecological receptors, with only occasional increases in nuisance dust immediately surrounding the application area.

Operational Phase

Dust and other particulate matter will be created during the operational phase of the project. **Table 7** provides details of the potential emissions during various activities.

Table 7: Sources of Particulate Emissions (extracted from Table 8-13 of Chapter 8 of the EIAR – SLR, 2024).

Activity	Source	Emission potential	Comments
Material transfer to processing area	On-site vehicle, Dry loose material.	**High** when dry material being handled during strong windy weather	Emissions due to prevailing meteorological conditions and amount of dry loose material. Emissions due to re-suspension of loose material on surfaces.
Processing of sand and gravel	Processing plant, Dry loose material	**High** when dry material being processed during strong windy weather	Emissions due to prevailing meteorological conditions (high winds).
Material transfer to storage area	On-site vehicle, Dry loose material	**High** when dry material being handled during strong windy weather	Emissions due to prevailing meteorological conditions and amount of dry loose material. Emissions due to re-suspension of loose material on surfaces.
Material storage	Dry loose material in stockpiles	**High** when dry material being stored during strong windy weather	Emissions due to prevailing meteorological conditions (high winds).
Material loading to HGV	On-site vehicle, Dry loose material	**High** when dry material being handled during strong windy weather	Emissions due to prevailing meteorological conditions and amount of dry loose material. Emissions due to re-suspension of loose material on surfaces.
Transfer off site / traffic off site	HGV / Road vehicles	**Low** - on paved road surfaces	Dependent on the amount of loose material on road surface available for re-suspension and track out.

Without appropriate mitigation, there is a high risk of dust creation from the following activities:

- Material transfer to processing area;
- Processing of sand and gravel;
- Material transfer to storage area;
- Material storage; and
- Material loading to HGV.
- There is also a low risk from transfer off-site and traffic off-site.

The site's north-eastern boundary borders with the SPA, however the proposed extraction area is located approximately 100m from the SPA boundary. Therefore, most of the dust created through the proposed works will deposit within 100m and will not reach the SPA. Large dust particles (greater than 30 µm), which make up the greatest proportion of dust emitted from minerals workings, will largely deposit within 100m of sources. Intermediate-sized particles (10-30 µm) are likely to travel up to 200-500m (IAQM, 2016). Therefore, the potential area of habitat within the SPA likely to be impacted by dust is relatively small.

Dust may cause an indirect impact to hen harrier through affecting vegetation, which may affect the availability of prey species. The CO for Slieve Bloom Mountains SPA aims to maintain the extent and condition of hedgerows, heath, bog, low intensity managed grasslands, and associated habitats within the SPA. These can provide important foraging resources for breeding hen harriers, and in the case of heath and bog, can also provide important nesting resources. The level of dust deposition likely to lead to a change in vegetation is very high (over 1g/m2/day) and the likelihood of a significant effect is therefore very low except on the site with the highest dust release close to sensitive habitats.

Without appropriate mitigation measures, the impacts of dust caused from the project alone will undermine the conservation objectives set out for this SCI species for the SPA to restore the favourable conservation condition of hen harrier.

4.3.2 River Barrow and River Nore SAC

The project has the potential to cause LSE to the River Barrow and River Nore SAC and the QI habitats and species through the following:

- Changes to water quality from suspended soils in surface run-off, or from an accidental escape of silt laden water from the washing process / settlement lagoons. Additionally, the accidental spillage and/or leak of fuels and oils that may enter the stream located to the south of the site and travelling downstream to reach the SAC. This impact may occur during the construction and operational phases of the project.
- Emissions to air via dust creation that may enter the stream located to the south of the site and travelling downstream to reach the SAC. This impact may occur during the construction and operational phases of the project.

4.3.2.1 Changes to Water Regime / Water Quality

Construction Phase

There will be no offsite discharge from the proposed development to the stream on the southern boundary or the Killeen River and therefore there are no direct negative impacts on surface water quality or quantity during this stage. Extraction will remain above the water table level, and hence flow paths that may be contributing to the adjacent streams will not be impacted.

The stripping and storage of topsoil and subsoils, where present, could result in sediment run-off in recharge to the shallow groundwater in the sand and gravel superficial deposits, which could migrate into the underlying bedrock aquifer. Accidental leaking or spillage of fuel and/or other petroleum-based products could also impact on groundwater in the bedrock aquifer. However, the bedrock aquifer is separated from the shallow groundwater in the superficial deposits by low permeability silt and clay. Therefore, this not anticipated to enter the stream as a result.

Operation Phase

There will be no offsite discharge from the proposed sand and gravel pit extension to the Killeen River and there will therefore be no direct impacts on surface water quality or quantity during this stage. Extraction will remain above the water table level, and hence flow paths that may be contributing to the adjacent streams will not be impacted.

There is a potential impact from elevated suspended solids generated from silty process water during the excavation and washing activities at the sand and gravel pit. This could result in sediment carried in recharge impacting the underlying locally important bedrock aquifer which, in turn, could impact on Killeen River in hydraulic connection with it. Accidental leaking or spillage of fuel and/or other petroleum-based products could also impact on the Killeen River.

Without appropriate mitigation measures, this could undermine the conservation objectives for the various QI habitats and species as a result.

4.3.2.2 Emissions to Air (Dust)

Construction Phase

Dust will be created during the construction phase of the project. As detailed **above**, there is a risk of dust emissions during earthworks, construction and trackout activities, have a low - negligible risk to ecological receptors, with only occasional increases in nuisance dust immediately surrounding the application area.

This dust may settle in the two streams located close to the site, especially the stream located to the north-east due to south-westerly prevailing winds (Met Éireann, n.d.). Any dust entering the streams will travel downstream to the River Barrow and River Nore SAC.

Without appropriate mitigation measures, this could undermine the conservation objectives for the various QI habitats and species as a result.

Operational Phase

Dust and other particulate matter will be created during the operational phase of the project. As detailed **above**, there risk of particulate emissions during the operational phase.

Without appropriate mitigation, there is a high risk of dust creation from the following activities:

- Material transfer to processing area;
- Processing of sand and gravel;
- Material transfer to storage area;
- Material storage; and
- Material loading to HGV.

There is also a low risk from transfer off-site and traffic off-site.

Without appropriate mitigation measures, this could undermine the conservation objectives for the various QI habitats and species as a result.

4.3.3 River Nore SPA

The project has the potential to cause LSE to the River Nore SPA and the QI habitats and species through the following:

- Changes to water quality from suspended solids or from an accidental escape of silt laden water from the washing process / settlement lagoons. Also, the accidental spillage and/or leak of fuels and oils that may enter the stream located to the south of the site and travelling downstream to reach the SPA. This may impact SCI species kingfisher indirectly by affecting their prey. This impact may occur during the construction and operational phases of the project.
- Emissions to air via dust creation that may enter the stream located to the south of the site and travelling downstream to reach the SPA. This may impact SCI species kingfisher indirectly by affecting their prey. This impact may occur during the construction and operational phases of the project.

4.3.3.1 Changes to Water Regime / Water Quality

Construction Phase

There will be no discharge from the proposed sand and gravel pit extension to the stream on the southern boundary or the Killeen River and therefore there are no direct negative impacts on surface water quality or quantity during this stage. Extraction will remain above the water table level, and hence flow paths that may be contributing to the adjacent streams will not be impacted.

The stripping and storage of topsoil and subsoils, where present, could result in sediment run-off in recharge to the shallow groundwater in the sand and gravel superficial deposits, which could migrate into the underlying bedrock aquifer. Accidental leaking or spillage of fuel and/or other petroleum-based products could also impact on groundwater in the bedrock aquifer. However, the bedrock aquifer is separated from the shallow groundwater in the superficial deposits by low permeability silt and clay. Therefore, this not anticipated to enter the stream as a result.

Operation Phase

There will be no discharge from the proposed sand and gravel pit extension to the Killeen River and there will therefore be no direct impacts on surface water quality or quantity during this stage. Extraction will remain above the water table level, and hence flow paths that may be contributing to the adjacent streams will not be impacted.

There is a potential impact from elevated suspended solids generated from silty process water during the excavation and washing activities at the sand and gravel pit. This could result in sediment carried in recharge impacting the underlying locally important bedrock aquifer which, in turn, could impact on Killeen River in hydraulic connection with it. Accidental leaking or spillage of fuel and/or other petroleum-based products could also impact on the Killeen River.

However, this risk is considered low as any leakage / spillage would be accidental only and of limited volume. An impact on the Delour River and SAC located downstream is unlikely (SLR, 2024).

Without appropriate mitigation measures, this could indirectly undermine the conservation objectives for the SCI species kingfisher as a result of impacts on their prey.

4.3.3.2 Emissions to Air (Dust)

Construction Phase

Dust will be created during the construction phase of the project. As mentioned above, details that the risk of dust emissions during earthworks, construction and trackout activities, have a low - negligible risk to ecological receptors, with only occasional increases in nuisance dust immediately surrounding the application area.

This dust may settle in the two streams located close to the site, especially the stream located to the north-east due to south-westerly prevailing winds (Met Éireann, n.d.). Any dust entering the streams will travel downstream to the River Barrow and River Nore SAC.

Without appropriate mitigation measures, this could indirectly undermine the conservation objectives for the SCI species kingfisher as a result of impacts on they prey.

Operational Phase

Dust and other particulate matter will be created during the operational phase of the project. As mentioned above**,** there is a risk of particulate emissions through dust creation during the operational phase from the following activities:

- Material transfer to processing area;
- Processing of sand and gravel;
- Material transfer to storage area;
- Material storage; and
- Material loading to HGV.

There is also a low risk from transfer off-site and traffic off-site.

Without appropriate mitigation measures, this could indirectly undermine the conservation objectives for the SCI species kingfisher as a result of impacts on they prey.

4.4 Step Two, Part Two: Effects of the Project in Combination

4.4.1 Identification of Projects and Plans

A GIS search was undertaken of available online planning search facilities provided by the prevailing local planning authorities, An Bord Pleanála and the EIA Portal, as well as the Laois County Development Plan (2021-20237) and Kilkenny County Development Plan (2021-2027) and the on-line planning portal for these counties. The GIS search covered a radius of c. 5km from the application site. Planning applications located beyond this 5 km buffer were also considered where it was assessed that they may affect the River Barrow and River Nore SAC and River Nore SPA (i.e., projects in close proximity to the catchment - WFD 15 catchment area). These are provided in **Table 8**.

Table 8: Granted planning applications within 5 km of the site and projects that may affect the River Barrow and River Nore SAC and River Nore SPA

Planning Ref / Link	Brief Description	Approximate Distance from Site	Planning Status
20154 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/20154/0	Construction of: 1. A slatted cattle house, 2. The conversion of an existing hayshed to a slatted cattle house, (3) a cattle handling area and all ancillary works and services.	Adjacent	Permission granted 27/07/20
Unknown	Quarry Mounthall - Google Maps.	c. 1.2 km SW	N/A
22740 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/22740/0	New single storey National Mountain Bike Trail Head Building consisting of a Café, Bike Hire Facility, Toilets, car park and all associated site works, demolition of an existing building at Baunreagh, Co. Laois.	c. 4 km NE	Permission granted 14/03/23
21423 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/21423/0	Upgrade Castletown wastewater treatment plant.	c. 8 km SE	Permission granted 07/09/21
2460078 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/2460078/0	Upgrade of the Ballyroan Wastewater Treatment Plant.	c. 10km SE	RFI
Tipperary https://www.eplanning.ie/TipperaryCC/AppFileRefDetails/2360677/0	4.11 ha / 84.28-acre solar farm at lands known as Brehony's Bog.	c. 14 km SW	Permission granted 21/05/24
19/530 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/19530/0	Renewable Gas Facility, associated peat deposition area and external and internal road upgrades at Cúil Na Móna Bog... The total area of the proposed development is 17.34 ha.	c. 17 km E	Permission granted 23/05/22 (ABP)
19328 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/19328/0	Upgrade to the existing wastewater treatment plant.	c. 20 km SE	Permission granted 03/06/20
21459 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/21459/0	Infill of land (2.2 ha).	c. 20 km SE	Permission granted 20/12/21
2078 ePlan - Online Planning Details	Construction of 8 no. wind turbines with a tip height of up to 185 metres and all associated foundations and hardstanding areas; 1 no. on-site electrical substation; 1 no. temporary construction compound; all associated underground electrical and communications cabling connecting the turbines to the proposed on-site electrical substation.	c. 20 km NE	Under judicial review
2360390 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/2360390/0	Extraction of sand and gravel (c. 787,310m3 total or c. 1.57 million tonnes total, at a maximum extraction rate of c. 200,000 tonnes per annum) over the proposed 10-year permission sought (Booth Precast).	c. 22 km SE	RFI
21599 https://planning.kilkennycoco.ie/AppFileRefDetails/21599/0	Galmoy – Reopening of underground zinc and lead mine.	c. 25 km S	Permission granted 02/08/22
VA11.308448 308448 | An Bord Pleanála (pleanala.ie)	A substation, electricity lines, on-site access tracks and all associated site development works to connect to Pinewoods Wind Farm, Co. Laois.	c. 27 km SE	Permission granted 22/11/21
21700 https://www.eplanning.ie/LaoisCC/AppFileRefDetails/21700/0	Continued use and operation of existing quarry including deepening of the quarry. Extraction will be confined to the existing permitted quarry area (P.A. Ref. 10/383) comprising an extraction area of c. 14.5 ha within the full landholding of c. 19.6 ha.(Lagan).	c. 30 km SE	Permission granted 01/07/2024
PA11.317809 https://www.pleanala.ie/en-ie/case/317809	Coolglass Wind Farm (Co. Laois).	c. 30 km SE	Under Consideration
2073 https://planning.kilkennycoco.ie/AppFileRefDetails/2073/0	Upgrade Ballyragget Wastewater Treatment Plant.	c. 30 km SE	Permission granted 26/06/20
https://planning.kilkennycoco.ie/AppFileRefDetails/22687/0	2 Anaerobic Digester Plants.	c. 30 km SE	At appeal
22687 ePlan - Online Planning Details (kilkennycoco.ie)	Installation of 31.49km of a 38kV underground electrical cabling connecting to 9 turbine Farranrory wind farm (plus ref 211620 2.25km).	c. 35 km SE	Permission granted 26/09/22

2360097 https://planning.kilkennycoco.ie/AppFileRefDetails/2360097/0	Threecastles Quarry Extension.	c. 40km SE	Permission granted 26.04.24
19/887 ePlan - Online Planning Details (kilkennycoco.ie)	mixed use of 266 no. residential units, 2 no. office blocks, nursing home, 2 no. retail/commercial units with offices overhead, creche and delivery of 3.96 hectares of open parkland.	c. 45 km SE	Permission granted 23/04/21 (ABP)
20180 ePlan - Online Planning Details and 318295 | An Bord Pleanála (pleanala.ie) 5 turbines	or the installation of approximately 4.6 kilometres (km) of underground cables within the Carlow County Council (CCC) boundary and approximately 2.0 km within the Laois County Council (LCC) boundary with a voltage of up to 38 kilovolts and associated works, including a new substation within LCC, for the connection of the consented Bilboa Wind Farm upgrading of an existing forestry track construction of two new onsite access tracks.	c. 45 km SE	Permission granted 13/08/21
JA10.307796 307796 | An Bord Pleanála (pleanala.ie)	The proposed Kilkenny Urban Park and Street will cover an area of c.1.44ha. The Park will comprise of a variety of grassed areas, trees, paved surfaces, water feature and meeting points. The Street will be a pedestrian and cyclist dominated space.	c. 45 km SE	Permission granted 22/02/21
20972 ePlan - Online Planning Details	The entirety of the development constitutes the provision of a 9-turbine Farranrory wind farm and all associated works on lands in both Counties Tipperary and Kilkenny.	c. 45 km S	Permission granted 30/03/21
21348 https://planning.kilkennycoco.ie/AppFileRefDetails/21348/0	Housing development on a site of c. 3.2 ha. The development will consist of: Construction of 77 no. residential units.	c. 45 km SE	Permission granted 15/10/21
22644 https://planning.kilkennycoco.ie/AppFileRefDetails/22644/0	Brownstown Solar Farm.	c. 45 km SE	At appeal
PA01.315365 315365 | An Bord Pleanála (pleanala.ie)	Wind energy development consisting of 7 no. wind turbines and all associated works. White Hill Wind Farm.	c.45 km SE	Permission granted 21/11/23
22662 ePlan - Online Planning Details	Industrial building (for the purpose of medical device manufacturing), with a gross floor area (GFA) of 29,490.	c. 50 km NE	Permission granted 11/01/2023
22487 https://planning.kilkennycoco.ie/AppFileRefDetails/22487/0	Underground cable is intended to connect the permitted 38kV substation in permitted Clashwilliam Solar Farm.	c. 50 km SE	Permission granted 30/01/23
2360562 https://planning.kilkennycoco.ie/AppFileRefDetails/2360562/0	Upgrade of the Kilmoganny Wastewater Treatment Plant.	c. 50 km S	Permission granted 11/03/24
21/508 http://idocsweb.kilkenny.ie/listFiles.aspx?catalog=planning&id=21508	Continuation of use of the existing pit consisting of 6.8 Ha. as previously granted planning permission under P04/136, P10/601 and P12/604; Extension of the pit into an adjoining greenfield area consisting of 8.9 Ha. which will be subject to extraction and occasional processing of material (P. Hennessy & Co. Ltd).	c. 55 km SE	Permission granted 18/01/22
20899 https://planning.kilkennycoco.ie/AppFileRefDetails/20899/0	grid connection from the consented Ballytobin Solar Farm to the existing 38kV ESB substation south of Callan Co. Kilkenny.	c. 55 km S	Permission granted 18/06/21
2360069 https://planning.kilkennycoco.ie/AppFileRefDetails/2360069/0	Castlegarden Solar PV energy development 103.64 ha.	c. 60 km SE	At appeal
JA10.317082 317082 | An Bord Pleanála (pleanala.ie)	Flood Relief Scheme.	c. 65 km SE	Under Consideration
PA10.309306 http://www.pleanala.ie/casenum/309306.htm	The construction of 21 wind turbines and ancillary works at Castlebanny Wind Farm, Co. Kilkenny.	c.73 km SE	Permission granted 26/09/22

4.4.2 Slieve Bloom Mountains SPA

Only three of the plans/projects provided in **Table 8** are considered close enough to cause an in-combination impact due to noise and emissions to air. All other projects and plans are sufficiently distant to not cause noise and vibrations to the SPA, with the closest being located ca. 4 km from the project.

The three closest projects to the site include the following:

- 20154: Construction of a slatted cattle house, and the conversion of an existing hayshed to a slatted cattle house, a cattle handling area and all ancillary works and services. No AA Screening report associated to this development was found.
- A quarry located at ITM coordinates 625194 697915. No AA Screening report associated to this development was found.
- 22740: New single storey national mountain bike trail head building. An AA Screening and NIS report was produced for this development (Oran Ecology, 2022)[15].

4.4.2.1 Noise and Vibrations

The first project [20154] comprises a small development, that may cause noise and vibrations in the short-term but would be completed relatively quickly. After which, there will be no increased risk of noise and vibrations and could undermine the conservation objectives for the SCI species hen harrier.

The second project [no ref.] comprises quarry or area of extraction with unknown planning status. It is unknown whether this is currently active or disused. If it is active, it is likely causing disturbance to hen harrier in the SPA to a similar level anticipated for the site as it also borders the SPA.

Additional noise will increase the area and potential duration of the noise disturbance for hen harrier. Conversely, any ongoing noise caused by this quarry may nullify the effects caused by this project. As hen harrier may have already habituated to the operational noise levels. This would lessen the potential impact of the noise disturbance caused by the project.

This location is also closer to the area of dry heath that is located ca. 500m to the west of the site. Therefore, any ongoing disturbance is likely already affecting the hen harrier, and the added disturbance caused by the project is unlikely to disturb any breeding hen harriers.

The third development [22740] comprises a new single storey building for a mountain bike trail. This proposed development is located at ITM coordinates 629343 701961and is approximately 4.6 km (northeast) from the Project. Therefore, it is sufficiently distant from the Project that potential noise impacts from both projects will not overlap. The AA screening and NIS report for this project concluded that the risk to hen harriers will be negligible due to the proximity of housing and existing recreational disturbance making their presence in that area unlikely. Moreover, possible disturbance will be limited to the construction phase and will be short-term and small in nature and the works will not cause significant disturbance to birds or hen harrier.

There may be an in-combination increase in noise disturbance from the two projects if the proposed construction works of the mountain bike head building overlap with the construction or operation phases of the Project. However, this is anticipated to be short in duration (i.e., only for the duration of the construction works of the mountain bike trail building). Once its construction is finished there will be no in-combination effects caused by noise. Both projects

[15] The AA Screening and NIS report can be found at https://plandocs.laois.ie/iDocsWeb/ViewFiles.aspx?docid=377269&format=djvu

are located outside the SPA and only peripheral SPA habitats will be affected by the noise created during their respective construction phases (and operation phase for this application). The AA screening and NIS report for this project lays out appropriate mitigation during its construction phase to prevent adverse disturbance effects to hen harrier including the following:

- A suitably qualified Ecological Clerk of Works (ECoW) will liaise with Coillte and NPWS from early Spring (mid-March) to ascertain if a hen harrier nest site has been established within 2 km of the proposed development site.
- If a nesting pair has been recorded within 1 km of the proposed development site, the ECoW will assess whether the activities could cause disturbance to the birds – this would largely depend on the proximity of the nest and the line visibility. If considered necessary, and after consultation with NPWS, work restrictions would be introduced in that area of the site until the nesting attempt is complete.

4.4.2.2 Emissions to Air (Dust)

Dust levels caused during the construction phases of the developments listed above will increase dust levels in-combinations with that caused by the construction and operational phases of the development. However, this in-combination effect will be short-term as, when discounting the unauthorised quarry, no dust creation is predicted following the completion of the construction of these other projects. Only the dust levels caused by the project and the unauthorised quarry (if active) will impact the SPA.

4.4.3 River Barrow and River Nore SAC

4.4.3.1 Changes to Water Regime / Water Quality

All projects and plans within 100m of any hydrologically connected rivers and streams to the River Barrow and River Nore SAC may cause an increased in-combination effect with the project. Developments may cause increased surface run-off and potential oil and particulate matter spillages that may enter waterways and reach the SAC.

Without appropriate mitigation, this could have a cumulative effect that could undermine the conservation objectives of the various QI habitats and species of the River Barrow and River Nore SAC.

4.4.4 River Nore SPA

4.4.4.1 Changes to Water Regime / Water Quality

All projects and plans within immediate close proximity to any hydrologically connected rivers and streams to the River Barrow and River Nore SPA will cause an increased in-combination effect with the project. Developments will cause increased surface run-off and potential oil and particulate matter spillages that may enter waterways and reach the SPA.

Without appropriate mitigation, this could have a cumulative effect that could indirectly undermine the conservation objectives of the various SCI species kingfisher of the River Nore SPA via impacts to their prey.

4.5 Step Three: Effects to Integrity

4.5.1 Slieve Bloom Mountains SPA

4.5.1.1 Noise and Vibrations

The effects of noise and vibrations caused by the Project, when considered in-combination with other developments may cause minor disturbances to hen harrier. However, the noise caused by the project will quickly be habituated by hen harrier and will not impact the primary dry heath habitats that are most likely to be used by breeding hen harrier, similar to ongoing farming activities in the surrounding area. Similar impacts will be experienced by prey items for hen harrier with the largest effects experienced within and immediately surrounding the site. Prey located beyond this will quickly habituate to noise disturbances and hen harrier will still find foraging value in these areas.

Therefore, it is assessed that, without appropriate mitigation, there will be an increase to noise levels that may cause minor disturbance to hen harrier, which would affect the integrity of the site.

4.5.1.2 Emissions to Air (Dust)

Emissions to air will not directly impact the SCI species hen harrier. There is a risk that dust created from the project alone as well as in combination with other developments may impact important habitats within the SPA for this species. However, this is considered a minor risk, as adverse weather conditions such as heavy rain and wind will quickly disperse and dust deposition and allow vegetation to photosynthesise normally.

Without appropriate mitigation measures, this would affect the integrity of the site.

4.5.2 River Barrow and River Nore SAC

4.5.2.1 Changes to Water Quality

The risk of pollution events entering the streams is considered negligible due to a c. 25m buffer which will be maintained between the proposed extraction area and the stream located adjacent (south) of the Site. Existing woodland, scrub and grassland vegetation located within this buffer will further reduce the risk of pollutants from entering the stream. Moreover, the water management system has been designed as a closed loop system and any leakage / spillage would be accidental only and of limited volume. This risk becomes greater when considering the impacts in-combination with other projects. Whilst the risk of accidental spillages being low for each site, the risk is increased for all developments hydrologically connected to the site.

Furthermore, several of the QI species, in particular, are highly sensitive to water pollution and the conservation objectives of these species would be undermined. Therefore, without appropriate mitigation measures, the impact would affect the integrity of the site.

4.5.2.2 Emissions to Air (Dust)

There is risk of dust entering the streams, which would travel downstream and enter the SAC. This dust would be dispersed within the aquatic environment and would be highly diluted before it reaches the SAC, located 2.4 km away. However, when considered in-combination with other developments, there is a greater risk of in-combination effects from dust.

Several QI species are highly sensitive to changes in water chemistry and their conservation objectives would be undermined. Therefore, without appropriate mitigation measures, the impact would affect the integrity of the site.

4.5.3 River Nore SPA

4.5.3.1 Changes to Water Quality

The risk of pollution events entering the streams is considered negligible due to a c. 25m buffer which will be maintained between the proposed extraction area and the stream located adjacent (south) of the Site. Existing woodland, scrub and grassland vegetation located within this buffer will further reduce the risk of pollutants from entering the stream. Moreover, the water management system has been designed as a closed loop system and any leakage / spillage would be accidental only and of limited volume. This risk becomes greater when considering the impacts in-combination with other projects. Whilst the risk of accidental spillages being low for each site, the risk is increased for all developments hydrologically connected to the site.

The SCI species kingfisher would not be directly impacted by this. However, potential changes in water chemistry may affect fish populations on which kingfisher predate. Therefore, without appropriate mitigation measures, the impact would affect the integrity of the site.

4.5.3.2 Emissions to Air (Dust)

There is risk of dust entering the streams, which would travel downstream and enter the SPA. This dust would be dispersed within the aquatic environment and would be highly diluted before it reaches the SPA. However, when considered in-combination with other developments, there is a greater risk of in-combination effects from dust.

The SCI species kingfisher would not be directly impacted by this. However, potential changes in water chemistry may affect fish populations on which kingfisher predate. Therefore, without appropriate mitigation measures, the impact would affect the integrity of the site.

4.6 Step Four: Mitigation measures

4.6.1.1 Slieve Bloom Mountains SPA

Appropriate mitigation measures relevant to the Slieve Bloom Mountains SPA are detailed in this section.

Noise

Screening berms, vegetation planting and acoustic fencing will be constructed along the boundary of the extension area prior to commencement of extraction activities and will act as acoustic barriers. Screening berms will be inspected on a regular basis and maintained as necessary.

Plant

- All mobile plant used at the development will have noise emission levels that comply with the limiting levels defined in EC Directive 86/662/EEC and any subsequent amendments.
- All operations will be undertaken only during permitted operating hours.
- All plant items will be properly and regularly maintained and operated according to the manufacturers' recommendations, in such a manner as to avoid causing excessive noise (i.e., all moving parts are kept well lubricated, all cutting edges are kept sharpened, the integrity of silencers and acoustic hoods are maintained).
- All plant will be fitted with effective exhaust silencers which are maintained in good working order to meet manufacturers' noise rating levels. Any defective silencers will be replaced immediately.

Traffic

- Any deliveries to the quarry will be programmed to arrive during daytime hours only.
- Adequate parking will be provided within the site.
- Care will be taken when unloading vehicles to reduce or minimise potential noise disturbance.
- Access / internal haul roads will be kept clean and maintained in a good state of repair, i.e., any potholes are filled, and large bumps removed, to avoid unwanted rattle and "body-slap" from heavy goods vehicles.
- Vehicles waiting within the quarry will be prohibited from leaving their engines running and there will be no unnecessary revving of engines.

Experience from other sites has shown that by implementing these measures, ambient noise levels from site activities and operations can be reduced by up to 5 dB(A).

Emissions to Air (Dust)

A wide range of dust mitigation and management measures are recommended for implementation at the application site. These include the measures listed as follows:

- Minimise drop heights when handling materials. Maximise use of excavated soil in construction of vegetated screening berms or in pit restoration works. Dampen materials using mist cannon, sprinklers, or water bowser.
- Minimise drop heights when handling material. Protect from wind where possible.
- Minimise length of on-site haul routes.
- Use of mist cannon / sprinklers / water bowser to dampen haul routes during dry weather periods.
- Restrict vehicle speeds to less than 20kph. Install signage and undertake staff training.
- Routing of traffic and away from any surrounding sensitive receptors.
- Use of road sweeper to reduce the amount of material available for re-suspension.
- Travel over paved surfaces / access road.
- Direct all HGVs through wheelwash facility.
- Seed / vegetate surfaces of completed perimeter mounds and stockpiles of restoration soils.
- Locate stockpiles to take advantage of any available shelter from wind.
- Use of mist cannon / sprinklers / bowser to moisten materials during periods of dry and windy weather.
- Limit mechanical disturbance of materials more likely to become airborne and/or time operations having regard to expected weather conditions.
- Hardstanding areas/site roads, stockpiles with the potential to give rise to dust will be regularly watered as appropriate during dry and/or windy conditions by dust cannon, sprinklers, or water bowser.
- Retention of perimeter hedgerows.
- Provision of screening berms.

Trackout Measures

When adverse conditions apply (dry, windy weather), water from a bowser will be sprayed on dry unpaved road surfaces to minimize dust rise. Any paved surfaces around the site and/or along the access road leading in and out of the site will also be sprayed as required.

All heavy goods vehicles leaving the application site will be routed through the proposed new wheelwash facility to remove and / or dampen any particulate materials attaching to the undercarriage and to prevent transport of fine particulates off-site, onto the local public road network.

Good Practice Measures

Effective site management practices are critical to demonstrate the willingness of the operator to control dust emissions. Monitoring of dust deposition and recording of any complaints shall be carried out to take appropriate measures to reduce emissions in a timely manner.

Prior to development, site specific training on dust mitigation measures shall be provided to site-based staff. Training will also cover an 'emergency preparedness plan' to react quickly in case of any failure of dust mitigation measures.

A water bowser will be made available at required times to dampen down stockpiled / particulate materials and/or unpaved surfaces when adverse (dry, windy) conditions apply.

4.6.1.2 River Barrow and River Nore SAC

Appropriate mitigation measures relevant to the River Barrow and River Nore SAC are detailed in this section.

Changes in Water Quality

The water used on the site will comprise a 'closed loop system' and there will be no discharge whatsoever from site into any of the nearby streams that are hydrologically connected to the SAC. The extraction will not intersect groundwater as dry working will be maintained. There will not be any significant abstraction of water for the proposed works on the site throughout the lifetime of the development, with the EIAR Chapter 7 – Water stating the following:

There will be a limited impact on groundwater in the bedrock beneath the site from the proposed water supply borehole. The required volumes are low and so there will be a localised impact only on the groundwater flow and quantity in the bedrock aquifer, with the bedrock aquifer is capable of supplying locally important abstraction of 100-400 m^3/d.

A source protection zone (defined by a 100-day time of travel from any point below the water table to the source) was calculated and ranged from 21.3m – 6.7 m for the water supply well. A well survey carried out on the Site confirmed a number of private wells. The closest identified private residential well is 420m away from the proposed water supply borehole. The closest residential property to the proposed water supply borehole is located 140m away. As the residential location is located at distance from the estimated 100-day time of travel, a minimal impact on any residential supply boreholes is anticipated. The water supply borehole will be installed in accordance with IGI guidelines (steel, bentonite, concrete apron etc. at well head), which will protect the underlying bedrock aquifer from contamination.

Breedon Ireland implement an environmental management system (EMS) for all operational sites which is accredited to ISO 14001 standard. This EMS will be implemented at the proposed development.

Environmental water monitoring will be carried out on a regular basis to demonstrate that the sand and gravel pit is not having any significant adverse effects on the surrounding environment.

In order to mitigate against the risk of pollution to groundwater and surface water occurring at the site the following management measures will be implemented.

- Rain falling across hardstanding areas will percolate downwards and recharge to the underlying sand and gravel. There will be little or no surface water run-off or overground flow across the site;
- There will be no off-site discharge from proposed development to any surface watercourse in the locality;
- Outside of impermeable surface areas at the site, all surface water percolates naturally to the ground;
- No re-fuelling (or servicing) of excavation plant will occur at extraction areas. Refuelling at the site will be undertaken in compliance with Breedon Ireland operating procedures. Training in respect of the correct implementation of the refuelling procedures will be given to all personnel onsite.
- All fuel and hydrocarbons / oils / lubricants will be stored in bunded containers in accordance with best practice.
- Final floor levels at the proposed pit excavations will be maintained above the underlying (seasonal maximum) groundwater level any rain falling across the pit will percolate naturally through unsaturated ground to the underlying shallow groundwater in the superficial deposits;
- Mobile plant and machinery will not be serviced / maintained within the sand and gravel pit to minimise the risk of uncontrolled release of polluting liquids to groundwater;
- A number of spill kits will be available across the site to stop the migration of any minor accidental leakages or spillages should they arise;
- In order to ensure mitigation measures are working, Breedon Ireland environmental team will undertake quarterly environmental audits at the site to ensure that compliance with all planning consents, licences and site environmental management system, which is accredited to ISO 14 001 standard, is both maintained and enhanced.

Implementation of these measures at the application will further minimise / reduce the potential impacts caused by dust created from entering the nearby watercourses and reaching and impacted the SAC.

Post – Operational Stage

As noted previously, the principal activity which will be undertaken at the application site is the extraction and processing of the in-situ sand and gravel with ultimate restoration of lands returned to an agricultural after-use and for the most part will merge back into the surrounding pastoral landscape.

The restoration phase will start when all the accessible sand and gravel deposits have been exhausted. All plant associated solely with extraction and processing activities will be removed from site. The remaining pit slopes and material used in the construction of the silt lagoon and screening berms will also be regraded and the general area returned to a beneficial agricultural use over the pit floor.

A layer of overburden/silt material will be spread over the worked-out pit floor as a sub-base in the progressive restoration area. On completion of the extraction works the sand and gravel pit will be restored to an agricultural use.

Emissions to Air (Dust)

A wide range of dust mitigation and management measures are recommended for implementation at the application site. These include the measures listed as follows:

- Minimise drop heights when handling materials. Maximise use of excavated soil in construction of vegetated screening berms or in pit restoration works. Dampen materials using mist cannon, sprinklers, or water bowser.
- Minimise drop heights when handling material. Protect from wind where possible.
- Minimise length of on-site haul routes.
- Use of mist cannon / sprinklers / water bowser to dampen haul routes during dry weather periods.
- Restrict vehicle speeds to less than 20kph. Install signage and undertake staff training.
- Routing of traffic and away from any surrounding sensitive receptors.
- Use of road sweeper to reduce the amount of material available for re-suspension.
- Travel over paved surfaces / access road.
- Direct all HGVs through wheelwash facility.
- Seed / vegetate surfaces of completed perimeter mounds and stockpiles of restoration soils.
- Locate stockpiles to take advantage of any available shelter from wind.
- Use of mist cannon / sprinklers / bowser to moisten materials during periods of dry and windy weather.
- Limit mechanical disturbance of materials more likely to become airborne and/or time operations having regard to expected weather conditions.
- Hardstanding areas/site roads, stockpiles with the potential to give rise to dust will be regularly watered as appropriate during dry and/or windy conditions by dust cannon, sprinklers, or water bowser.
- Retention of perimeter hedgerows.
- Provision of screening berms.

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When adverse conditions apply (dry, windy weather), water from a bowser will be sprayed on dry unpaved road surfaces to minimize dust rise. Any paved surfaces around the site and/or along the access road leading in and out of the site will also be sprayed as required.

All heavy goods vehicles leaving the application site will be routed through the proposed new wheelwash facility to remove and / or dampen any particulate materials attaching to the undercarriage and to prevent transport of fine particulates off-site, onto the local public road network.

Good Practice Measures

Effective site management practices are critical to demonstrate the willingness of the operator to control dust emissions. Monitoring of dust deposition and recording of any complaints shall be carried out to take appropriate measures to reduce emissions in a timely manner.

Prior to development, site specific training on dust mitigation measures shall be provided to site-based staff. Training will also cover an ‘emergency preparedness plan’ to react quickly in case of any failure of dust mitigation measures.

A water bowser will be made available at required times to dampen down stockpiled / particulate materials and/or unpaved surfaces when adverse (dry, windy) conditions apply.

4.6.1.3 River Nore SPA

Appropriate mitigation measures relevant to the River Nore SPA are detailed in this section.

Changes in Water Quality

The water used on the site will comprise a 'closed loop system' and there will be no discharge whatsoever from site into any of the nearby streams that are hydrologically connected to the SPA. The extraction will not intersect groundwater as dry working will be maintained. There will not be any significant abstraction of water for the proposed works on the site throughout the lifetime of the development, with the EIAR Chapter 7 – Water stating the following:

There will be a limited impact on groundwater in the bedrock beneath the site from the proposed water supply borehole. The required volumes are low and so there will be a localised impact only on the groundwater flow and quantity in the bedrock aquifer, with the bedrock aquifer is capable of supplying locally important abstraction of 100-400 m^3/d.

A source protection zone (defined by a 100-day time of travel from any point below the water table to the source) was calculated and ranged from 21.3m – 6.7 m for the water supply well. A well survey carried out on the Site confirmed a number of private wells. The closest identified private residential well is 420m away from the proposed water supply borehole. The closest residential property to the proposed water supply borehole is located 140m away. As the residential location is located at distance from the estimated 100-day time of travel, a minimal impact on any residential supply boreholes is anticipated. The water supply borehole will be installed in accordance with IGI guidelines (steel, bentonite, concrete apron etc. at well head), which will protect the underlying bedrock aquifer from contamination.

Breedon Ireland implement an environmental management system (EMS) for all operational sites which is accredited to ISO 14001 standard. This EMS will be implemented at the proposed development.

Environmental water monitoring will be carried out on a regular basis to demonstrate that the sand and gravel pit is not having any significant adverse effects on the surrounding environment.

In order to mitigate against the risk of pollution to groundwater and surface water occurring at the site the following management measures will be implemented.

- Rain falling across hardstanding areas will percolate downwards and recharge to the underlying sand and gravel. There will be little or no surface water run-off or overground flow across the site;
- There will be no off-site discharge from proposed development to any surface watercourse in the locality;
- Outside of impermeable surface areas at the site, all surface water percolates naturally to the ground;
- No re-fuelling (or servicing) of excavation plant will occur at extraction areas. Refuelling at the site will be undertaken in compliance with Breedon Ireland operating procedures. Training in respect of the correct implementation of the refuelling procedures will be given to all personnel onsite.
- All fuel and hydrocarbons / oils / lubricants will be stored in bunded containers in accordance with best practice.
- Final floor levels at the proposed pit excavations will be maintained above the underlying (seasonal maximum) groundwater level any rain falling across the pit will percolate naturally through unsaturated ground to the underlying shallow groundwater in the superficial deposits;

- Mobile plant and machinery will not be serviced / maintained within the sand and gravel pit to minimise the risk of uncontrolled release of polluting liquids to groundwater;
- A number of spill kits will be available across the site to stop the migration of any minor accidental leakages or spillages should they arise;
- In order to ensure mitigation measures are working, Breedon Ireland environmental team will undertake quarterly environmental audits at the site to ensure that compliance with all planning consents, licences and site environmental management system, which is accredited to ISO 14 001 standard, is both maintained and enhanced.

Implementation of these measures at the application will further minimise / reduce the potential impacts caused by dust created from entering the nearby watercourses and reaching and impacted the SPA.

Post – Operational Stage

As noted previously, the principal activity which will be undertaken at the application site is the extraction and processing of the in-situ sand and gravel with ultimate restoration of lands returned to an agricultural after-use and for the most part will merge back into the surrounding pastoral landscape.

The restoration phase will start when all the accessible sand and gravel deposits have been exhausted. All plant associated solely with extraction and processing activities will be removed from site. The remaining pit slopes and material used in the construction of the silt lagoon and screening berms will also be regraded and the general area returned to a beneficial agricultural use over the pit floor.

A layer of overburden/silt material will be spread over the worked-out pit floor as a sub-base in the progressive restoration area. On completion of the extraction works the sand and gravel pit will be restored to an agricultural use.

Emissions to Air (Dust)

A wide range of dust mitigation and management measures are recommended for implementation at the application site. These include the measures listed as follows:

- Minimise drop heights when handling materials. Maximise use of excavated soil in construction of vegetated screening berms or in pit restoration works. Dampen materials using mist cannon, sprinklers, or water bowser.
- Minimise drop heights when handling material. Protect from wind where possible.
- Minimise length of on-site haul routes.
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- Restrict vehicle speeds to less than 20kph. Install signage and undertake staff training.
- Routing of traffic and away from any surrounding sensitive receptors.
- Use of road sweeper to reduce the amount of material available for re-suspension.
- Travel over paved surfaces / access road.
- Direct all HGVs through wheelwash facility.
- Seed / vegetate surfaces of completed perimeter mounds and stockpiles of restoration soils.
- Locate stockpiles to take advantage of any available shelter from wind.

- Use of mist cannon / sprinklers / bowser to moisten materials during periods of dry and windy weather.
- Limit mechanical disturbance of materials more likely to become airborne and/or time operations having regard to expected weather conditions.
- Hardstanding areas/site roads, stockpiles with the potential to give rise to dust will be regularly watered as appropriate during dry and/or windy conditions by dust cannon, sprinklers, or water bowser.
- Retention of perimeter hedgerows.
- Provision of screening berms.

Trackout Measures

When adverse conditions apply (dry, windy weather), water from a bowser will be sprayed on dry unpaved road surfaces to minimize dust rise. Any paved surfaces around the site and/or along the access road leading in and out of the site will also be sprayed as required.

All heavy goods vehicles leaving the application site will be routed through the proposed new wheelwash facility to remove and / or dampen any particulate materials attaching to the undercarriage and to prevent transport of fine particulates off-site, onto the local public road network.

Good Practice Measures

Effective site management practices are critical to demonstrate the willingness of the operator to control dust emissions. Monitoring of dust deposition and recording of any complaints shall be carried out to take appropriate measures to reduce emissions in a timely manner.

Prior to development, site specific training on dust mitigation measures shall be provided to site-based staff. Training will also cover an 'emergency preparedness plan' to react quickly in case of any failure of dust mitigation measures.

A water bowser will be made available at required times to dampen down stockpiled / particulate materials and/or unpaved surfaces when adverse (dry, windy) conditions apply.

5.0 Conclusion

This Natura Impact Statement, based on the best available scientific information, shows that, considering the proposed mitigation measures which are designed to prevent likely significant effects from habitat loss, surface water pollution, groundwater pollution, disturbance from noise and emissions to air (dust) from the Project at Mounthall & Cummer townlands, Camross, Co. Laois, will not undermine the conservation objectives of the River Barrow and River Nore SAC, Slieve Bloom Mountains SPA and River Nore SPA, either alone or in-combination with other projects or plans.

Based on the information set out in this report we submit that the competent authority has sufficient information to allow it to determine that the application for the development of a proposed sand and gravel pit, will not have an adverse effect on the integrity or pose a risk of likely significant effects on the European sites of the River Barrow and River Nore SAC, Slieve Bloom Mountains SPA and River Nore SPA, or any other European site.

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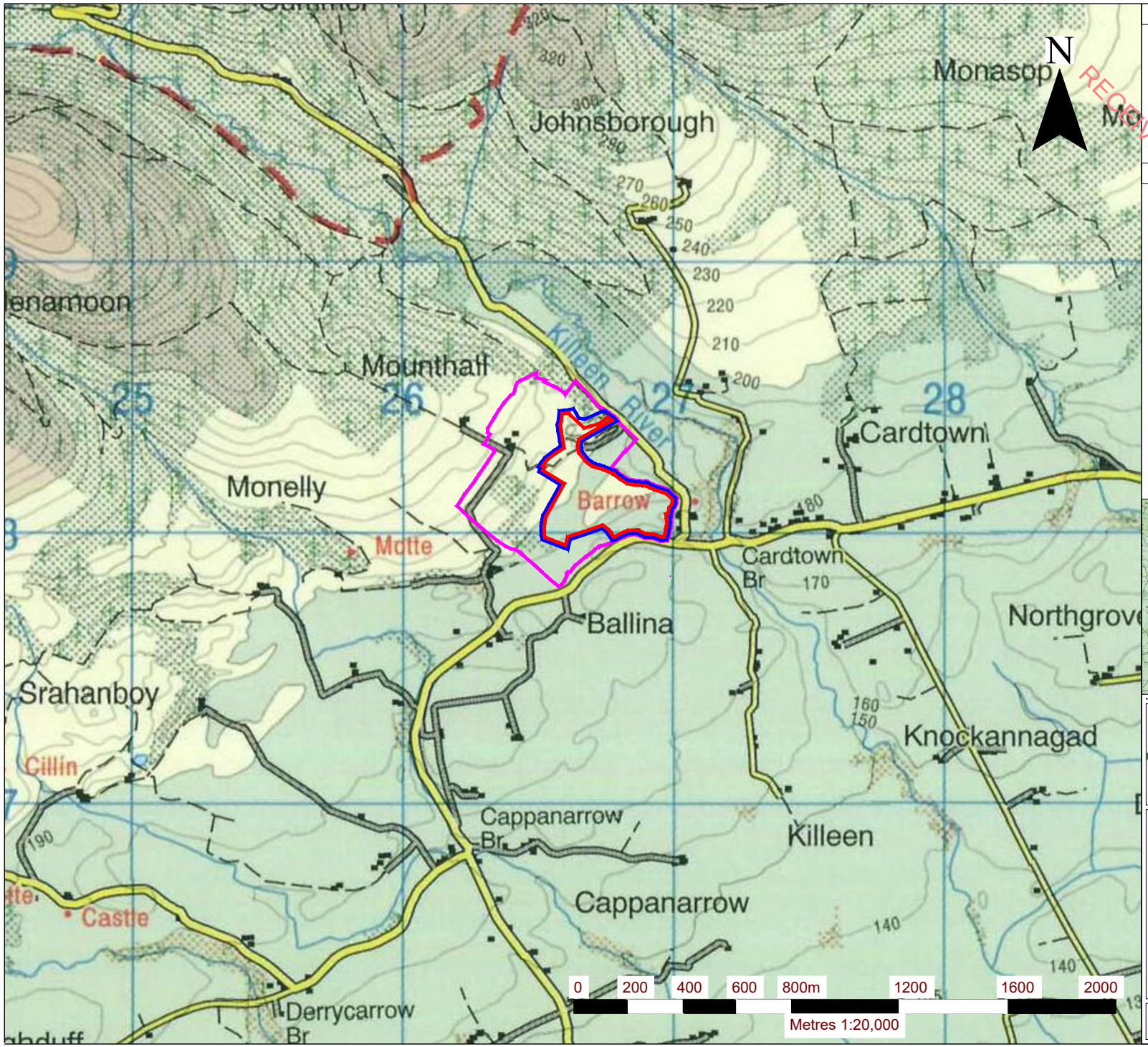
Figures

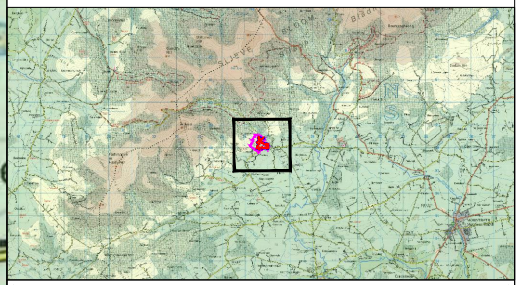


NOTES

1. Extract from Ordnance Survey Discovery Series Map No. 54
2. Ordnance Survey Ireland Licence No. CYAL50381397 (c) Tailte Éireann - Surveying

LEGEND

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*



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BREEDON IRELAND

Mounthall Sand & Gravel Pit Development

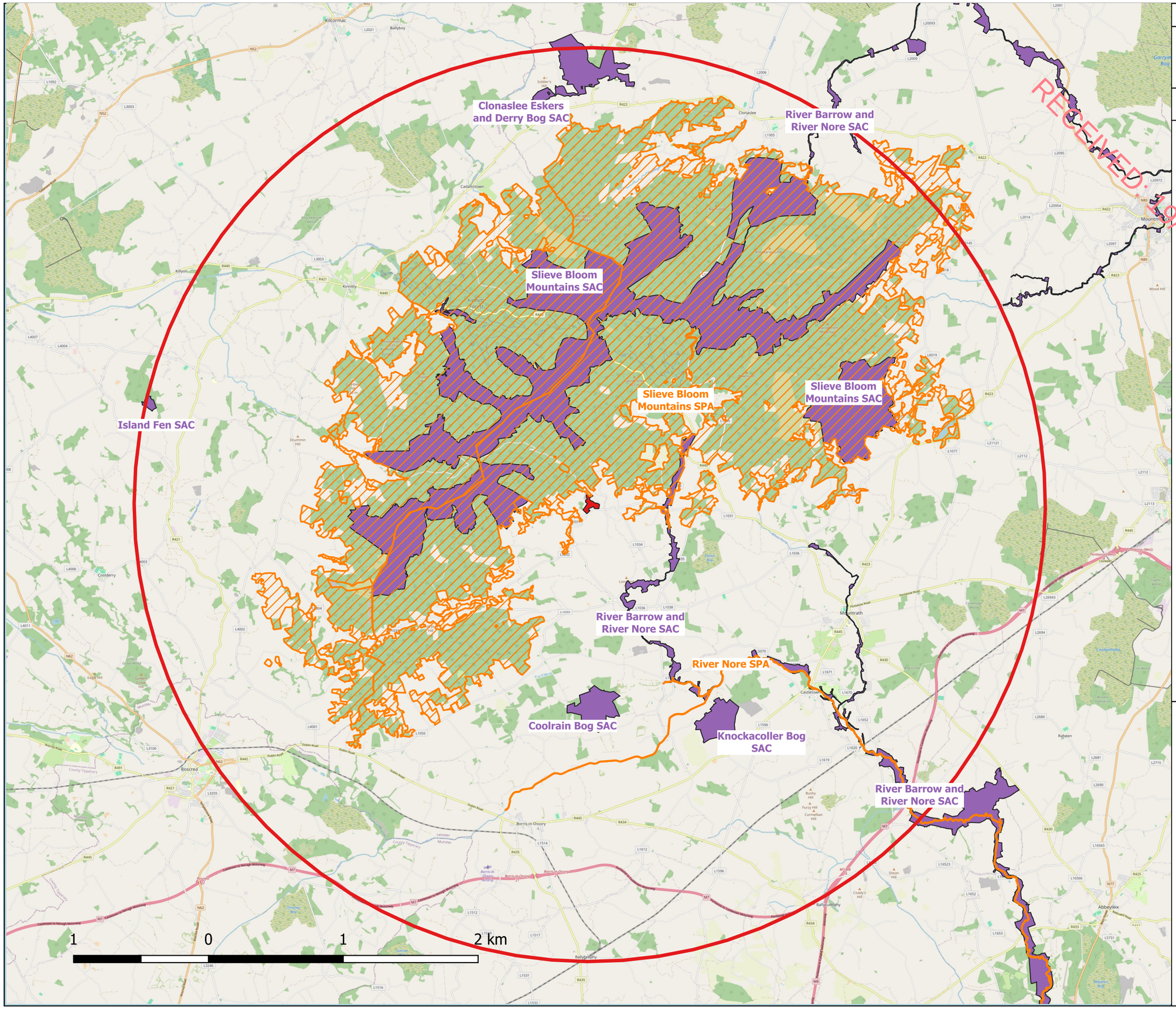
Mounthall, Camross, Co. Laois

Site Location Map

FIGURE 1

Scale	Date
1:20,000 @A4	SEPTEMBER 2024

00584.065036 EIAR Fig 5-1 Location Plan.dwg



NOTES

1.Base Mapping: OpenStreetMap © (www.openstreetmap.org/copyright)
2. CYAL50381397 © Tailte Éireann - Surveying

LEGEND

- 15 km Buffer
- Special Protection Areas
- Special Areas of Conservation
- Red Line Boundary

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BREEDON IRELAND

Mounthall Sand & Gravel Pit Development

Mounthall, Camross, Co. Laois

European Sites within 15 km

FIGURE 2

Scale: 1:289360 @ A3

Date: FEBRUARY 2024

SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development

Appendix A Relevant Legislation

Breedon Materials Ltd. (trading as Breedon Ireland)

SLR Project No.: 501.00584.065036

10 September 2024

A.1 European Nature Directives (Habitats and Birds)

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation (SAC). Similarly, Special Protection Areas (SPA) are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, SACs and SPAs are referred to as the European network. The European Network is the minimum required to conserve certain habitats and species which are listed in the Directives.

Under Article 6(3) of the Habitats Directive, an Appropriate Assessment (AA) must be undertaken for any plan or project that is not directly connected with or necessary to the management of a European site but is likely to have a significant effect thereon, either individually or in combination with other plans or projects. An AA is an evaluation of the potential impacts of a plan or project on the conservation objectives of a European site, and the identification, where necessary, of mitigation or avoidance measures to preclude adverse effects on the integrity of the site.

Article 6, paragraph 3 of the European Commission Habitats Directive 92/43/EEC ("the Habitats Directive") states that:

"*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public*".

A.2 European Communities (Birds and Natural Habitats) Regulations 2011

Pursuant to the Habitats Directive, Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, similarly sets out the requirements for screening assessments and the circumstances under which an AA is required.

Regulation 42(1) requires that '*a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site*.' Regulation 42(2) expands on this, stipulating that a public authority must carry out a screening for AA before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken.

Regulation 42(6) requires that '*the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site'*.

Regulation 42(3)(a) gives the public authority the power to direct a third party to provide a Natura Impact Statement (NIS) and Regulation 42(3)(b) allows it to request any additional information that it needs to complete the screening assessment or AA. Regulation 42(5) goes

on to make clear that the NIS should include such information as the public authority considers necessary to enable it to undertake the AA and to ascertain if a project or plan will affect the integrity of a European site. In addition to the information, Regulation 2(1) provides a definition of a Natura Impact Statement as '*a report comprising the scientific examination of a plan or project and the relevant European Site or European Sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment*'.

Regulation 42(11) makes clear that the AA must be carried out by the public authority and that it must include its conclusion as to whether the project or plan would adversely affect the integrity of a European site, and that this must be done prior to consenting the project.

A.3 Planning and Development Act 2000 (as amended)

These processes have been further enshrined in the Planning and Development Act 2000 (as amended), in sections 177T, 177U and 177V, which are as follows:

s177T(1)(b) A Natura impact statement means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

(2) Without prejudice to the generality of subsection (1), a Natura impact report or a Natura impact statement, as the case may be, shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites.

177U. — (1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

(4) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

177V. — (1) An appropriate assessment carried out under this Part shall include a determination by the competent authority under Article 6.3 of the Habitats Directive as to whether or not a draft Land use plan or proposed development would adversely affect the integrity of a European site and an appropriate assessment shall be carried out by the competent authority, in each case where it has made a determination under section 177U(4) that an appropriate assessment is required, before — ... (b) consent is given for the proposed development.

Appendix B Relevant EIAR Plans and Extracts

Breedon Materials Ltd. (trading as Breedon Ireland)

SLR Project No.: 501.00584.065036

10 September 2024

EIAR Extracts:

Chapter 2 – Project Description Figures 2-1, 2-2, 2-3, 2-4, 2-5, 2-6

Chapter 5 – Biodiversity Chapter

Chapter 7 – Water Chapter

Chapter 8 – Air Quality Chapter

Chapter 10 – Noise Chapter

EIAR Extract

Chapter 2 – Project Description Figures 2-1 to 2-8

N

Slieve Bloom SPA

Mounthall
Mounthall

Existing hard surfaced site entrance

Existing S&G Pit

Quarry

Residence (**R1**)

Residence (**R12**)

Killeen River

L10317 Local Road

RECEIVED: 19/09/2024

A
A'
B
B'
C
C'
D
D'

O/H Powerlines
to be re-directed around extraction area

Limit of proposed extraction (c.8ha.)

Drainage Channel

L1031 Local Road

Residence (**R2**)

Residence (**R3**)

Residence (**R6**)

0 50 100 150 200 250m

Scale 1:2,500

Notes:

1. Extract from Ordnance Survey 5,000 scale mapping - sheet numbers 3880, 3881, 3937, 3938

Legend:

- Landowner Boundary (c.32.1 Hectares)
  Third party landowner's land interest
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares)
  under lease agreement from landowner
- Existing Sand & Gravel Pit Area (c.1.2 Hectares)
- Proposed S&G Extraction Area (c.8 Hectares)
- Residential Property
- Agricultural Shed / Other Building (non-residential)
- O/H Powerlines (with 5 no single poles located within the proposed extraction area)
  To be redirected around the extraction void by and in consultation with ESB Networks
- Water course
- Woodland areas
- Slieve Bloom SPA

Rev	Amendments	Date	By	Chk	Auth

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Client
Breedon Ireland

Project
Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title
Existing Site Layout

Scale		SLR Project No.
1:2,500	@ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date	Date	Date	Date
01/24	01/24	09/24	09/24

Figure Number
Figure 2-1

Rev.
1

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appendix\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-1 (Dwg-4) Existing Layout R1.dwg

12/09/2024

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N

Slieve Bloom SPA

Residence (**R12**)

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Mounthall
Mounthall

Proposed water supply well for top-up

Concrete Pad (with Interceptor) for refuelling

Carparking

Welfare Facilities

Office and Weighbridge

Existing hard surfaced site entrance

Silt Settlement Lagoons (Closed system)

Hard paved surface *(with surface water fall back into site)*

L10317 Local Road

Hardcore surface

Residence (**R1**)

2m Berm grass seeded (Year 1)

Native species planting (Year 1)

Personnel proof and acoustic fencing (c.150m)

Berm topsoil used in final restoration

PHASE 3

Stripped topsoil used in Phase 2 pit face restoration works with balance stored on pit floor for use in Phase 3 pit slope and final pit floor restoration

Native species planting (Year 1)

2m Berm grass seeded (Year 1)

Stockproof fencing (along full length of red line application boundary)

Mobile Processing Plant

PHASE 2

Stripped topsoil used to construct berms with balance stored on pit floor for use in Phase 1 pit slope restoration when extraction advances to Phase 2

Stripped topsoil used in Phase 1 restoration works with balance stored on pit floor for use in Phase 2 pit slope restoration when extraction advances to Phase 3

Berm topsoil used in final restoration

Residence (**R2**)

Limit of proposed extraction (c.8ha.)

PHASE 1

Residence (**R3**)

Personnel proof and acoustic fencing (c.150m)

Native species planting (Year 1)

L1031 Local Road

Residence (**R6**)

0 50 100 150 200 250m

Scale 1:2,500

Notes:

1. Extract from Ordnance Survey 5,000 scale mapping - sheet numbers 3880, 3881, 3937, 3938

Legend:

- Landowner Boundary (c.32.1 Hectares)
  Third party landowner's land interest
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares)
  under lease agreement from landowner
- Proposed S&G Extraction Area (c.8 Hectares)
- Proposed personnel proof and acoustic fencing (c. 200m total)
  To provide additional screening to nearest residences
  Remainder of red line site boundary to have stockproof fencing
- Proposed screening berm (2m high)
  Grass seeded for duration of extraction operations
  Soils used in final site restoration operations
- Proposed native species planting
  Vegetation to be permanently retained post extraction operations
- Residential Property
- Agricultural Shed / Other Building (non-residential)
- Proposed Direction of Extraction Operations
- Proposed Stripped Topsoil Management
- Proposed borehole for water supply top-up
- Woodland areas
- Slieve Bloom SPA

Rev	Amendments	Date	By	Chk	Auth

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Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Phased Extraction Design Layout

Scale		SLR Project No.
1:2,500	@ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date: 01/24	Date: 01/24	Date: 09/24	Date: 09/24

Figure Number: **Figure 2-2** Rev.: **1**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appends\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-2 (Dwg-5) Phased Extraction R1.dwg 12/09/2024

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Slieve Bloom SPA

Residence (

N

RECEIVED: 19/09/2024

Proposed water supply well for top-up

3m x 90m sightline evelope

Concrete Pad (with Interceptor) for refuelling

Existing hard surfaced site entrance

Carparking

Welfare Facilities

Office and Weighbridge

Wheelwash

Minor vegetation trimming required

Killeen River

Mounthall

Mounthall

L10317 Local Road

Silt Settlement Lagoons (Closed system)

Hard paved surface *(with surface water fall back into site)*

Hardcore surface

Residence (**R1**)

2m Berm grass seeded (Year 1)

Native species planting (Year 1)

Personnel proof and acoustic fencing (c.150m)

Water returned to washing plant

Process water directed to settlement lagoons

Native species planting (Year 1)

2m Berm grass seeded (Year 1)

Stockproof fencing (along full length of red line application boundary)

Mobile Processing Plant

Limit of proposed extraction (c.8ha.)

Residence (**R2**)

Killeen Rive

Residence (**R3**)

Personnel proof and acoustic fencing (c.150m)

Drainage Channel

Native species planting (Year 1)

L1031 Local Road

Residence (**R6**)

0 50 100 150 200 250m

Scale 1:2,500

Notes:

1. Extract from Ordnance Survey 5,000 scale mapping - sheet numbers 3880, 3881, 3937, 3938

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Proposed S&G Extraction Area (c.8 Hectares)
- Special Protection Area (SPA) *Slieve Bloom SPA*
- Woodland and vegetation Areas
- Proposed personnel proof and acoustic fencing (c. 200m total) *To provide additional screening to nearest residences* *Remainder of red line site boundary to have stockproof fencing*
- Proposed screening berm (2m high) *Grass seeded for duration of extraction operations* *Soils used in final site restoration operations*
- Proposed native species planting *Vegetation to be permanently retained post extraction operations*
- Residential Property
- Agricultural Shed / Other Building (non-residential)
- Woodland areas
- Slieve Bloom SPA

Rev	Amendments	Date	By	Chk	Auth

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Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Proposed Final Extraction Layout

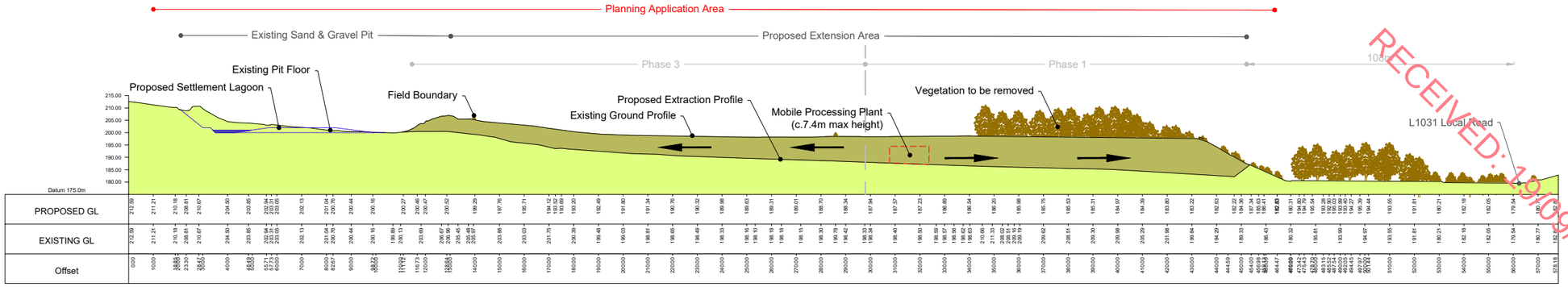
Scale		SLR Project No.
1:2,500	@ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date: 01/24	Date: 01/24	Date: 09/24	Date: 09/24

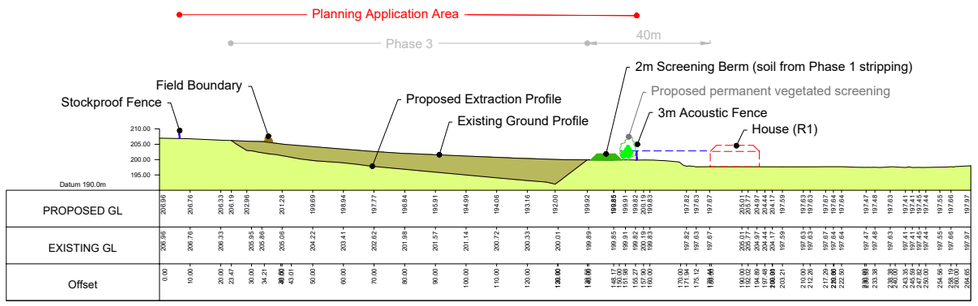
Figure Number: **Figure 2-3** Rev.: **0**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appends\02 Project Description\Dwgs\CAD\Wsing\00584.065036 EIAR Fig 2-3 (Dwg-6) Final Extraction Design R2.dwg 12/09/2024

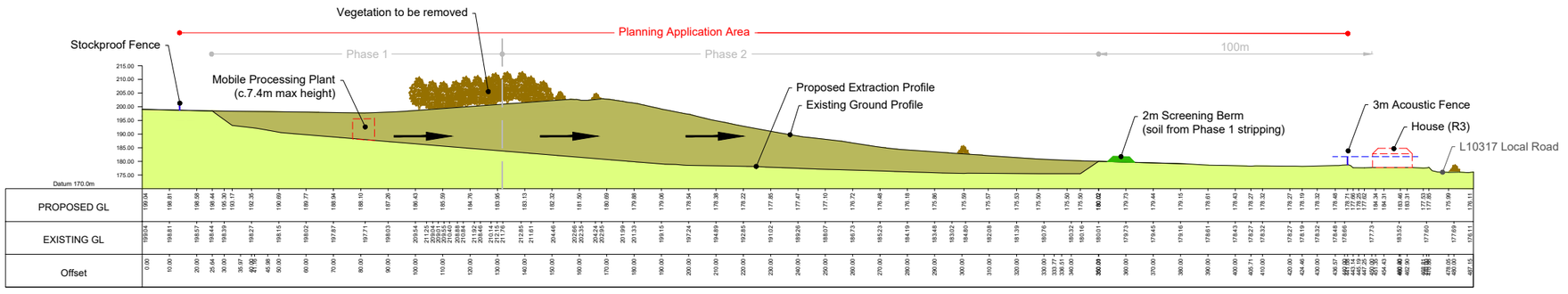
CYAL50381397



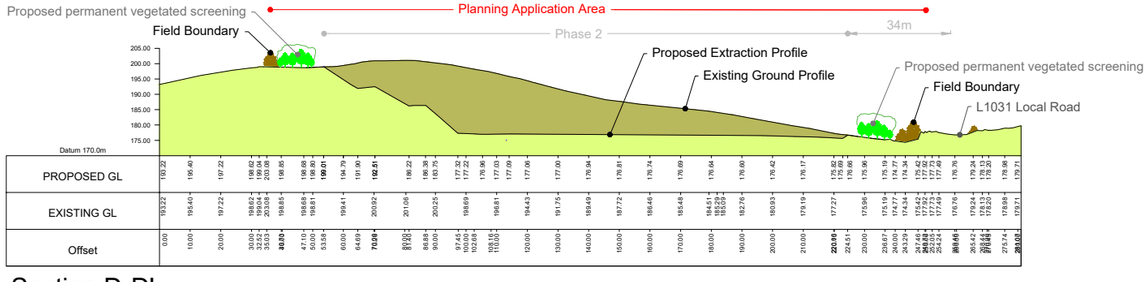
Section A-A'



Section B-B'



Section C-C'



Section D-D'

0 20 40 60 80 100 120 140 160 180 200m

Scale 1:2,000

Notes:

Legend:

RECEIVED: 19/09/2024

Rev	Amendments	Date	By	Chk	Auth

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Figure Title
Existing & Proposed Cross Sections

Scale	SLR Project No.
1:2,000 @ A3	00584.065036

Designed	Drawn	Checked	Authorised
SMcD	SMcD	LH	LH
Date 01/24	Date 01/24	Date 09/24	Date 09/24

Figure Number **Figure 2-4** Rev. **1**

S:\SLR Projects\00584 Lagan Materials Ltd\065036 Mounthall S&G Pit Development\EIAR\Volume-2 EIAR Report Figs Appendix\02 Project Description\Dwgs\CAD\Wking\00584.065036 EIAR Fig 2-4 (Dwg-7) Existing-Proposed Cross Sections R1.dwg 12/09/2024