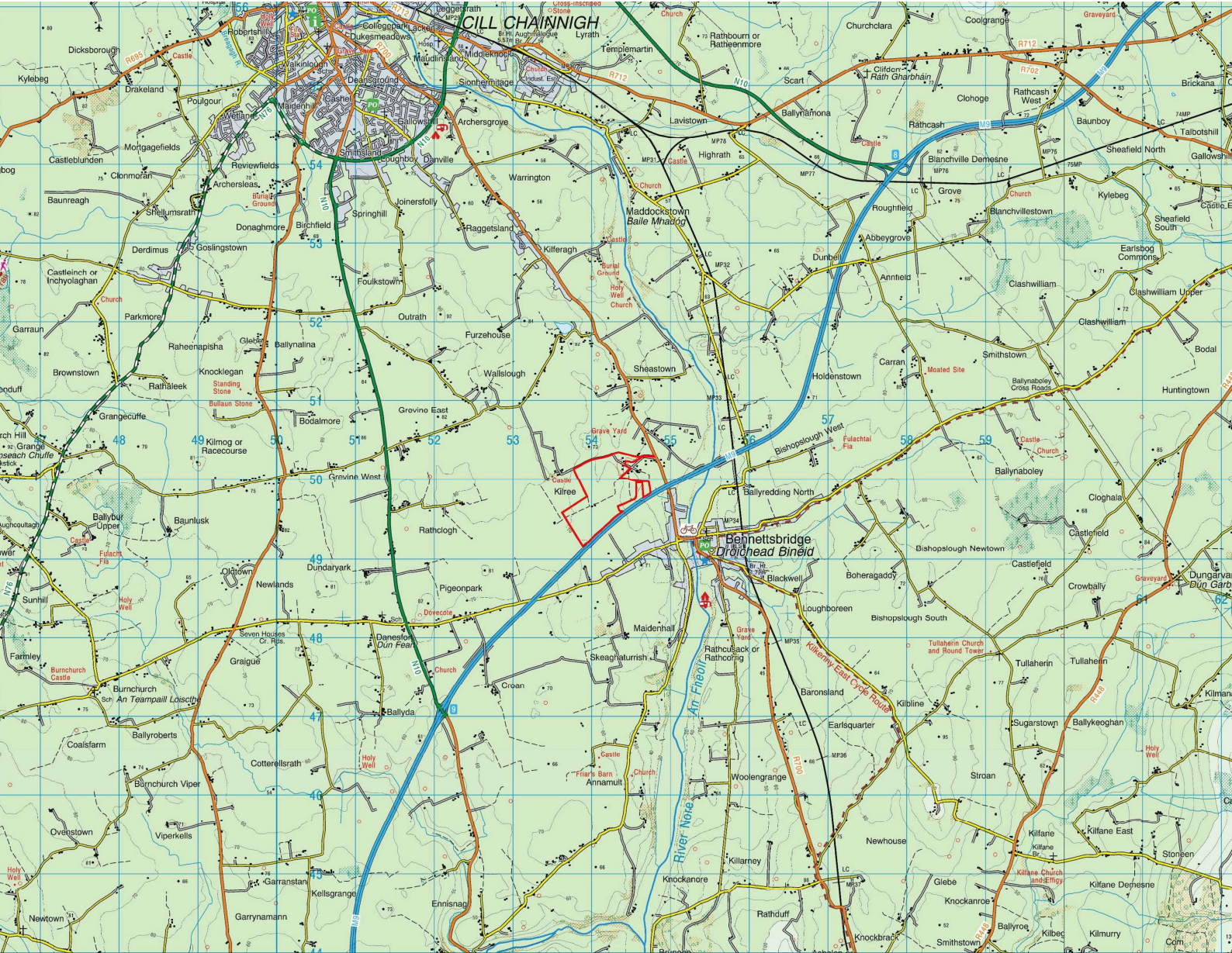


CHAPTER 2

SCOPE & METHODOLOGY

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CHAPTER 2: SCOPE & METHODOLOGY

Introduction

- 2.1 This chapter presents an outline of the EIA reporting methodology to be employed for the proposed development. It outlines the methodology for the identification and evaluation of potential likely significant environmental effects and also presents the methodology for the identification and evaluation of potential cumulative and inter-related impacts.

Legislation and Appropriate Guidance

- 2.2 The European Union Directive 85/337/EC required that certain private and public projects which are likely to have significant resultant environmental impacts are subject to a formalised Environmental Impact Assessment prior to their consent. This Directive was subsequently amended by the EU through three amendments: 97/11/EC, 2003/4/EC and 2009/31/EC, which were then codified in Directive 2011/92/EU and subsequently amended by Directive 2014/52/EU.
- 2.3 The 2014/52/EU Directive was transposed into Irish law through European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018) which amended the Planning and Development Act, 2000, and the Planning and Development Regulations, 2001. This EIAR has been produced in accordance with these relevant legislative requirements and Statutory Instruments.
- 2.4 The Environmental Impact Assessment of the Proposed Development has been made with regard to the 'Guidelines on the information to be contained in Environmental Impact Assessment Reports', published by the EPA (Environmental Protection Agency, 2022); and the 'Draft Advice Notes for Preparing Environmental Impact Statements', (Environmental Protection Agency, 2003).
- 2.5 The latter document contains specific guidance on the types of issues to be considered in relation to Quarries (Project Type 18). The classification of effects and their significance has also been carried out in accordance with these guidance; unless this is otherwise stated within the relevant section or chapter.
- 2.6 The Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018), were also considered in this assessment. Assessments of technical disciplines have been made in accordance with applicable legislation, identified guidance and industry best practice. Relevant European Commission guidance considered as part of this assessment includes: Environmental Impact assessment of Projects – Guidance on Screening (European Commission, 2017b); Environmental Impact assessment of Projects – Guidance on Scoping (European Commission, 2017a); and Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission, 2017c).

Annex IV of Directive 2014/52/EU

- 2.7 Information for the EIAR Data and information to be included by the developer in the EIAR is identified in Annex IV of the amended EIA Directive, 2014/52/EU. Table 2.4: Requirements of 2014/52/EU Annex IV and where these have been addressed in this EIAR.

Table 2.1: Requirements of 2014/52/EU Annex IV and where these have been addressed in this EIAR

Item	Requirement of Annex IV item	Reference in EIAR
1	Description of the project, including in particular: (a) a description of the location of the project; (b) a description of the physical characteristics of the whole project, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases; (c) a description of the main characteristics of the operational phase of the project (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.	(a) Chapter 1.0 – Introduction & (a) & (b) Chapter 3.0 – Project Description (c) and (d) Chapter 3.0 Project Description, and identified in the relevant technical chapters
2	A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	Chapter 4.0 – Alternatives
3	A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge	A 'Baseline Conditions' section has been provided in each technical chapter along with a section which summarises a 'Do-Nothing' scenario without development.
4	A description of the factors specified in Article 3(1) likely to be significantly affected by the project: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape	Each relevant study area which has been scoped into the EIAR is provided within a dedicated technical chapter. Chapters 5.0 –15.0.

5	A description of the likely significant effects of the project on the environment resulting from, inter alia: (a) the construction and existence of the project, including, where relevant, demolition works; (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources; (c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste; (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters); (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources; (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; (g) the technologies and the substances used. The description of the likely significant effects on the factors specified in Article 3(1) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.	(a), (b) and (c) Each technical chapter, as appropriate (d) Chapter 5.0 (Pop and Human Health) (e) Chapter 16.0 (Interactions). (f) Chapter 10.0 (Air Quality) and Chapter 9.0 (Climate) (g) Each technical chapter, as appropriate Descriptions of effects are identified in each technical chapter, as appropriate.
6	A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	Assessment methodology is identified in each technical chapter. Difficulties encountered in compiling the EIAR has been identified where appropriate within the technical chapters.
7	A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description	The identification of mitigation measures is identified in each technical chapter, as appropriate.

	should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Chapter 17 provides a summary of all mitigation measures and monitoring proposed.
8	A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies	The identification of risks of major accidents and/or disasters is identified in each technical chapter, as appropriate.

EIA Approach Overview: EPA Guidelines (2022)

2.8 The fundamental principles to be followed when preparing an EIAR are:

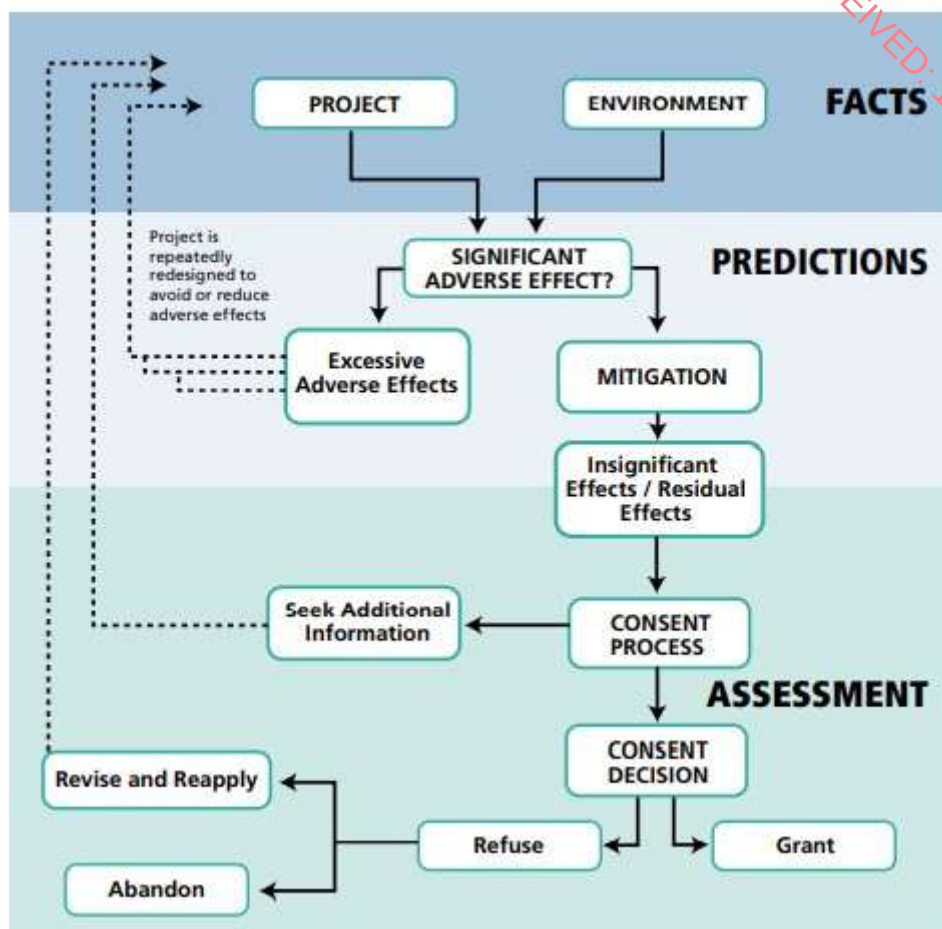
- Anticipating, predicting, avoiding and reducing significant effects;
- Assessing and mitigating effects;
- Maintaining objectivity;
- Ensuring clarity and quality;
- Providing relevant information to decision makers;
- Facilitating better consultation.

2.9 Figure 2.1 below illustrates that the EIA process can be considered as involving three main parts. The first consists of a compilation of facts – i.e. the description of the existing environment and the description of the proposed project.

2.10 The second consists of predictions of likely effects – this may be carried out on an iterative basis as the design is improved to eliminate excessive adverse effects.

2.11 The final part consists of the assessment of the environmental effects as part of a consent process which may decide to grant, condition, refuse or seek additional information.

Figure 2.1: The EIA Process (taken from the EPA Guidelines (2022))



2.12 The EIA process follows three main stages to the point at which the EIA Report (EIAR) is submitted:

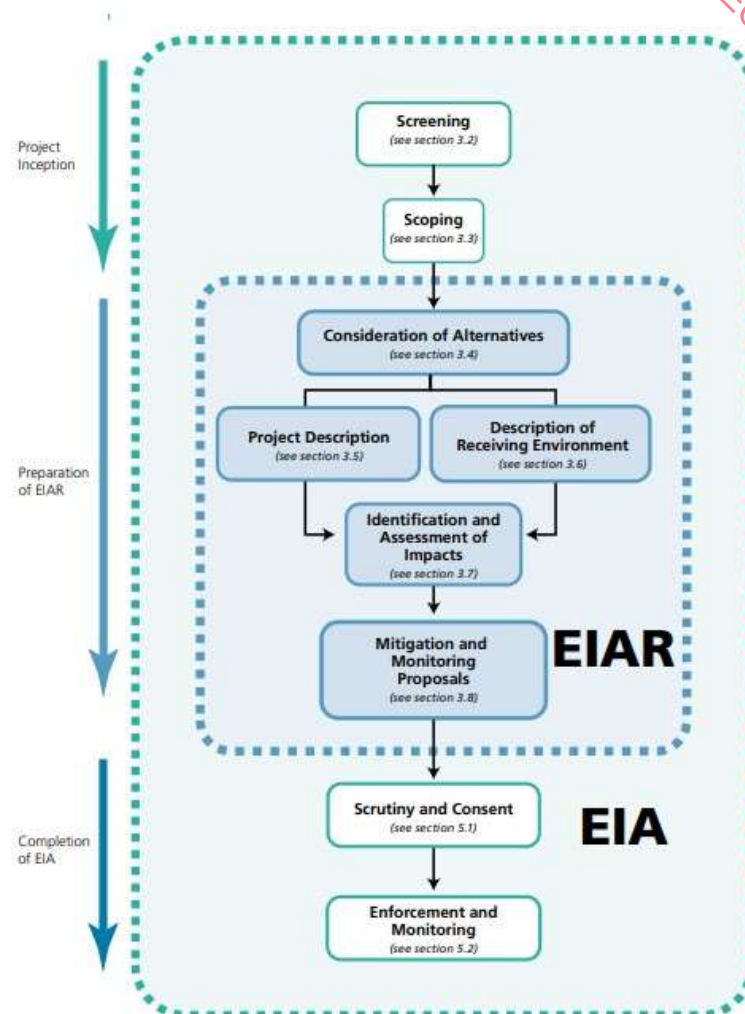
- 1) Screening – to determine whether a proposed development should be subject to EIA;
- 2) Scoping – to determine which topic areas (environmental factors) should be included in the EIA (scoped in) and which should be excluded (scoped out); and
- 3) EIAR Preparation – the stage in which the main body of work is undertaken, resulting in the production of an EIAR.

2.13 EIA involves a number of processes, which take place during screening, scoping and the main EIA stages:

- 1) Identifying and describing relevant features of the proposed development;
- 2) Identifying and describing relevant features of the baseline environment;
- 3) Consultation; and
- 4) Predicting likely impacts and effects of the proposed development on the baseline environment and developing any required mitigation measures.

2.14 More details of these stages and processes are provided in Figure 2.2, and the sections below.

Figure 2.2: The Position of an EIAR within the EIA Process (taken from the EPA Guidelines (2022))



EIA Process

Screening

- 2.15 Screening is a procedure used to determine whether a proposed development is likely to have significant effects on the environment. The outcome is a decision on whether EIA needs to be undertaken for the proposed development, in which case the subsequent stages of scoping and EIAR preparation will be followed.
- 2.16 In order to determine whether an EIA is required for the proposed development, it is necessary to determine whether it is a project listed in one of the Annexes to the Directive 2011/92/EU (as amended by Directive 2014/52/EU). These Annexes have been transposed in to Irish law.
- 2.17 The prescribed classes of development which require EIA are outlined in Schedule 5 of the Planning and Development Regulations 2001 (S.I. 600 of 2001, as amended).
- 2.18 Paragraph 19 of Part 1 of Schedule 5 states that the following form of development requires an EIA:
- “Quarries and open-cast mining where the surface of the site exceeds 25 hectares.*
- 2.19 Paragraph 22 relates to changes or extensions. It states:

- “Any change or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any set out in this Annex.”*
- 2.20 Paragraph 2 of Part 2 of Schedule 5 refers to extractive industry and part (b) of that section states that the following requires an EIA
- “Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares.”*
- 2.21 In addition, paragraph 13(a) of Part 1 requires EIA in respect of:
- “Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would:-*
- i. result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule and*
 - ii. result in an increase in size greater than –*
- 25 per cent, or*
- an amount equal to 50 per cent of the appropriate threshold,*
- whichever is the greater.*
- 2.22 The proposed development relates to the lateral extension of the existing permitted quarry into an additional area of approximately 24.5 hectares, within an overall application site area of approximately 61 hectares. The overall site includes existing extraction areas, processing infrastructure, storage areas, and the proposed extension lands.
- 2.23 Under Schedule 5, Part 1 of the Planning and Development Regulations 2001 (as amended), the extraction of minerals by surface means is a class of development for which an Environmental Impact Assessment is mandatory where the area of extraction exceeds 25 hectares. The total area of the existing and proposed quarry development exceeds this threshold. Accordingly, an EIAR is required.
- 2.24 In addition, under Schedule 5, Part 2, an EIA is required for quarries where the extraction area exceeds 5 hectares. The extraction area alone, being in excess of 5 hectares, triggers the need for an EIAR under Part 2.

Scoping

- 2.25 The scoping stage involves deciding which environmental topics should be covered by the EIA and therefore what information should be included in the EIAR. This involves considering the nature of the proposed development and the initial, usually desk based, information that has been obtained on the baseline environment. The topic areas where significant effects may potentially arise (and those where significant effects are unlikely to arise) are then identified. Methodologies for filling any information gaps and for undertaking the assessment are then developed for each of the topic areas that have been 'scoped in'.
- 2.26 When deciding on the scope of an EIAR, there is no statutory requirement to seek a Scoping Opinion from the local planning authority. The Planning and Development Act, (2000) 173, 2(a) states:
- “If an applicant or a person intending to apply for permission so requests, the planning authority concerned shall give a written opinion on the information to be contained in an environmental impact statement, subject to any prescribed consultations to be carried out*

by the planning authority in relation to such an opinion, before that person submits the application for the grant of planning permission.”

2.27 The following topics have been scoped into the EIA, as it was considered that there was potential for significant environmental effects to arise as a result of the Proposed Development:

- Population and Human Health;
- Biodiversity;
- Land, Soils and Geology;
- Water;
- Climate;
- Air Quality;
- Noise and Vibration;
- Landscape and Visual;
- Traffic;
- Archaeology and Cultural Heritage;
- Material Assets;
- Interactions;
- Mitigation and Monitoring.

Consultation

- 2.28 Consultation is an important part of the EIA process, at both the pre and post application stage. Consultation may take place with the responsible authority, statutory consultees, other relevant bodies, and with the general public. It allows information to be obtained on the local environment and other issues, and for feedback to be provided on the Proposed Development and scope of the EIA.
- 2.29 A preplanning consultation request was issued to a number of consultees, including Kilkenny County Council. The list of consultees and a record of consultation is provided in Table 2-2. Ongoing or post-application consultation will be referred to in EIAR chapters, where relevant.

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Table 2-2: Consultation Responses

Consultee	Response	Comments	Relevant ER Chapters
Kilkenny County Council Attendees: Peter Kinghan (Planning Consultant), Mark Galvin (BLQ), Kilkenny Co Co: Claire Kelly (Planner), Harry Shine (Roads), Shane Wall (Environment)	01/05/2025	Proposed Development Overview: - Lateral extension of c. 17.75 ha within a total application area of 62 ha - Continued use of existing permitted extraction area (extension of operational timeline) - Depth of extraction: 30 mOD - Increased average extraction: from 525,000 to 675,000 tpa, to be stress-tested at 750,000 tpa - Removal of existing farmyard and associated structures - Forestry removal within the application area - EIAR and AA and / or NIS to accompany the application - Statutory consultation already initiated with bodies such as NPWS and TII	Chapter 4: Alternatives; Chapter 3: Project Description.
		Key Planning Issues: - Alternatives, site selection, and depth rationale must be justified, especially given proximity to recorded archaeological features. - Clarify phasing, compliance with existing permissions, and final restoration (particularly if flooding is proposed). - EIAR must clearly distinguish between:	

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Consultee	Response	Comments	Relevant ER Chapters
		○ Permitted extraction area (continued use) ○ Proposed extension • Include table showing compliance with existing permissions. • Cumulative/in-combination impacts of both existing and proposed quarry areas to be fully assessed across all EIAR sections. • Clarify any development contributions levied and paid to date, especially where existing areas may be used as storage. • Visual impact assessment (LVIA) should use worst-case visuals, including M9 views in winter conditions. • Forestry removal must be fully assessed under EIAR/NIS, including off-site compensatory planting, especially due to potential broadleaf content.	Planning Report; Existing Permitted Quarry included in the planning application area; Planning Report details planning areas and contributions paid. Chapter 12 LVIA Chapter 6 Biodiversity
		Environment Section Comments: • Assess water quality, cone of depression, drawdown, private water sources, and impacts on River Nore. • Include C&D Waste Management Plan for demolition of farmyard.	Chapter 8 Water Chapter 3 Project Description

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Consultee	Response	Comments	Relevant ER Chapters
		- Assess noise, dust, and vibration related to increased extraction (including potential for larger blast sizes). - Lighting impacts to be assessed across both existing and new areas.	Chapter 10 AQ and Chapter 11 Noise and Vibration
		Roads Section Comments: - Submit Traffic Assessment based on 750,000 tpa (average = 675,000 tpa). - Include typical haul routes and traffic scenarios at maximum output. - Undertake pavement condition survey of regional road — scope to be agreed in advance. - Address potential impacts on M9 Motorway, including stability, noise, and dust (noting TII consultation). - Special development contribution may be applied.	Chapter 13: Traffic
		Additional Note on Forestry (Post-Meeting Email, 02/05/2025): - Proposed felling area: 6.81 ha (map provided via certified Tailte map). - Area 30 (5.5 ha) expected to be predominantly ash. - Earlier felling (1.78 ha & 1.69 ha) under separate permissions not related to quarry applications.	The forestry felling licence for the site will be subject to the regulatory processes under the requirements of the Department of Agriculture

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Consultee	Response	Comments	Relevant ER Chapters
		Although <10 ha, off-site compensatory planting is required and must be included in EIA with details of location, acreage, and species.	forestry legislation and guidelines.
Geological Survey of Ireland	25 February 2025	GSI advised that its geological datasets should be used during the preparation of the EIAR and referenced its publicly accessible online mapping resources. Relevant datasets include subsoils, geochemistry, aquifer vulnerability, groundwater, karst, landslide susceptibility, and geoheritage sites. They highlighted the importance of using appropriate metadata attribution for these datasets. They requested: - A copy of any borehole logs or site investigation data gathered, which would be added (in redacted form) to their national borehole database. - Consideration of geological heritage through access to quarry faces during operations for scientific purposes. - The potential for leaving a representative quarry face exposed at closure or incorporating public information panels if the site has significant geological value. They referred to their guidance document, <i>Geological Heritage Guidelines for the Extractive Industry</i>, and encouraged collaboration where feasible. GSI clarified that its response does not constitute support for or objection to the project.	Chapter 7: Land, Soils and Geology

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Consultee	Response	Comments	Relevant ER Chapters
Development Applications Unit (DAU) – Department of Housing, Local Government and Heritage	28 March 2025	- The Department confirmed that the information submitted at pre-planning stage was not sufficient for a full assessment of archaeological implications. However, it welcomed the proposal to undertake an Archaeological Impact Assessment (AIA) as part of the EIAR, including desktop review, field survey, geophysical survey, and test excavation. - The AIA should be carried out by a suitably qualified archaeologist and must include: - All lands subject to development, including access roads, haul roads, and temporary compounds. - Assessment of impacts on the wider archaeological landscape, not just the development footprint. - The site is close to multiple Recorded Monuments, including three enclosures (KK023-049001, KK023-049002, KK023-049003), some of which extend into the proposed development site. Reference was made to important archaeological findings during M9 Motorway development to the south, including an early medieval enclosure with associated settlement and burials. - The AIA and EIAR must: - Include an archaeological impact statement. - Address potential impacts during construction, operation, and restoration phases. - Present appropriate mitigation measures for both direct and indirect effects. - Include consideration of potential sub-surface archaeology and any previously unrecorded features.	Chapter 14: Cultural Heritage

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Consultee	Response	Comments	Relevant ER Chapters
		○ Assess effects on the setting and amenity of archaeological monuments and landscapes. • The Department highlighted the national policy presumption in favour of avoiding impacts on archaeological heritage. • The DAU reserved final comment pending review of the AIA and EIAR when submitted and reiterated the need for early, comprehensive assessment to inform the EIA process.	
Health Service Executive (HSE) — Environmental Health Service Submission	26/03/2025	Key Issues Raised: • Population and Human Health: A proportionate assessment is required, based on a source–pathway–receptor model. Sensitive receptors should be assessed in terms of land use rather than individual persons. • Water (Hydrology and Hydrogeology): All drinking water sources must be identified, including private wells and public supplies. Pre- and post-development monitoring of wells within 150m of the site is recommended. • Noise and Vibration: Baseline noise surveys are required, excluding noise from existing quarry operations. • Air Quality and Dust: Detailed assessment using dispersion modelling is required. A Construction Environmental Management Plan (CEMP) should outline comprehensive dust mitigation. • Public Consultation: Strong emphasis on early and meaningful engagement with the local community, supported by the appointment of a community liaison officer. EIAR must show how consultation influenced the EIA process.	Chapter 5: Populations and Human Health; Chapter 8: Water Chapter 11: Noise and Vibration Chapter 10: Air Quality

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Consultee	Response	Comments	Relevant ER Chapters
		• Decommissioning and Restoration: A site restoration plan should be submitted, ideally involving infill and reuse of the quarry void to reduce long-term risks. Public amenity options should be considered. • Compliance Review: The EIAR should include a review of planning compliance and any complaints received to date. • Climate and Sustainability: Climate-related effects should be assessed, and opportunities for health gains highlighted. • Cumulative Impact: EIAR must identify and assess all nearby developments and consider cumulative effects. • Additional Guidance Documents Cited: ○ 2018 DoHPLG/EPA Guidelines for Planning Authorities ○ EU Guidance on EIA Reports (2017) ○ EPA EIAR Guidelines (2022) • Recommendations: ○ Incorporate actual site data from the existing quarry operation to support impact assessment. ○ Ensure the EMS (Environmental Management System) is in place and aligned with ISO 14001:2015. ○ Provide detail on all ancillary facilities and utilities.	Chapter 3: Project Description Planning Report Chapter : Climate Each EIAR Chapter

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Consultee	Response	Comments	Relevant ER Chapters
Transport Infrastructure Ireland (TII)	26/02/2025	Key Observations and Recommendations: Statutory Context: TII acts as a statutory consultee under the Planning Acts. While this response provides non-binding best practice guidance, TII reserves the right to make formal submissions on a planning application. Policy Framework: Reference is made to the National Planning Framework, National Development Plan 2021–2030, TII Publications, and the Spatial Planning and National Roads Guidelines for Planning Authorities (2012). The strategic role, capacity, and safety of the national road network must be safeguarded. Proximity to M9 Motorway: The proposed lateral extension lies directly north of the M9 motorway. The EIAR must go beyond traffic impact and include detailed consideration of quarrying impacts on the M9. EIAR Recommendations: Geotechnical Assessment - Assess potential quarrying impacts on the M9 including subsurface, alignment, pavement, and screening bunds. - Include an appropriate setback and monitoring regime. Dust and Debris Mitigation - Assess and mitigate dust/debris risk to the M9.	Chapter 7: Land, Soils and Geology Chapter 3: Project Description; Chapter 10: Air Quality; Chapter 11: Noise and Vibration; Chapter 12: LVIA.

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Consultee	Response	Comments	Relevant ER Chapters
		3. Drainage Impacts - Ensure no adverse impacts on the M9 drainage system. Holding pond/lagoon discharge must not lead to flooding. 4. Noise & Visual Impact - Consider visual and noise effects on the national road. Refer to relevant TII guidance (e.g. NRA Good Practice Guidance for Noise, 2014). 5. Haul Route Assessment - Fully assess proposed haul routes, including capacity, structural integrity, and the need for abnormal load permits or exceptional approvals. - Identify any required improvements and note that the developer will bear the cost of such works. 6. Traffic and Transport Assessment (TTA) - Prepare a TTA per TII Guidelines (2014), including sub-threshold TTA considerations. - Assess impacts on junctions with national roads. Coordination with Other Parties: - Engage with local authorities, PPP companies, and MMarC contractors regarding haul routes and operational requirements. - Where abnormal loads or temporary works are needed within MMarC boundaries, coordinate with TII's thirdpartyworks@tii.ie and secure necessary deeds of indemnity.	Chapter 8: Water Chapter 3: Project Description; Chapter 11: Noise and Vibration; Chapter 12: LVIA. Chapter 13: Traffic Chapter 13: Traffic

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Consultee	Response	Comments	Relevant ER Chapters
		• Road Safety Audits: ○ Address any requirements for Road Safety Audits per TII standards. • Note: TII emphasises that this is a non-exhaustive list, and the developer must address site-specific impacts in line with best practice.	
Uisce Éireann	07/03/2025	Key Issues Raised: 1. Proximity to Drinking Water Abstraction Points ○ The site lies 5.2 km upstream of UÉ abstraction points at Knockanore. ○ EIAR must address direct, indirect, and cumulative impacts on these points, including potential hydrological/hydrogeological pathways. 2. Groundwater & Dewatering ○ EIAR must include full excavation details, particularly if quarrying will extend below groundwater level. ○ Impacts of dewatering should be modelled and mitigated. 3. Stormwater & Hydrocarbon Runoff ○ All phases (construction, operation, decommissioning) must assess and mitigate the risk of contaminants entering surface and groundwater. 4. Servicing of the Site ○ The planning application must clarify how the existing and extended quarry will be serviced for water supply and wastewater.	Chapter 8: Water

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Consultee	Response	Comments	Relevant ER Chapters
		• Additional Environmental Assessment Requirements: ○ Identify hydro(geo)logical pathways from site to any drinking water sources. ○ If backfilling is proposed, a waste sampling strategy must be provided to confirm inert status. ○ Mitigation measures should be outlined in an Environmental Management Plan and Incident Response Plan. ○ Confirm no impact on UÉ's abstraction sources, in line with the Water Framework Directive. ○ Clarify if UÉ infrastructure upgrades are required to support the development. ○ If trade effluent is to be discharged, outline any pre-treatment measures required. ○ No surface water is permitted to enter the UÉ sewer network. ○ Identify and assess any physical impacts on UÉ assets, including reservoirs, pipelines, and abstraction points. ○ Determine and verify location of public water services and confirm protection or diversion if needed. ○ Assess impact on receiving water bodies and their assimilative capacity. ○ Determine catchment impacts from abstraction or contamination risks. ○ Assess potential impacts on protected or sensitive areas if abstraction/discharge affects designated sites.	

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Consultee	Response	Comments	Relevant ER Chapters
		○ Maintain clearance distances from UÉ assets in line with standards; no build-over permitted. ○ Where connections are sought, developers must enter into formal connection agreements with UÉ. ● Recommendations: ○ Submit a Pre-Connection Enquiry (PCE) early to confirm feasibility of connecting to UÉ networks. ○ Submit an EIAR Scoping Request at least 6 months prior to application.	

EIAR Preparation

Difficulties Encountered in Preparing the EIAR

- 2.30 No particular technical difficulties were encountered in the preparation of the EIAR such that the prediction of impacts from the Proposed Development has not been possible. Relevant difficulties or survey limitations specific to each study area have been identified in the respective technical chapters, as appropriate.
- 2.31 Conservative assessments and construction good practice methods/mitigations have been applied where information concerning methodology or program could not be fully determined. Other details of the development may be revised prior to the final planning permission grant of the development, in agreement with the planning authority.
- 2.32 Where appropriate, information from publicly available sources has been used in the course of this assessment. This includes mapping sources such as the Environmental Protection Agency (EPA), Geological Survey of Ireland (GSI), Department of Environment, Climate and Communications and other information including Census returns. Due care has been taken in the review of these data sets; however, no responsibility can be taken for inaccuracies which may be present within this public data.

Structure of the EIAR

- 2.33 The findings of the EIA are set out in this EIAR, comprising the following set of documents:
- Non-Technical Summary (NTS): This document will provide a summary of the key findings of the EIA in non-technical language.
 - Environmental Impact Assessment Report (EIAR): This document contains the full text of the EIA. The chapter headings will be as follows:
 - 1.0: Introduction;
 - 2.0: Scope and Methodology;
 - 3.0: Project Description;
 - 4.0: Alternatives;
 - 5.0: Population and Human Health;
 - 6.0: Biodiversity;
 - 7.0: Land, Soils and Geology;
 - 8.0: Water;
 - 9.0: Climate;
 - 10.0: Air Quality;
 - 11.0: Noise & Vibration;
 - 12.0: Landscape and Visual;
 - 13.0 Traffic;
 - 14.0: Archaeology and Cultural Heritage;
 - 15.0 Material Assets;
 - 16.0: Interactions; and
 - 17.0 Mitigation and Monitoring.

Structure of the EIAR Chapters

2.34 Each technical chapter will follow a similar structure, covering the following:

- Introduction;
- Legislative and Policy Context;
- Assessment Methodology and Significance Criteria;
- Baseline Conditions;
- Potential Effects;
- Mitigation and Management (and/or Monitoring);
- 'Do-Nothing' Scenario;
- Cumulative Effects;
- Residual Effects;
- Difficulties Encountered; and
- References.

Determining the Key Features of the Proposed Development

- 2.35 A description of the Proposed Development is provided in Chapter 3.0 'Project Description' including information on the site, design, size and other relevant features of the development.
- 2.36 A description of the reasonable alternatives, which are relevant to the Proposed Development and its specific characteristics, is provided in Chapter 4.0. Information is provided of the main reasons for the option chosen, taking into account the effects of the development on the environment, economic and social effects.

Determining the Baseline

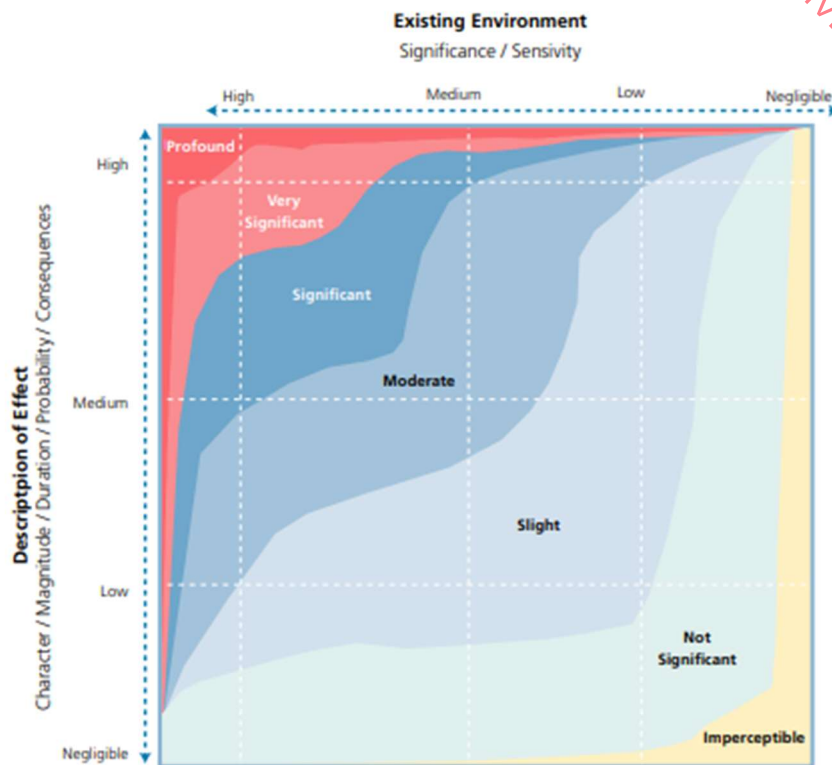
- 2.37 The EIA Directive requires the following in terms of baseline description under Annex IX:
- "A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge."*
- 2.38 The EPA's Guidelines on the Information to be Contained in EIARs (EPA, 2022) provides guidance on the methodology used to establish the baseline scenario within an EIAR.
- 2.39 Establishment of the baseline is a key foundation when carrying out the EIA process as it identifies existing environmental factors which must be considered relating to the Proposed Development and likely impacts from the Proposed Development, and significance of those impacts, on the baseline.
- 2.40 Within the EIAR, a description is provided within the various topic chapters of the relevant aspects of the current state of the environment (baseline scenario). An outline is also provided of the likely evolution of the baseline environment in the absence of implementation of the Proposed Development (the 'Do-Nothing' scenario). Information on the baseline environment was obtained through desk top review of existing environmental data and, where necessary, the collection of new data through site surveys.

- 2.41 The assessments presented in this EIAR are largely based on the comparison of expected impacts compared with current or recent baseline environmental conditions. This is with the exception of topics such as air quality, noise, traffic and transport, landscape and visual assessments which factor in future baseline changes.
- 2.42 These approaches are explained in further detail in the relevant chapters.
- 2.43 Establishment of the current and future baseline allowed effects to be assessed and reported by comparing a scenario with the Proposed Development against one without the Proposed Development.
- 2.44 The baseline description provided in the EIAR:
- Includes a description of the site location and the surrounding area as far as environmental effects are anticipated; and
 - Defines existing land-uses and environmental receptors/resources relevant to the environmental topic.

Prediction of Impacts and Effects and Development of Mitigation Measures

- 2.45 The environmental impact assessment of the project has been made with regard to the 'Guidelines on the information to be contained in Environmental Impact Assessment Reports', published by the EPA (Environmental Protection Agency, 2022); and the 'Draft Advice Notes for Preparing Environmental Impact Statements' (Environmental Protection Agency, 2015).
- 2.46 Assessments of technical disciplines have been made in accordance with applicable legislation, identified guidance and industry best practice. For several topic areas, forecasting methods developed by the respective professional bodies have been followed in order for an assessment of significance of impacts to be made. For topics where there is no topic specific guidance available, a common framework of assessment criteria and terminology has been used throughout this EIAR based on the EPA's Guidelines on the Information to be Contained in EIARs (Environmental Protection Agency, 2022).
- 2.47 This common framework follows a 'matrix approach' to environmental assessment which is based on the value (sensitivity) of the receptor and the characteristics of the impact (magnitude and nature). The terms used in the common framework are described below. Details of how these specifically relate to the individual topic areas are provided within the respective topic chapters. The descriptive terminology identified by the EPA has been reproduced below for the sake of reference for this document. The consistent use of this terminology provides clarity in the method of the assessment and meaning of the conclusions.
- 2.48 The EPA's method of determining the significance of impacts that is described below and portrayed in Figure 3.4 of the updated Guidance (EPA 2022) has been used in this EIAR. There are seven generalised degrees of impact significance that are commonly used in EIA, which are: Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant and Profound, the definitions of which are given under Description of Effects below.

Figure 2.3: Chart Showing Typical Classifications of the Significance of Effects (taken from the EPA Guidelines (2022))



There are seven generalised degrees of effect significance that are commonly used in EIA. Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant and Profound. Generalised definitions of each of these are provided in Table 3.4. When more specific definitions exist within a specialised factor or topic, e.g. biodiversity, these should be used in preference to these generalised definitions. (ref. Advice Notes⁶⁸.)

Assessment of Significant Effects

- 2.49 As stated in the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022), an assessment of the likely significant effects of a project is a statutory requirement of the EIAR process. The criteria for the presentation of the characteristics of potential significant effects will be described with reference to the magnitude, spatial extent, nature, complexity, probability, duration, frequency, reversibility, cumulative effect and transboundary nature (if applicable) of the effect.
- 2.50 It may be useful to consider such impacts in light of the criteria listed in Annex III of the amended Directive.
1. magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
 2. nature of the impact;
 3. transboundary nature of the impact;
 4. intensity and complexity of the impact;
 5. probability of the impact;
 6. expected onset, duration, frequency and reversibility of the impact;

7. cumulation of the impact with the impact of other existing and/or approved projects; and
8. possibility of effectively reducing the impact.

Descriptions of Effects

- 2.51 Each effect usually needs to be qualified to provide a comprehensive description of the predicted effect on receptors. The EIAR should focus on the likely, significant effects.
- 2.52 The extent to which the effects of major accidents and/or disasters are examined in the EIAR should be guided by an assessment of the likelihood of their occurrence (risk). This may be supported by general risk assessment methods or by systematic risk assessments required under other regulations, e.g., a COMAH (Control of Major Accident Hazards involving Dangerous Substances) assessment.
- 2.53 The potential for a project to cause risks to human health, cultural heritage or the environment due to its vulnerability to external accidents or disasters is considered where such risks are significant, e.g., the potential effects of floods on sites with sensitive facilities. Where such risks are significant then the specific assessment of those risks in the form of a Seveso Assessment (where relevant) or Flood Risk Assessment may be required. The EIAR should refer to those separate assessments while avoiding duplication of their contents.

Figure 2.4: Description of Effects (taken from the EPA Guidelines (2022))

Quality of Effects It is important to inform the non-specialist reader whether an effect is positive, negative or neutral.	Positive Effects A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral Effects No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative/Adverse Effects A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Describing the Significance of Effects 'Significance' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see <i>Determining Significance</i>).	Imperceptible An effect capable of measurement but without significant consequences.
	Not Significant An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight Effects An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
	Very Significant An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
	Profound Effects An effect which obliterates sensitive characteristics.
Describing the Extent and Context of Effects Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.	Extent Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
	Context Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)

Describing the Probability of Effects Descriptions of effects should establish how likely it is that the predicted effects will occur so that the CA can take a view of the balance of risk over advantage when making a decision.	Likely Effects The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Describing the Duration and Frequency of Effects 'Duration' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	Momentary Effects Effects lasting from seconds to minutes.
	Brief Effects Effects lasting less than a day.
	Temporary Effects Effects lasting less than a year.
	Short-term Effects Effects lasting one to seven years.
	Medium-term Effects Effects lasting seven to fifteen years.
	Long-term Effects Effects lasting fifteen to sixty years.
	Permanent Effects Effects lasting over sixty years.
	Reversible Effects Effects that can be undone, for example through remediation or restoration.
	Frequency of Effects Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).

Describing the Types of Effects	Indirect Effects (a.k.a. Secondary or Off-site Effects) Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative Effects The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
	‘Do-nothing’ Effects The environment as it would be in the future should the subject project not be carried out.
	‘Worst-case’ Effects The effects arising from a project in the case where mitigation measures substantially fail.
	Indeterminable Effects When the full consequences of a change in the environment cannot be described.
	Irreversible Effects When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual Effects The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic Effects Where the resultant effect is of greater significance than the sum of its constituents (e.g. combination of SO _x and NO _x to produce smog).

- 2.54 The approach to assigning significance of effect included reasoned argument, the professional judgement of competent experts and using effective consultation to ensure the advice and views of relevant stakeholders were taken into account.

Design and Mitigation

- 2.55 The environmental assessment and design of the Proposed Development incorporated mitigation measures using a hierarchical system as follows:
1. Avoidance and prevention: design and mitigation measures to prevent the effect (e.g. alternative design options or avoidance of environmentally sensitive sites);
 2. Reduction: where avoidance is not possible, then mitigation is used to lessen the magnitude or significance of effects; and
 3. Remediation: where it is not possible to avoid or reduce a significant adverse effect, these are measures to offset the effect.
- 2.56 The following categories of mitigation have been described in the EIAR:
1. Embedded mitigation: project design principles adopted to avoid or prevent adverse environmental effects (as described in the Project Description, Chapter 3.0), and

including fixed procedural commitments such as the development and adoption of a Environmental Monitoring Plan; and

2. Essential mitigation: measures required to reduce and if possible offset likely significant adverse environmental effects, in support of the reported significance of effects in the environmental assessment (as described in the individual topic chapters).
- 2.57 Any enhancement measures have also been described (measures that are over and above what is required to mitigate the adverse effects of a project), as well as any requirements for monitoring of mitigation measures associated with any significant environmental effects.

Cumulative Impact Assessment

- 2.58 Each technical chapter of the EIAR includes a cumulative assessment which considers the impacts arising from the project alone and cumulatively with other relevant plans, projects and activities.
- 2.59 The cumulative effects were assessed when the conclusions of individual environmental topic assessments had been reached and reported. The assessment of cumulative effects from different projects are discussed within the relevant technical chapters.

Methodology for the Cumulative Assessment of Projects

- 2.60 The potential for cumulative effects to arise from the proposed development was assessed across key areas, including population & human health, biodiversity, land, soils and geology, water, climatic factors, landscape, cultural heritage, and material assets. Each relevant section of this Environmental Impact Assessment Report concludes with a cumulative impact assessment, where appropriate, to ensure comprehensive consideration of potential combined effects.
- 2.61 The cumulative impact assessment evaluates how the proposed quarry development may influence the surrounding environment when considered alongside other relevant permitted, proposed, and completed projects in the vicinity of the proposed site.

Projects Considered in Cumulative Assessment

- 2.62 Relevant assessment material was gathered on developments within the area surrounding the proposed site. This material, compiled from the Kilkenny County Council online Planning Register and reviews of relevant Environmental Reports or Environmental Impact Assessment Reports (EIARs), as well as planning application details and drawings, provides insights into past and future projects, their activities, and their environmental impacts.
- 2.63 Given the small scale of nearby residential and rural developments, there is no potential for these minor developments to create in-combination impacts with the proposed development.
- 2.64 For developments already constructed and operational, their impacts are reflected in the baseline conditions established within Chapters 4 to 15 of this EIAR.
- 2.65 The following developments have been included in the cumulative assessment:

Existing Quarry Operations at the Proposed Site

- 2.66 This includes ongoing quarry activities, such as extraction (by blasting), processing, and dewatering. The current rate of production and existing environmental controls were reviewed to evaluate their interaction with the proposed development.

Existing Manufacturing Operations on Site

- 2.67 The on-site production of asphalt, lime products, and precast concrete products was considered. While a concrete batching plant is permitted on-site, concrete is not currently being produced. All such operations are regulated under existing planning permissions and discharge licences, which provide appropriate environmental controls.
- 2.68 As note in Chapter 1 the asphalt plant is located within the wider quarry site and is operated independently by the Breedon Group under planning permission P18/150, which authorises its operation until 31st December 2028. This plant does not form part of the current application but is referenced where relevant in this EIAR for cumulative assessment purposes.

Third-Party Quarries in the Wider Area

- 2.69 *Hennessy Concrete (Sheastown)*: located 1km, approximately, to the northeast of the application site is mapped by the EPA as being in the Stoneyford Gravels GWB but the deeper bedrock underlying the Sand & Gravel at the Hennessey Quarry will be part of the bedrock of the Kilkenny GWB. However, it is noted that Hennessey quarry does not interfere or alter that bedrock. Processing infrastructure at the site includes (crushing, screening & washing plant), concrete batching plants, workshops, fuel storage areas, weighbridge, wheelwash, laboratory/office/canteen/toilet facility, fuel storage and other ancillary facilities.
- 2.70 Roadstone (Maddockstown) Quarry is managed within the Conditions of an IPC Licence PO521-03 and is located approx. 2km northeast of the proposed application area.
- 2.71 The quarries operations were considered in assessing potential cumulative impacts in relevant EIAR chapters.

Third-Party Proposed Development in the Wider Area

- 2.72 The following developments were short-listed as having the potential to result in cumulative effects:
- 21508: P Hennessy and Co Ltd, Sheastown, Bennettsbridge, Co. Kilkenny: the development consists of a total area of 15.7 Hectares comprising of the following: 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: Continuation of use of the existing processing infrastructure (crushing, screening and washing plant), concrete batching plants, garage, workshop, fuel storage shed, wheelwash, office/laboratory and all other ancillary facilities; Landscaping and restoration of the site including construction of berms and all associated ancillary facilities/works; The applicant is seeking a 25 year permission as part of the planning application. The application is accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement.: Granted Conditional 07/12/2021;
 - 2560187: Rohan Dairies Ltd. Kilree, Sheastown, Co. Kilkenny, R95XTK2: construction of 2 no. agricultural sheds consisting of cubicles, feeding area and underground slatted slurry storage tanks and construction of 2 no. silage pits and all associated site works: Further information received 16/07/2025.

Prediction of Residual Impacts and Effects

- 2.73 Once the embedded mitigation and essential mitigation measures had been developed the assessment process for predicting impacts and effects described above was repeated to determine the residual effects (i.e. the effects remaining after mitigation).
- 2.74 Monitoring measures are proposed in the EIAR where there is uncertainty regarding the significance of, or the predicted levels of residual effects, or where monitoring is necessary to modify control measures on an ongoing basis to control residual effects.

'Do-nothing' Scenario

- 2.75 Each technical chapter of the EIAR includes an assessment of the situation or environment which would exist if a proposed, development, project or process were not carried out. This scenario takes account of the continuation or change of current management regimes, as well as the continuation or change of trends currently evident in the environment.