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2.0 SCOPE & METHODOLOGY

2.1 EIA Approach Overview

The aim of Environmental Impact Assessment (EIA) is to protect the environment by ensuring that when a responsible authority decides whether to grant permission for a proposed development, which is likely to have significant effects on the environment, it does so with full knowledge of the likely significant effects. It is then able to take these into account in the decision-making process. The aim of EIA is also to ensure that the public are given early and effective opportunities to participate in the decision-making procedures. The EIA process also allows the project proponent and their project team to identify and implement mechanisms to reduce the environmental impact of the development, through design changes and other forms of mitigation.

The EIA has been undertaken by competent experts and their names and qualifications are provided in Section 1.10.

Directive 2014/52/EU provides this definition of the EIA process:

“Article 1(2)(g) Environmental impact assessment means a process consisting of:

- I. The preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);*
- II. The carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;*
- III. The examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;*
- IV. The reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and*
- V. The integration of the competent authority’s reasoned conclusion into any of the decisions referred to in Article 8a.”*

General objectives of the EIA process have been identified in Figure 2.1.

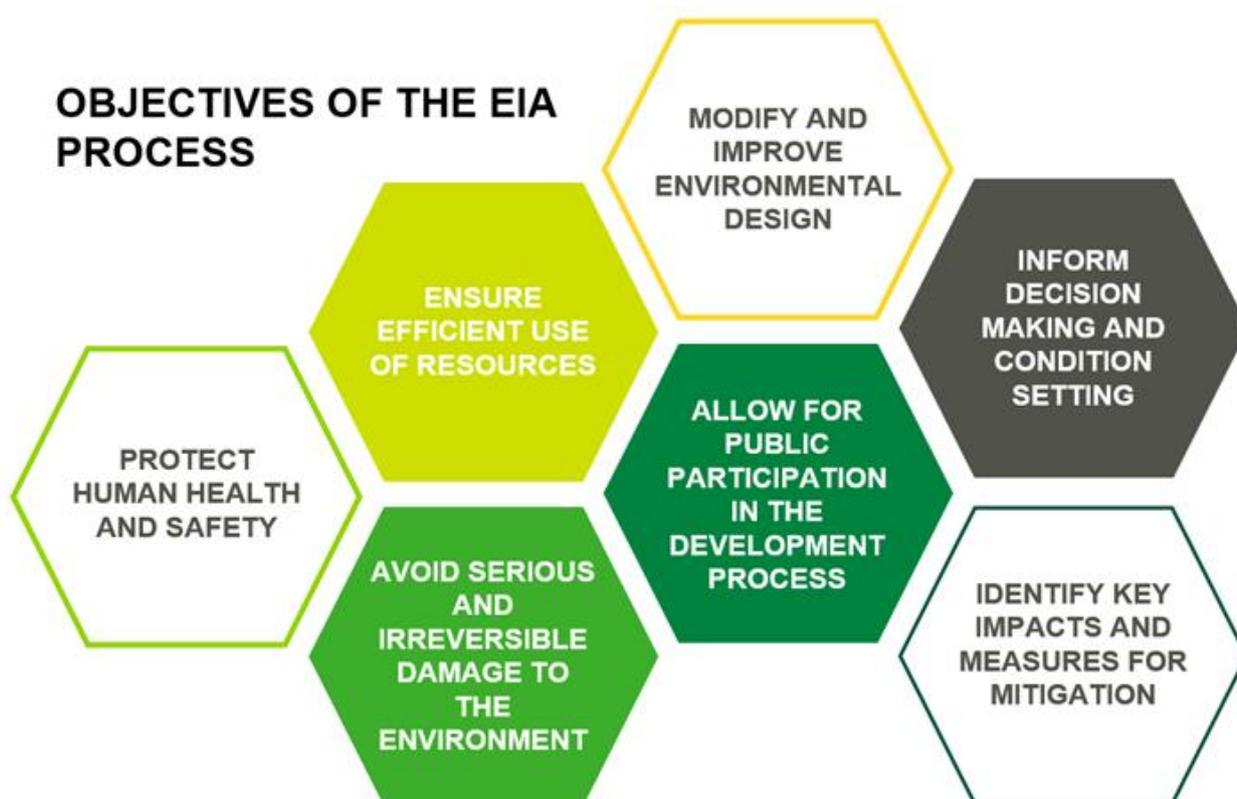


Figure 2.1: Objectives of the EIA process

The EIA process follows four main stages¹:

- 1) Screening – to determine whether a proposed development should be subject to EIA. The EPA (2022) states the following on the screening stage of EIA:

“Screening, is to establish if an EIA is required or not.”

- 2) Scoping – to determine which topic areas (environmental factors) should be included in the EIA (scoped in) and which should be excluded (scoped out). The EPA (2022) states the following on the scoping stage of EIA:

“Scoping’ is a process of deciding what information should be contained in an EIAR and what methods should be used to gather and assess that information. It is defined in the European Commission guidance as: ‘The process of identifying the content and extent of the information to be submitted to the Competent Authority under the EIA process’.”

- 3) EIAR Preparation – the stage in which the main body of work is undertaken, resulting in the production of an EIAR. The EPA (2022) states the following on the EIAR stage of EIA:

¹ Taken from Figure 2.1 of the Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA May 2022

“A report of the effects, if any, which proposed development, if carried out, would have on the environment and shall include the information specified in Annex IV of the Environmental Impact Assessment Directive.”

And

“The Environmental Impact Assessment Report (EIAR) is the principal document that the EIA process is based on.”

- 4) Completion of EIA – this stage includes scrutiny and consent (including seeking additional information, where required) and mitigation and monitoring of the development. The EPA (2022) states the following on this part of the EIA process:

“After completion of an EIAR, the remaining stages in the EIA process are scrutiny & consent and enforcement & monitoring (See Figure 2.1). These are not part of the preparation of an EIAR but are worthwhile considering in order to improve the applicant’s focus on how to present material in a way that facilitates the CA’s role in the EIA process.”

And

“After the developer applies for consent, the CA examines the EIAR, circulating it to statutory consultees while also making it available to the public. In addition to its own consideration of the information presented in the EIAR, the CA takes account of other environmental information submitted by the developer, certain authorities and the public during the formal consent process”

An overview of the EIA process is presented in **Error! Reference source not found.**

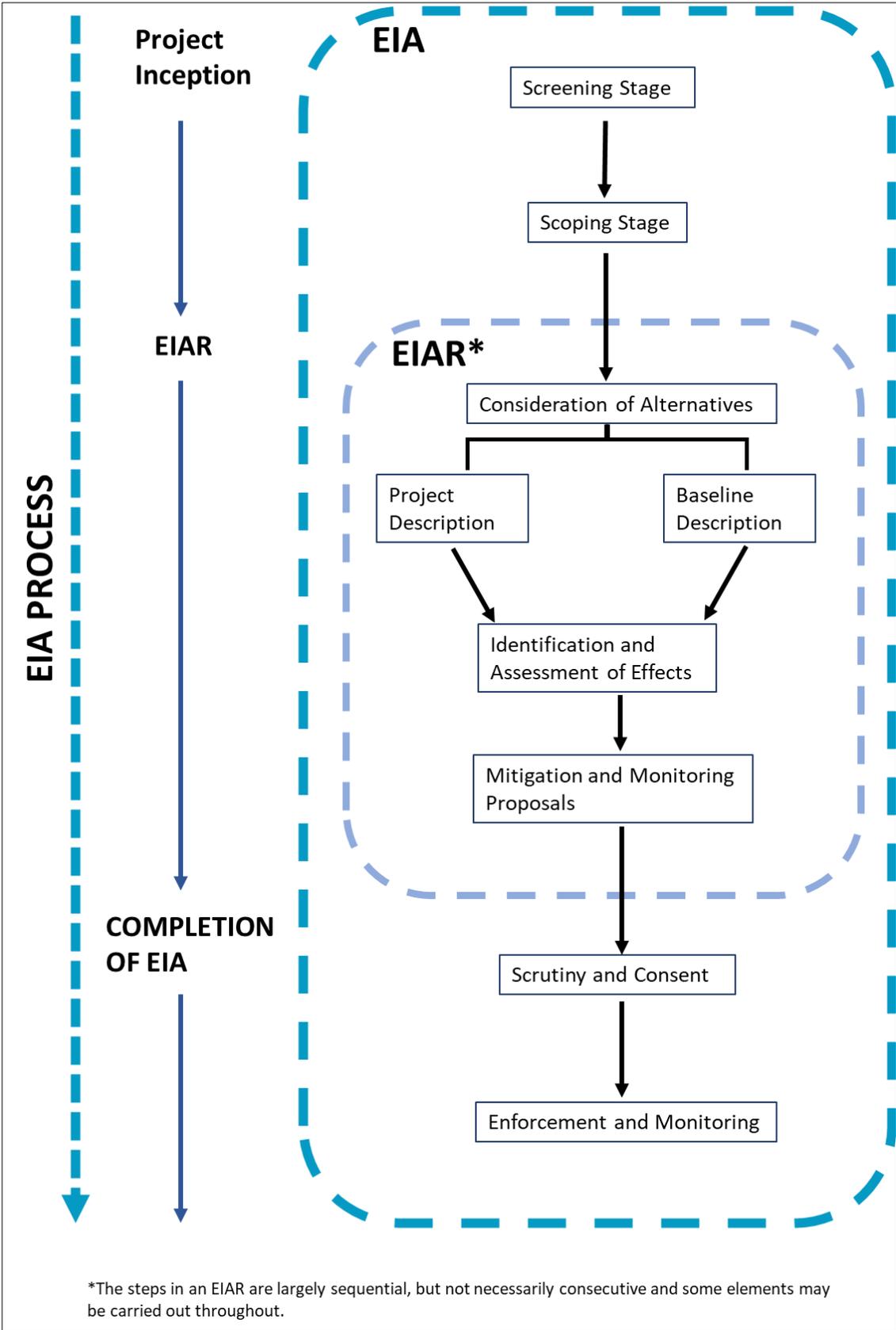


Figure 2.2: Overview of the EIA Process (after Figure 2.1, EPA, 2022)

2.1.1 *Legislation and Appropriate Guidance*

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.

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.

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, 2015). The latter document contains specific guidance on the types of issues to be considered in relation to mineral extraction (Project Type 17) and quarries and open-cast mining (Project Type 18). The classification of effects and their significance has also been carried out in accordance with these materials; unless this is otherwise stated within the relevant section or chapter.

The recent 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).

2.2 **EIA Stages**

2.2.1 *Screening*

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.

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. 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).

The applicable threshold defined in Schedule 5; Part 1 for the Proposed Development is:

“19. Quarries and open-cast mining where the surface of the site exceeds 25 hectares.”

The Proposed Development also requires an EIA as it meets the criterion set out under Part 2 of Schedule 5 of the Regulations as follows:

“2. c) All extraction of minerals within the meaning of the Minerals Development Acts, 1940 to 1999.”

2.2.2 Scoping

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’.

Monaghan’s County Development Plan (2019 – 2025) contains Policies EIP1, EIP2, EIP3 and EIP4 in relation to planning applications within its administrative area. These set out specific environmental issues which have been considered for the proposals.

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.”

A formal Scoping Request was submitted for the Proposed Development to several consultees, including Monaghan County Council.

As a result of the scoping process the following topics were 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;
- Air Quality and Climate;
- Noise and Vibration;

- Archaeology and Cultural Heritage;
- Traffic and Transport;
- Landscape and Visual;
- Material Assets;
- Risks and Hazards; and
- Interactions.

2.3 Scope of this EIAR

2.3.1 Statutory Consultees

Early stakeholder engagement has been a key process in the compilation of this EIAR. A copy of the scoping report (included as Appendix 2.1 to this document) was sent on 20th June 2019 to the statutory consultees to provide feedback, where relevant. Feedback from the 2019 scoping responses received has been incorporated into the EIAR, where appropriate. The original scoping responses received are provided in Appendix 2.2.

Table 1 (in Appendix 2.2) presents a tabulated list of the statutory consultees who have received the scoping report and a summary of their response. Table 2 (in Appendix 2.2) provides a summary of the scoping response that Monaghan County Council (MCC) provided.

In January 2022, a planning application (Reg. Ref. 22/34) to develop the Knocknacran West Open-Cast Mine and Community Sports Complex was lodged to MCC. This proceeded to a Request for Further Information (RFI). A response to the RFI was lodged in October 2022, however, the application was withdrawn by the Applicant in December 2022.

The proposed development presented in this EIAR and that presented in Reg. Ref. 22/34 are the same, consultations documented therein (including the two public submission rounds and the RFI dated 15th June 2022) have been used to inform this EIAR as part of the scoping process. The details of submissions from statutory consultees in relation to the planning application (Reg. Ref. 22/34) are presented in Table 1 (in Appendix 2.3) and details of submissions from MCC are presented in Table 1 (in Appendix 2.4).

Pre-planning application meetings have been held with MCC in January and February 2023, in advance of a new planning application. In addition, correspondence with MCC is ongoing in relation to subsidence events at Knocknacran West/Drumgoosat.

2.3.2 Community Engagement

SGMI actively engage with the community surrounding the Knocknacran and Drummond mines, providing a Community Liaison Officer and link to a 'Community Updates and Media Statement' page on their website - (<https://www.gyproc.ie/community-updates-media-statements>). This link provides the Community with up-to-date information and reassurance in relation to recent subsidence events.

Prior to, and unrelated to, the initial subsidence event in September 2018, the relocation of the Magheraclone Mitchells GAA Club grounds and the community centre, to allow for the development of

Knocknacran West Mine, had been proposed to the community. Drawings of the new proposed site and design for the Community Sports Complex were presented on a display board at the entrance to the former club pitches prior to the subsidence events.

Since the subsidence event in September 2018, a series of meetings between community representatives, the Local Authority, local Councillors, SGMI and a number of statutory bodies have taken place. Concerns can be raised at these meetings by the Community. The 'Community Updates and Media Statement' page on their website initially made reference to the original planning application and EIAR on 12 August 2019 and updates on the progress have been mentioned in statements since then.

Prior to the submission of the Planning Application and EIAR, a community information event took place at the Nuremore Hotel & Country Club, Carrickmacross, Co. Monaghan. The event was run over two consecutive days, on Tuesday 21st and Wednesday 22nd, September 2021, from 2 pm to 9 pm each day. A flyer (copy of which is presented in Appendix 2.5) was delivered to approximately 800 local residents inviting them to view plans relating to the Proposed Development in pre-booked 30 minute slots. In total, 198 residents attended the event over the two days.

A separate information day was held on Monday 20th September 2021 for public representatives, which attracted ca. 20 visitors, made up of local county councillors and politicians. The information days included stands presenting the history of mining in the area, Saint-Gobain, the proposed Community Sports Complex and the proposed Knocknacran West Open-Cast Mine development. A presentation was also provided on the proposed Community Centre for Drumgoosat, which has since been granted under Reg. Ref.: 22/23.

Appendix 2.6 summarises the environmental issues raised during the 2021 public information event and identifies the corresponding sections of this EIAR which contains further information.

In addition, public submissions were received for the planning application Reg. Ref. 22/34. This previous planning application presented the same project which is considered here in this EIAR. This current EIAR has considered and incorporated these third party concerns. The public consultation periods were carried out between January and February 2022, and October and November 2022. A summary of the concerns raised during this process, and a comment on the concern or where these are addressed in this EIAR, are provided in Table 1 (in Appendix 2.7).

2.3.3 Annex IV of Directive 2014/52/EU – 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 2.1 shows where this information has been provided in the 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 – 16.0.
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	(a), (b) and (c) Each technical chapter, as appropriate (d) Chapter 5.0 (Pop. and Human Health), Chapter 15.0 (Archaeology and Cultural Heritage), and Chapter 17.0 (Major Accidents and Disasters) (e) Chapter 18.0 (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

	environmental protection objectives established at Union or Member State level which are relevant to the project.	
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 Section 0 and 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 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.	The identification of mitigation measures is identified in each technical chapter, as appropriate.
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.	Chapter 17.0 (Major Accidents & Disasters)
9	A non-technical summary of the information provided under points 1 to 8.	EIAR Volume 1
10	A reference list detailing the sources used for the descriptions and assessments included in the report.	Reference list contained at the end of each chapter.

2.3.4 EIAR Preparation

The main EIA stage involves activities such as undertaking surveys to fill gaps in baseline data, undertaking environmental modelling, assessing the nature and significance of effects and preparing the EIAR, including the Non-Technical Summary (NTS).

2.3.4.1 Difficulties Encountered in Preparing the EIAR

No particular technical difficulties were encountered in the preparation of the EIAR such that 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.

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.

As 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.

2.4 EIA Process

2.4.1 Determining the Key Features of the Proposed Development

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.

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.

2.4.2 Determining the Baseline

The EIA Directive requires the following in terms of baseline description under Annex IX:

"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."

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.

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.

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.

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, geology (including geotechnical), landscape and visual assessments which factor in future baseline changes. These approaches are explained in further detail in the relevant chapters.

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.

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.

2.4.3 Consultation

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. Pre-application consultation has already been referred to above. Ongoing or post-application consultation will be referred to in EIAR chapters, where relevant, e.g., post application communications will be required with the relevant service providers to relocate or temporarily divert services during initial construction works associated with the Cut-and-Cover tunnel, once planning permission has been obtained.

2.4.4 Structure of the EIAR

The findings of the EIA will be set out in an 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 will contain the full text of the EIA. It is proposed that 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;
 - 12.0: Vibration;
 - 13.0: Landscape and Visual;
 - 14.0 Traffic;
 - 15.0: Archaeology and Cultural Heritage;
 - 16.0 Material Assets;
 - 17.0 Major Accidents and Disasters;
 - 18.0: Interactions; and
 - 19.0: Mitigation and Monitoring.

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

1. Introduction
2. Legislative and Policy Context
3. Assessment Methodology and Significance Criteria

4. Baseline

5. Key Characteristics of the Proposed Development:

- Constructional Phase
 - Community Sports Complex
 - Mine Development
- Operational Phase
 - Community Sports Complex
 - Mine Development
- Restoration/Closure Phase
 - Community Sports Complex
 - Mine Development

6. Potential Effects:

- Construction Phase
 - Community Sports Complex
 - Mine Development
- Operational Phase
 - Community Sports Complex
 - Mine Development
- Restoration/Closure Phase
 - Community Sports Complex
 - Mine Development

7. Mitigation and Management:

- Construction Phase
 - Community Sports Complex
 - Mine Development
- Operational Phase
 - Community Sports Complex
 - Mine Development
- Restoration/Closure Phase
 - Community Sports Complex
 - Mine Development

8. Monitoring:

- Construction Phase
 - Community Sports Complex
 - Mine Development
- Operational Phase
 - Community Sports Complex
 - Mine Development
- Restoration/Closure Phase
 - Community Sports Complex
 - Mine Development

9. Residual Effects

- Community Sports Complex
- Mine Development

10. Cumulative Effects

- The Project – Community Sports Complex and Mine Development
- The Project and other offsite projects (existing/reasonably foreseeable future)

11. Do Nothing Scenario

12. Difficulties Encountered

2.4.5 *Prediction of Impacts and Effects and Development of Mitigation Measures*

2.4.5.1 **Determining the Extent of the Assessment**

It is necessary to define the extent of the EIA in both spatial and temporal terms, and this has been done as described below.

Geographical Extent

The EIA directly covers the physical extent of the Site as shown in the red line boundary plan (Figure 2.3). Many predicted impacts can also extend beyond the immediate Site boundary, for example the use of the Site for foraging by a species that is primarily located off-site. Therefore, for certain topic areas, a wider 'zone of influence' has been considered, as described in the individual topic chapters.

The geographical extent of the EIA also includes the cumulative impacts from related and unrelated development activities in both the construction and operational phases.

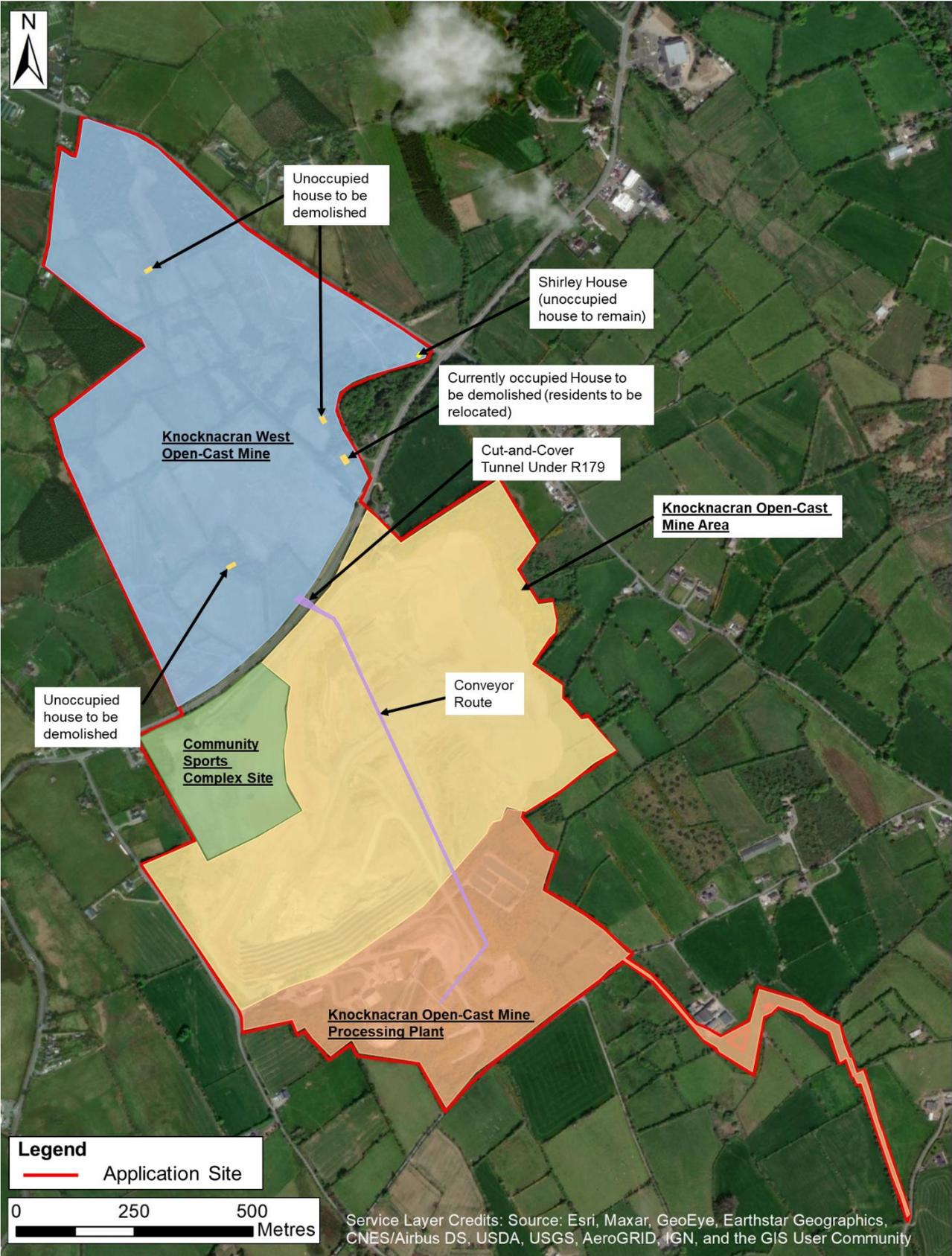


Figure 2.3: Site Outline

Temporal Extent

Under the current mine phasing plan, mining activities will occur for ca. 30 - 35 years, with production of gypsum scheduled to commence in ca. 2026.

Overall phasing of mining proposals is described in Chapter 3.0.

Figure 2.4 and Table 2.2, below presents the lifecycle for the Project considered within this EIAR.

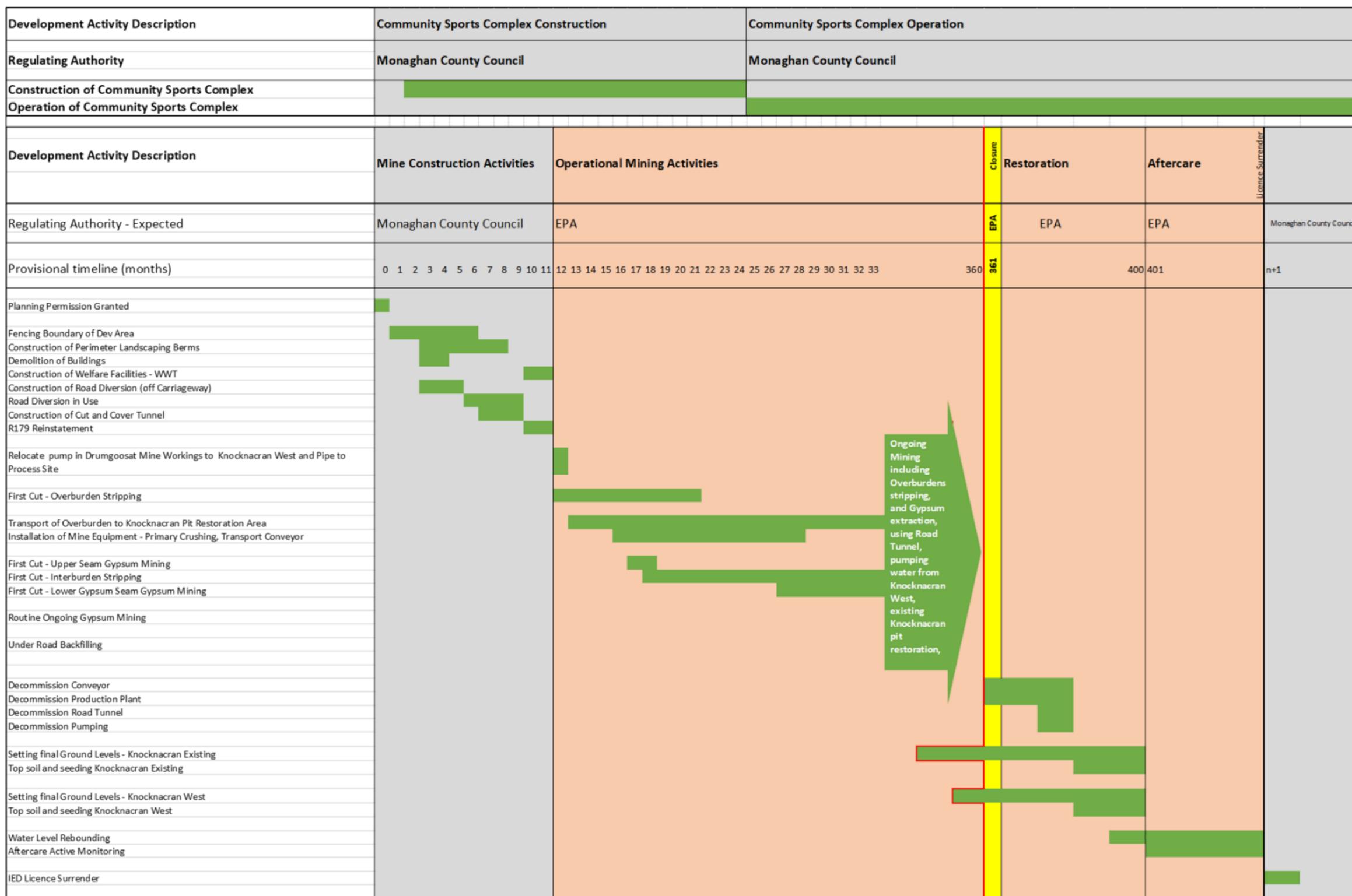


Figure 2.4: Lifecycle for the Project

Table 2.2: Description of Stages of Development

Activity	Description of Activities taking place	Licencing Context	Scheduling
<p style="text-align: center;">Construction</p>	<p>Construction Activities:</p>	<p>Construction of the upgrade to the Community Sports Complex.</p>	<p>Not in EPA licenced Area or an area that will become licenced.</p> <p>Will commence before mine operation activities take place and will continue during mine operation activities.</p>
		<p>Construction of Perimeter Landscaping involving movement of surface soils in New Mining Area (Knocknacran West) and erection of security fencing.</p>	<p>Part of an Area that is not currently EPA licenced.</p> <p>Not an activity that requires an EPA licence.</p> <p>Will commence and be complete before Mine operation activities take place.</p>
		<p>Construction of a temporary road diversion and cut and cover tunnel under the R179.</p>	<p>Not an activity that requires an EPA licence.</p> <p>Will commence and be complete before Mine operation activities take place.</p>
		<p>Construction of new mine entrance.</p>	<p>Not an activity that requires an EPA licence.</p> <p>Will commence and be complete before Mine operation activities take place.</p>
<p style="text-align: center;">Operation</p>	<p>Mine Operation Activities:</p>	<p>The excavation (by mechanical means) of overburden to access the upper seam of Gypsum.</p>	<p>A mining specific activity for the purpose of extracting Gypsum mineral.</p> <p>Requires an EPA licence.</p> <p>Will commence after construction activities have been completed and will continue for the life of the mine.</p>
		<p>The drilling, blasting, excavation, transport and crushing of the Upper seam of Gypsum.</p>	<p>A mining specific activity for the purpose of extracting gypsum mineral.</p> <p>Requires an EPA licence.</p> <p>Requires a mining lease.</p> <p>Will commence after construction activities have been completed and will continue for the life of the mine.</p>
		<p>The excavation (by mechanical means) of interburden to access the lower seam of Gypsum.</p>	<p>A mining specific activity for the purpose of extracting Gypsum mineral.</p> <p>Requires an EPA licence.</p> <p>Requires a mining lease.</p> <p>Will commence after construction activities have been completed and will continue for the life of the mine.</p>
		<p>The drilling, blasting, excavation, transport and crushing of the Lower seam of Gypsum.</p>	<p>A mining specific activity for the purpose of extracting Gypsum mineral.</p> <p>Requires an EPA licence.</p> <p>Requires a mining lease.</p> <p>Will commence after construction activities have been completed and will continue for the life of the mine.</p>

		Ongoing phased restoration - The transport and placement of overburden and interburden to previously mined areas, initially in Knocknacran and subsequently in Knocknacran West periodically throughout the life of the mine - operational phase.	A mining specific activity for the purpose of extracting Gypsum mineral. Requires an EPA licence.	Will commence after construction activities have been completed and will continue periodically throughout the life of the mine.
Restoration	Restoration Activities	Final placement of overburden and interburden.	Carried out under a formal CRAMP on EPA licenced sites.	Will commence following cessation of Gypsum extraction.
	Closure	The date on which mine activities are deemed to have ceased.		Will commence after mine has ceased operation and before aftercare commences.
		The decommissioning and removal of plant, equipment and buildings after the mine has ceased production.	Carried out under a formal CRAMP on EPA licenced sites.	
		The decommissioning and sealing of road tunnel under R179.		
	Aftercare	A period of active monitoring during which the previously developed area is monitored to ensure restoration has been effective and no ongoing impacts remain.	Carried out under a formal CRAMP on EPA licenced sites.	Will commence after all restoration activities have been completed.
Licence Surrender	The date on which the site is deemed to be stable and no further formalised monitoring is required.	The date when the EPA licence is withdrawn for the site, after an audit process.	Will commence after a formal closure audit and sign off by the EPA and Statutory Authorities	

Construction activities will vary between temporary (effects lasting less than a year) and short-term (effects lasting one to seven years) in accordance with the EPA’s 2022 “*guidelines on the Information to be contained in Environmental Impact Assessment Reports*”. Mining activities will be of long-term duration (lasting fifteen to sixty years). The Restoration (combined final restoration, closure and aftercare) phase for the proposed Mine Development will have Permanent Effects (lasting over 60 years). A decommissioning phase for the Community Sports Complex development has not been considered due to the permanent nature of the development.

Details of closure and aftercare of the proposed Mine Development are set out in the Closure, Restoration and Aftercare Management Plan (CRAMP) which is contained in Appendix 3.3 to this EIAR. The closure objective for the proposed Mine Development is for SGMl to work with stakeholders, both community and statutory, to ensure the interests of all are understood and met. The CRAMP will evolve during the life of the mine and details will be agreed with Statutory Authorities. Details of mitigation and monitoring measures proposed for the aftercare phase of the proposed Mine Development are set out in Chapter 19.0 of this EIAR.

2.4.5.2 Methodology

The environmental impact assessment of the Mine Development and Community Sports Complex 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).

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).

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.

The descriptions for value (sensitivity) of receptors are provided in Table 2.3.

Table 2.3: Environmental Value (Sensitivity) and Descriptions

Value (sensitivity) of receptor / resource	Typical description
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.

Negligible	Very low importance and rarity, local scale.
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The descriptions for magnitude of impact are provided in Table 2.4.

Table 2.4: Magnitude of Impact and Typical Descriptions

Magnitude of impact (change)		Typical Description
High	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Medium	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Adverse	Very minor loss or alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.

The approach followed to derive effects significance from receptor value and magnitude of impacts is shown in Table 2.5. Where Table 2.5 includes two significance categories, reasons are provided in the topic chapters to support the reporting of a single significance category.

Table 2.5: Significance Matrix

		Magnitude of Impact (Degree of Change)			
		Negligible	Low	Medium	High
Environmental value (Sensitivity)	High	Slight	Slight or moderate	Moderate or large	Profound
	Medium	Imperceptible or slight	Slight or moderate	Moderate	Large or profound
	Low	Imperceptible	Slight	Slight	Slight or moderate
	Negligible	Imperceptible	Imperceptible or slight	Imperceptible or slight	Slight

A description of the significance categories used is set out in Table 2.6. It is based on and is consistent with the EPA’s 2022 EIAR Guidelines. The EPA’s ‘Significant’ and ‘Very Significant’ categories have been

combined into one ‘Large’ category. Furthermore, the EPA’s ‘Not Significant’ category has been combined with the ‘Slight Effects’ category. These substitutions provide conservatism by attributing a higher effects category to adverse effects. The removal of the ‘significant’ and ‘not significant’ terminology from the matrix stage of the method avoids confusion when an overall significance is attributed to the particular impact.

Table 2.6: Significance Categories and Typical Descriptions

Significance Category	Typical Description
Profound	An effect which obliterates sensitive characteristics.
Large	An effect which, by its character, magnitude, duration or intensity alters a significant proportion of a sensitive aspect of the environment.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Imperceptible	An effect capable of measurement but without significant consequences.

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. Unless stated otherwise in individual chapters, effects that alter environmental sensitivities and are therefore considered to be **Significant** based on professional judgement. Effects that are Moderate, Slight or Imperceptible are those which at their highest effect are consistent with existing and emerging baseline trends and are considered to be **Not Significant**.

The assessment of the significance of environmental effects covered the following factors:

1. The receptors/resources (natural and human) which would be affected and the pathways for such effects;
2. The geographic importance, sensitivity or value of receptors/resources;
3. The duration (long- or short-term); permanence (permanent or temporary) and changes in significance (increase or decrease);
4. Reversibility - e.g. is the change reversible or irreversible, permanent or temporary;
5. Environmental and health standards (e.g. local air quality standards) being threatened; and
6. Feasibility and mechanisms for delivering mitigating measures, e.g. Is there evidence of the ability to legally deliver the environmental assumptions which are the basis for the assessment.

2.4.5.3 Design and Mitigation

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.

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), an example of an inherent design feature and including fixed procedural commitments such as the development and adoption of a Construction Environmental Management Plan (CEMP) prior to project development; and
2. Additional 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 and in Mitigation and Monitoring, Chapter 19.0).

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.

2.4.5.4 Prediction of Residual Impacts and Effects

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).

2.4.5.5 Cumulative Assessment

The EIA assessed cumulative effects including those from:

1. The Proposed Development itself (including those from in-combination effects between disciplines including between the Community Sport Complex and the mine development); and
2. Different offsite projects (together with the Proposed Development itself).

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 and include:

1. Establishment of a list of projects which had the potential to result in cumulative impacts, including:
 - a. Development projects with valid planning permissions or consent orders, and for which EIA is a requirement; and
 - b. Proposals in adopted development plans with a clear identified programme for delivery.

2.5 References

- Department of Housing, Planning and Local Government (2018) 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'. Available at: <https://www.opr.ie/wp-content/uploads/2019/08/2018-Environmental-Impact-Assessment-1.pdf> (Accessed: 1st February 2023).
- Environmental Protection Agency (2015) 'Advice Notes for Preparing Environmental Impact Statement - Draft'.
- Environmental Protection Agency (2022) 'Guidelines on the information to be contained in Environmental Impact Assessment Reports - Draft'. Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf (Accessed: 1st February 2023).
- European Commission (2017a) Environmental impact assessment of projects: guidance on scoping (Directive 2011/92/EU as amended by 2014/52/EU). LU: Publications Office. Available at: <https://data.europa.eu/doi/10.2779/71339> (Accessed: 1st February 2023).
- European Commission (2017b) Environmental impact assessment of projects: guidance on screening (Directive 2011/92/EU as amended by 2014/52/EU). Available at: http://publications.europa.eu/publication/manifestation_identifier/PUB_KH0417938ENN (Accessed: 1st February 2023).
- European Commission (2017c) Environmental impact assessment of projects: guidance on the preparation of the environmental impact assessment report (Directive 2011/92/EU as amended by 2014/52/EU). LU: Publications Office. Available at: <https://data.europa.eu/doi/10.2779/41362> (Accessed: 1st February 2023).
- European Union (2011) 'Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment'. Official Journal of the European Union. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0092&from=EN> (Accessed: 1st February 2023).
- European Union (2014) 'Directive 2014/52/EU of the European Parliament and of the Council, amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment'. Official Journal of the European Union. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052&from=EN> (Accessed: 1st February 2023).
- Irish Statute Book (2000) 'Planning and Development Act'. As amended. Office of the Attorney General. Available at: <http://www.irishstatutebook.ie/eli/2000/act/30/enacted/en/html> (Accessed: 1st February 2023).
- Irish Statute Book (2001) 'S.I. No. 600/2001 - Planning and Development Regulations, 2001'. As amended. Office of the Attorney General. Available at: <http://www.irishstatutebook.ie/eli/2001/si/600/made/en/print> (Accessed: 1st February 2023).

- Irish Statute Book (2018) 'S.I. No. 296 of 2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations'. Office of the Attorney General. Available at: <http://www.irishstatutebook.ie/eli/2018/si/296/made/en/print> (Accessed: 1st February 2023).

APPENDIX 2.1

2019 Scoping Report and Scoping Responses



REPORT

**Environmental Impact Assessment Report (EIAR)
Knocknacran West Open-Cast Mine and Community
Complex Development
*SCOPING DOCUMENT***

Monaghan County Council

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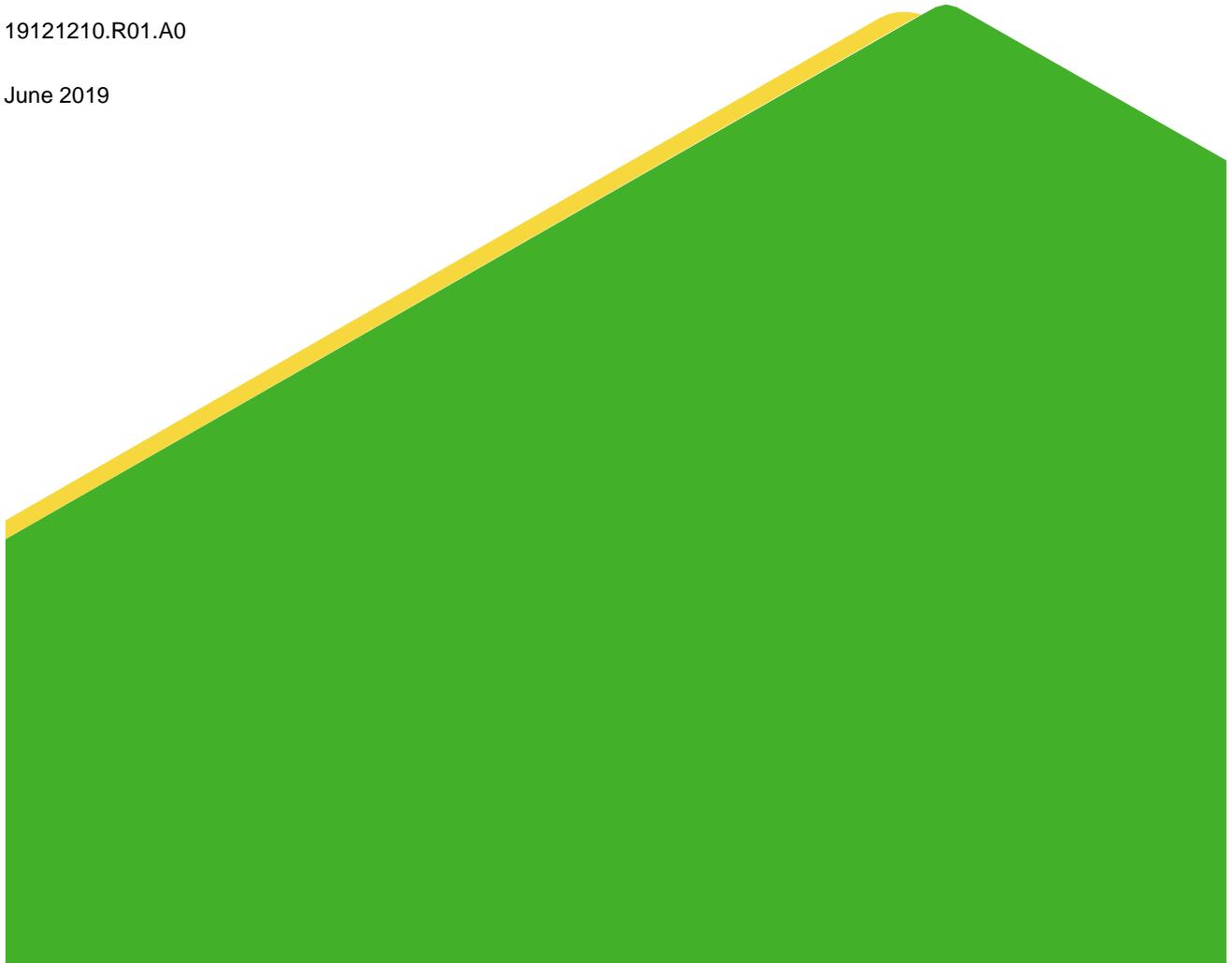


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APPENDICES

1.0 INTRODUCTION

Saint-Gobain Mining (Ireland) Limited (SGMI) is a wholly owned subsidiary of Saint-Gobain. Established in 1665, Saint-Gobain is a world leader in design, production and distribution of construction materials, delivering innovative products and services. Today, Saint-Gobain operates in 64 countries, employing ca. 191,500 people across four sectors: Construction Products (including plaster, plasterboard and dry-lining systems), Innovative Materials, Building Distribution and Packaging. Saint-Gobain’s Gypsum business in Ireland has been operating since 1936. Saint-Gobain has become a major contributor to the Irish construction industry, employing ca. 600 people.

The Knocknacran West Deposit is a continuation of the existing deposit at Knocknacran but is separated on the surface by a regional road (R179), from the existing underground mine (Drummond), open pit mine (Knocknacran) and associated crushed rock production facilities at Knocknacran. The R179 connects Kingscourt, Co. Cavan to Carrickmacross Co. Monaghan. The overall Application Site is shown in Figure 1.

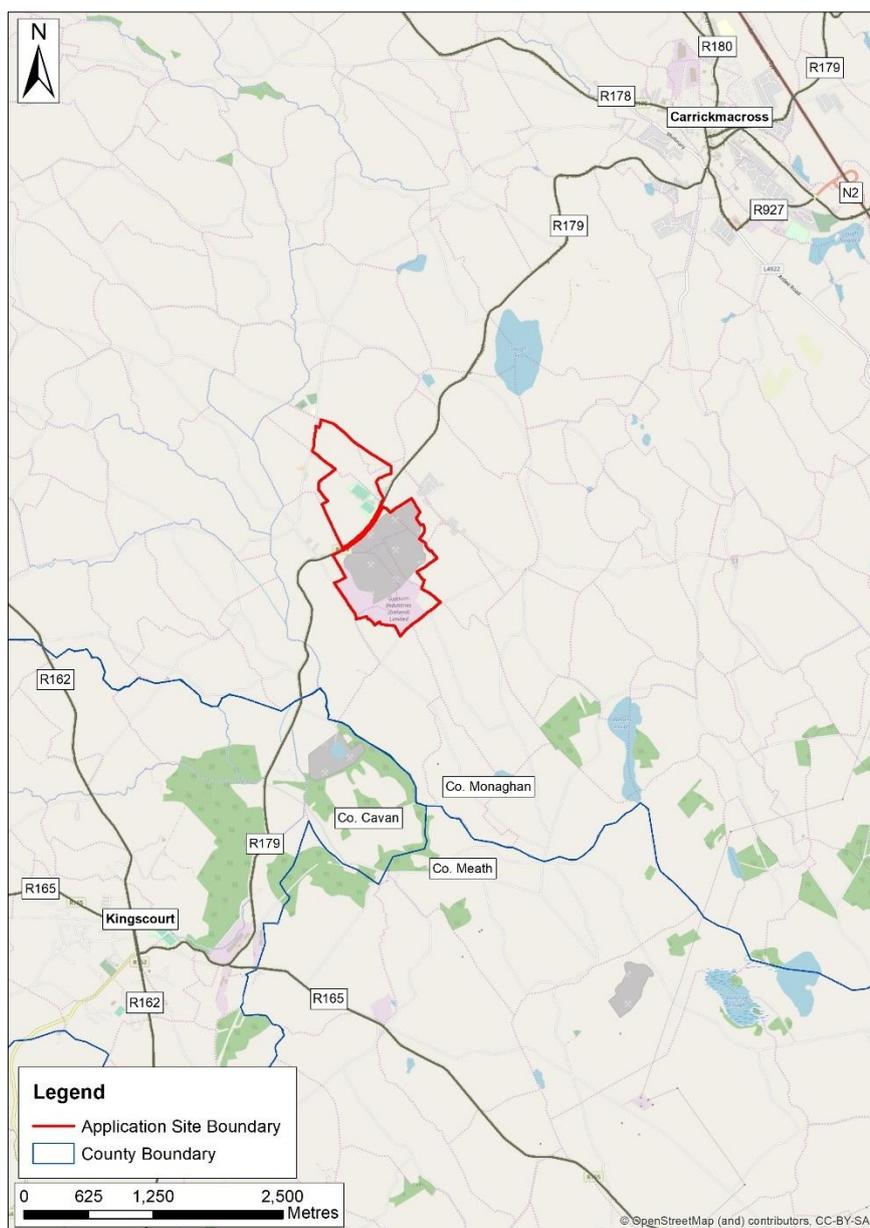


Figure 1: Application Site

The subject of this Scoping Document is;

- The extraction of gypsum from the former underground mine at Knocknacran West by open pit mining methods located in the townlands of Knocknacran (East & West) and Drumgoosat, Co. Monaghan, and the construction of a Cut-and-Cover Tunnel under the main Carrickmacross to Kingscourt regional road for the transport of gypsum (by haulage truck and covered conveyor depending on operational demands) to the existing processing plant at Knocknacran, and for the transport of overburden and interburden (by haulage truck) to the Knocknacran open pit mine;
- The restoration of the existing Knocknacran open pit mine located in the townlands of Derrynascobe, Enagh, Knocknacran East and Drummond, Co. Monaghan;
- The continuation of use of the processing plant, water treatment facilities and ancillary buildings on the existing Knocknacran open pit mine site for use by the proposed Knocknacran West open pit mine, located in the townlands of Enagh, Derrynaglah, Drummond and Derrynascobe, Co. Monaghan;
- The demolition of one vacant house and farm shed in the townland of Knocknacran West, Co. Monaghan; and
- The development of a Community Complex located in the townlands of Drummond and Knocknacran West, Co. Monaghan.

The development is of a type and scale to require an Environmental Impact Assessment Report (EIAR) and is at a location that warrants a companion Natura Impact Study (NIS).

This document provides preliminary EIAR information regarding the proposed project and the way in which it is envisaged that environmental affects will be assessed and managed. The document aims to provide enough detail that the consultees can be confident that the Environmental Impact Assessment (EIA) process will provide the necessary stewardship to ensure that the project is executed in an acceptable manner. It should also enable the authorities to identify any specific conditions, studies and areas of concern that they consider necessary for the project to proceed and also enable them to suggest any alterations to the scope and focus of studies that are proposed. Overall it should ensure that there are no unforeseen issues for any party during the development, operation and decommissioning phases of the project. The consultee is invited to submit observations, comments on this Scoping Document to Barry Balding, Golder Associates (contact details contained in Section 7.0).

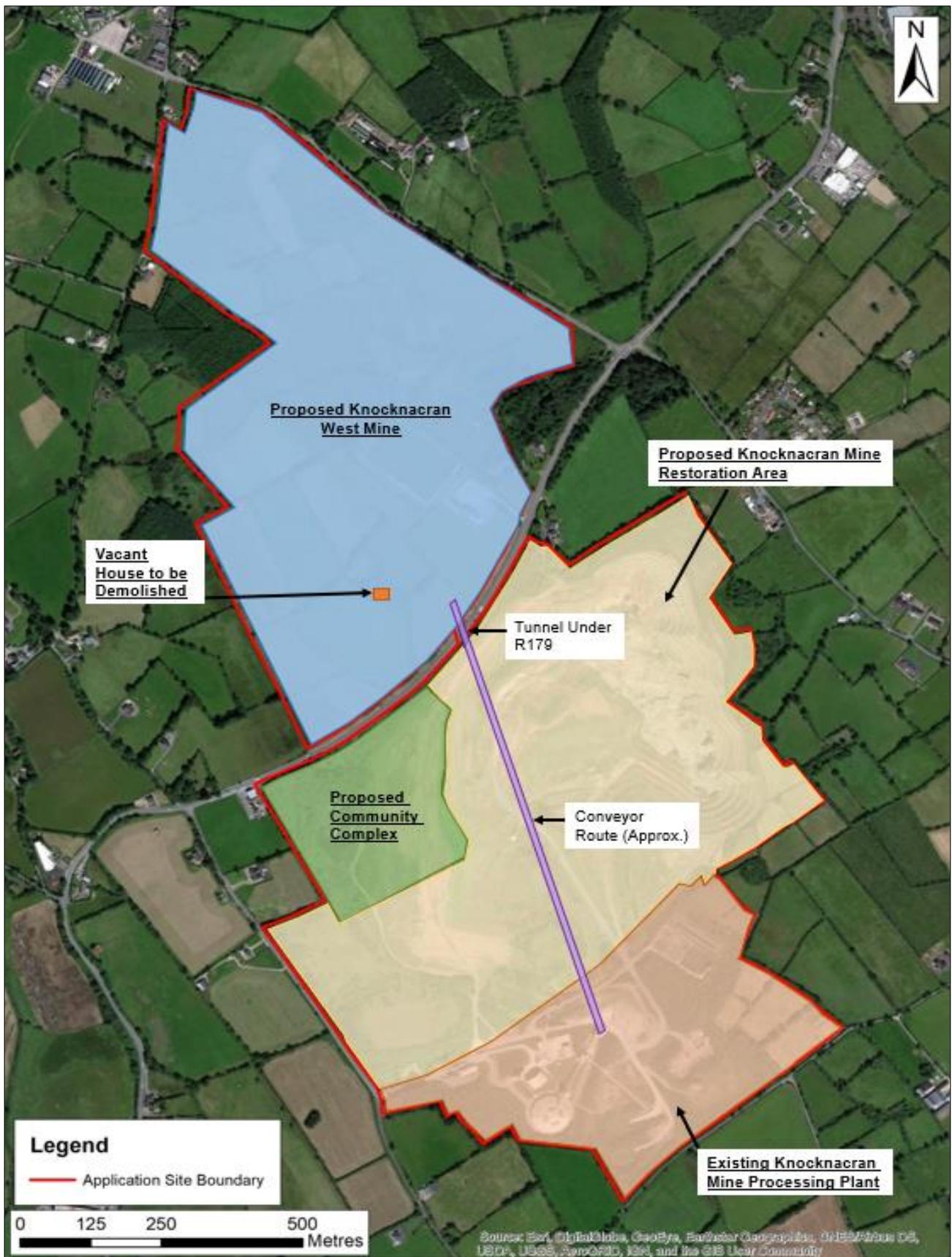


Figure 2: Application Site in red, Knocknacran West Mine in blue, Knocknacran Mine Restoration in yellow, Knocknacran Processing Plant in pink and the Community Complex Development in green

1.1 Terminology

As the development consists of five distinct elements (relating to extraction, mineral processing, restoration, community complex development and demolition of a vacant house), each element will be referred to within the relevant subheadings in this scoping report, attention will also be paid to their cumulative impacts where relevant.

The distinct elements of the proposed development are as follows:

- The proposed 'Knocknacran West Mine' where it is proposed to extract gypsum and source material (interburden and overburden) for the restoration of Knocknacran Mine. This mine encompasses the remaining part of the old workings at the former Drumgoosat Underground Mine. It also includes the construction of a Cut-and-Cover Tunnel under the Carrickmacross to Kingscourt regional road (R179) for the transport of gypsum (by haulage truck and covered conveyor depending on operational demands) to the existing processing plant at Knocknacran, and for the transport of overburden and interburden (by haulage truck) for the purpose of restoring the Knocknacran open-cast mine;
- The 'Knocknacran Mine Restoration' area, located on the existing Knocknacran Mine site where it is proposed to restore the existing extraction area using material (interburden and overburden) from the proposed Knocknacran West Mine. The Knocknacran Mine Restoration area within this document refers only to the extraction footprint of the mine which is to be restored. The existing Knocknacran Mine will be in active closure and restoration during the operation of the proposed Knocknacran West Mine;
- The continuation of use of the current Knocknacran Mine processing plant, water management facilities and ancillary facilities, which is to be referred to as the 'Knocknacran Mine Processing Plant'. This is located on the existing Knocknacran Mine site and to the immediate south of the proposed Knocknacran Mine Restoration area;
- The demolition of a 'Vacant House and Farm Shed' located on the proposed Knocknacran West Mine site; and
- The proposed 'Community Complex' where it is proposed to construct a community sports complex.

All five of these elements make up the proposed development which can collectively be referred to as the 'Site'. The Knocknacran West Mine, Knocknacran Mine Restoration and the Knocknacran Mine Processing Plant are commonly referred to together throughout this report because they are intrinsically linked. Refer to Figure 2 for a clear outline of these elements within the Site (redline boundary).

The demolition of the former community facility on the Knocknacran West Mine site will not be addressed here as the process of demolishing the facility and rehabilitating the site is expected to be completed before the submission of this application for planning permission.

1.1.1 Rationale for the Development: Knocknacran West Mine, Continuation of use of Knocknacran Mine Processing Plant and Knocknacran Mine Restoration

SGMI proposes to apply to Monaghan County Council for permission to extract the remaining pillars, overlying room beam / pillar and previously un-mined areas from both the Upper and the Lower Gypsum Units using open pit mining methods at Knocknacran West. It is proposed to continue to use the existing processing facility on the existing Knocknacran Mine site for the processing of the extracted gypsum from Knocknacran West Mine via a Cut-and-Cover Tunnel under the main Carrickmacross to Kingscourt regional road. The gypsum will be transported by a combination of haulage truck and covered conveyor depending on operational demands. The tunnel will also be used for the transport of overburden and interburden (by dump truck) to the Knocknacran open pit mine for use in restoration.

Additionally, it is proposed to restore the proposed extraction area of the Knocknacran West Mine site using overburden and interburden stripped from the site itself.

The development at Knocknacran West Mine and continuation of use of Knocknacran Processing Plant will sustain benefits to the national and local economies through the continuity of sustainable jobs directly related to the operation as well as indirect benefits through the use of local supply and services. It will achieve this by integrating its operation into the overall running of the Knocknacran/Drummond Mines to provide a sustainable, high quality gypsum feed to the Saint-Gobain owned and operated plasterboard and building plasters factory in Kingscourt, Co. Cavan.

The Knocknacran West Gypsum Deposit is a continuation of the existing gypsum deposit at Knocknacran and Drummond Mines. As gypsum is a naturally occurring mineral found within the subsurface, the process of extraction of natural gypsum can only be undertaken through mining methods.

Gypsum is a non-metallic mineral, which is found in rock form and is a valuable commodity in everyday life as it provides safer working and living environments, aids in the recovery of damaged limbs and enables food production in areas previously infertile. Due to its unique composition, gypsum offers considerable fire protection which is why gypsum is widely used in the construction industry to line the walls of houses, offices and commercial outlets. Gypsum has a wide number of uses including the following:

- Plaster and Plasterboard;
- Cement Manufacture;
- Soil conditioner;
- Pottery, glass and metal moulds;
- Medical casts; and
- Dental plaster moulds.

Gypsum reserves at the existing Knocknacran Mine and Drummond Mine are being depleted in line with demand. A new supply of gypsum is required in the near future to maintain the viability of the Irish gypsum industry as the existing gypsum operations at the Site represent the only gypsum operation in the country.

The material (i.e. overburden and interburden, including mudstone and dolerite which are not part of the gypsum reserve) from the proposed Knocknacran West Mine will be transported under the R179 road via truck and/or conveyor to Knocknacran Mine to be used in the final restoration of the existing Knocknacran Mine site (Figure 2). A restoration plan is in place for the existing Knocknacran Mine regardless of the proposed Knocknacran West Mine development. The current restoration plan would see the restoration of Knocknacran Mine to a lake with associated planting and agricultural fields while the proposed restoration, using material from Knocknacran West Mine, would see the restoration of the Knocknacran Mine area to mixture of native woodlands and agricultural lands.

The proposed Community Complex development consisting of playing pitches, running track, all-weather pitch, sports hall and associated infrastructure, which will be a social and recreational benefit to the local community.

1.1.2 Rationale for Development: Demolition of Vacant House

To enable the development of Knocknacran West Mine, one vacant house and farm shed will be demolished within the Site.

1.1.3 Rationale for Development: Community Complex Development

There have been discussions with the operators of the existing community facility and the Applicant for a number of years regarding relocating the facilities to a nearby site in advance of the proposed Knocknacran West Mine. However, the recent subsidence event beneath the existing community facilities has changed the timeline of events and created an immediate need for a new permanent facility to be built in the area.

The proposed Community Complex will be located to the northwest of the existing Knocknacran Mine, on lands owned by the Applicant. The entrance to the Community Complex will be located on the R179 and will use an existing site entrance (Figure 3).

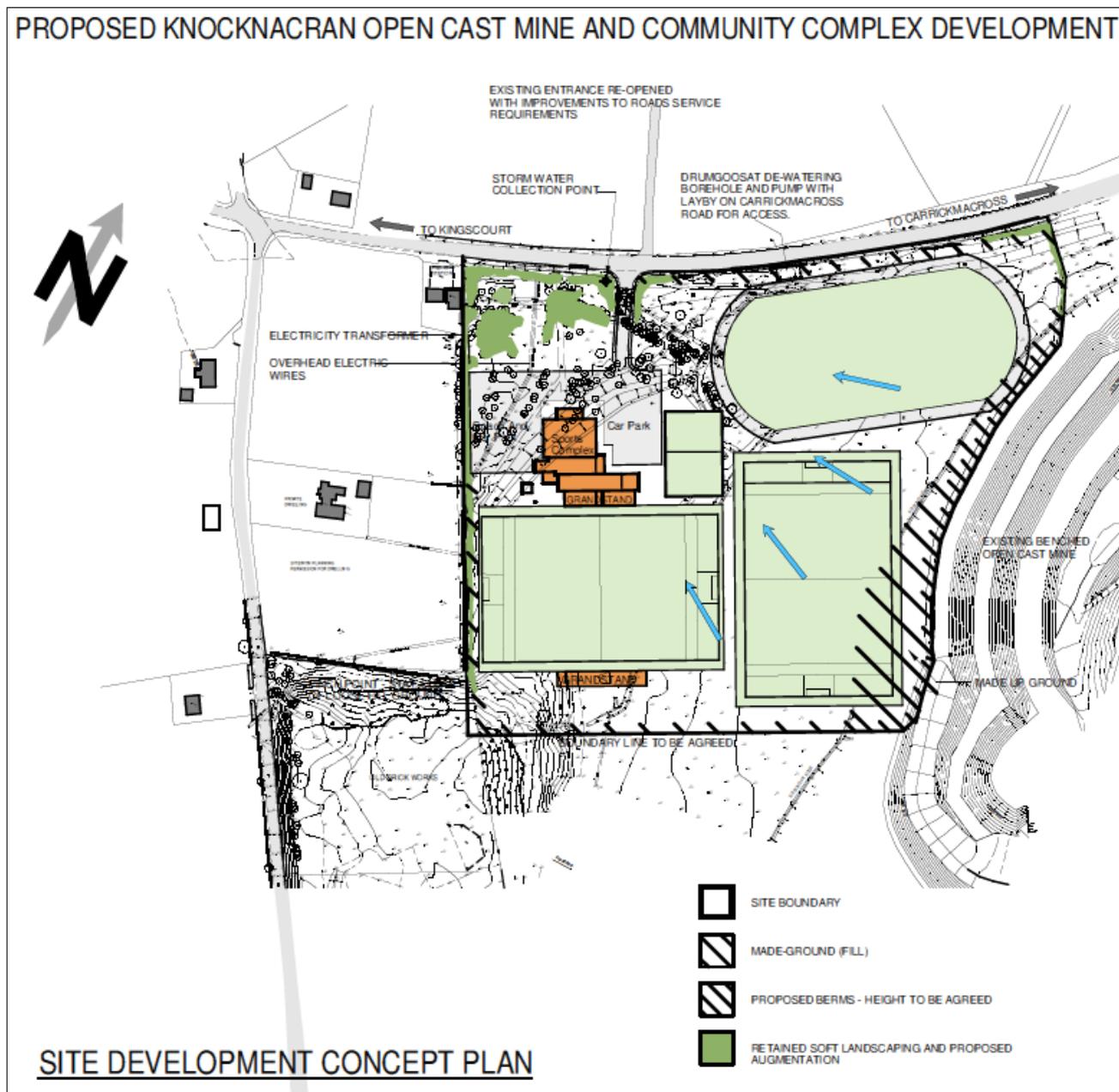


Figure 3: Community Complex - Conceptual Plan

1.2 Basis for the Scoping Study

The EIA process requires a multi-disciplinary approach due to the many varied environments (e.g. human beings, water and ecological) that may be affected. The EIAR scoping report is a key element of the EIA process, assessing the environmental characteristics and sensitivities of the proposed development at the Site, and will provide relevant information on the following issues to be addressed in the EIAR:

- Potential significant impacts;
- Legal requirements;
- Consultation requirements;
- Consideration of alternatives and mitigation measures; and
- Issues to be scoped out.

Scoping ensures that mitigation measures are identified at an early stage in the design and EIA process, thereby minimising the need for subsequent design amendments and ensuring that environmental protection and sustainability are key factors in the project design. The Scoping Study has drawn on the following sources of information:

- Review of planning files and associated technical documentation related to the Site available from the client and online from Monaghan County Council's planning website (accessed April 2019);
- Review of published information on designated areas of nature conservation interest, landscape value and areas of archaeological and cultural heritage value;
- Review of local planning policies contained in the County Monaghan Development Plan 2019 – 2025;
- Review of EIA guidance documents including the 'Guidelines for Planning Authorities and An Bord Pleanála on Carrying Out Environmental Impact Assessment'¹ and 'Environmental Impact Assessment of Projects – Guidance on Scoping (Directive 2011/92/EU as amended by 2014/52/EU)²; and
- Review of relevant legislation documents including the Planning and Development Act 2001 (as amended)¹ and Directive 2011/92/EU as amended by Directive 2014/52/EU³.

1.2.1 Requirement for EIA

Projects requiring EIA are set out in Schedule 5 of the Planning and Development Regulations 2001 (as amended).

The proposed development requires an EIA as it meets the criterion set out under Part 1 of Schedule 5 of the Regulations which states the following:

19. Quarries and open-cast mining where the surface of the site exceeds 25 hectares.

The proposed development also requires an EIA as it meets the criterion set out under Part 2 of Schedule 5 of the Regulations which states the following:

2. c) All extraction of minerals within the meaning of the Minerals Development Acts, 1940 to 1999.

In the light of these regulations, an EIA is necessary for the proposed development. However, it should be noted that the proposed Community Complex would not independently meet the criteria needed to trigger an EIAR. As such, the Community Complex will be assessed within the EIAR where relevant.

¹ Department of Housing, Planning and Local Government of Ireland, August 2018.

² European Commission of the European Union, 2017.

³ European Parliament and Council of the European Union, 16th April 2014.

1.3 Consideration of Alternatives

1.3.1 Introduction

In order to consider possible alternatives to the proposed development, the key principles of sustainable development have been incorporated into this alternative's assessment, namely the consideration of social, environmental and economic factors. This provides a systematic approach to evaluate project alternatives in a robust manner, with the strengths and weaknesses of each option discussed under these principles of sustainability.

The Alternatives section has been separated into two subsections which relate to either the mine related activities (Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant) or the Community Complex. Each subsection will consider alternatives related to the specific nature of the developments.

1.3.2 Summary of Alternatives for Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Process Plant

The proposed development and three alternatives (considered as substitute to the proposed development) are presented below:

- **Current Proposal** - Enable development of the sites to ensure continued extraction, processing and utilisation of a nationally important resource;
- **Alternative A** - Development of a greenfield site within Ireland for the supply of gypsum and gypsum products for demand nationally;
- **Alternative B** - Relocation of mining operations to another site abroad and the importation of material to be processed at the existing factory in Kingscourt, Co. Cavan; and
- **Alternative C** - Do nothing scenario.

1.3.3 Social, Environmental and Economic Considerations of the Alternatives for Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Process Plant

The Current Proposal is considered the most favourable alternative. This option enables the continued extraction of gypsum at the Site and allows for the restoration of the Knocknacran Mine site to original ground contours, where possible, and also allows for the continuation of use of the existing processing plant to ensure extraction and utilisation of a valuable national resource with good local access in terms of employment, its contribution to the local and national economies, manufacture of products for sale and revenue contributions to the both local and national authorities. Knocknacran West Mine site contains good quality workable gypsum which is under the control of SGMI. Manufacturing facilities are well established and located close to the extraction activities in Kingscourt, Co. Cavan. No intensification of mining activities is planned for the proposed development.

Alternatives A and B are not considered to be viable due to their associated social, environmental and economic impacts. The sourcing of a greenfield site, importation of materials and relocation of operations would result in such a site being situated further away from Monaghan and the manufacturing factory in Kingscourt; thus, increasing the journey lengths and knock-on effects to road infrastructures. Additionally, there are numerous environmental and social impacts of closing an existing mine and developing a new site and the relocating or sourcing of material from abroad may lead to less stringent environmental controls being placed on any mine operating abroad.

The proposed development at Knocknacran West Mine provides a source of high-quality gypsum for future infrastructural requirements nationally, in line with sustainable principles. The option to not extract materials (Alternative C) from the Site is also considered unfavourable.

This could mean the loss of jobs and revenue to the both the local and national economies. Refer to Table 1 below for a summary of the magnitude of impacts from each alternative.

Table 1: Assessment of Current Proposal and Alternatives and Estimation of Magnitude of Impact

Description of Alternatives	Social Considerations	Environmental Considerations	Economic Considerations
Current Proposal - Enable development of the Application Site (Current proposal)	Slight adverse	Slight adverse	Slight positive
Alternative A - Development of greenfield site within Ireland	Very Significant adverse	Significant adverse	Significant adverse
Alternative B - Relocation of mining operations to another site abroad and the importation of material to be processed at the factory site in Kingscourt	Significant adverse	Slight adverse - uncertain	Significant adverse
Alternative C - Do nothing scenario	Significant adverse	Negligible	Significant adverse

Current Proposal - Enable development of Knocknacran West Mine, Knocknacran Mine Restoration and Continuation of Use of Knocknacran Processing Plant.

Social

The Application seeks to recommence mining at the Site of a historical underground mine. The proposed development is for the extraction of gypsum from the Site using open-cast mining methods. Material will be extracted from the remaining pillars, overlying room beam / pillar and previously un-mined areas from both the Upper and the Lower Gypsum Units.

The duration of the extraction activity in the locality will be increased (to ca. 30 years) in order to work the available resource. However, this is a recommencement of former mining activities at the Site and an extension to the current Knocknacran mining activities by SGMI, an already established activity at the Site, which has been in operation for over 30 years by the current owners. Therefore, the effects of the additional duration is deemed to be '*Slight Adverse*' which is defined as an effect which will cause a noticeable change in the character without affecting sensitivities.

This scenario proposes to maintain production rates as currently permitted under the existing Planning Permission (Planning Reg. Ref. 17/217) from the existing mine, producing between ca. 250,000 and 500,000 tonnes of gypsum per annum depending on market conditions. Therefore, traffic is determined to have '*Neutral*' effects as the proposed development will not add additional traffic volumes to the road network.

Planting, screening and restoration measures will go a significant way towards reducing any adverse effects on visual impacts, and as they mature, they will assist in the visual integration and screening of the working area. Within the immediate site area, there will be permanent change in Landscape, however, such change is consistent with other previous and ongoing activities at the existing facility. The proposed mining operations will be difficult to discern from surrounding receptors (roads and dwellings), even those in relatively close proximity to the Site. Thus, there is considered to be a '*Slight Adverse*' landscape impact, but the visual impact of the development is deemed to be '*Imperceptible*'.

Environmental

The current proposal presents a low level of environmental impact as mitigation measures and infrastructure are currently in place with permitted extraction presently taking place in the adjacent Knocknacran Mine. Extraction activities in this proposal will be below the water-table and discharge to surface water will be monitored under the IE Licence P0519-03. Manufacturing facilities such as the existing factory in Kingscourt, Co. Cavan are already established. In addition, the current proposal will not represent an intensification of mining activities but rather maintain a guarantee of gypsum supply. Environmental effects from this proposal are deemed to be '*Slight Adverse*'.

Economic

Mining reserves can only be worked where they occur and as such, the proposed development will extract the remaining gypsum from the underground workings at Knocknacran West Mine using open-cast mining methods. In this regard, consideration of alternatives can only be related to alternatives of detailed design and processing methods.

The extraction of gypsum is controlled by the availability and quality of the reserve which in turn controls the overall design plan for the mine. The scale of the extraction area is also controlled by the ownership of the land by the operator and it would be disadvantageous to consider the use of a smaller area of land for extraction as an alternative to the current proposal as the available reserve would not be fully extracted and utilised. The mining plan is to take the majority of the remaining pillars, overlying roof beam/pillars and previously un-mined areas. Removal of the old underground workings will also aid in the long-term stability in the area of Knocknacran West.

Consideration has been given to the design and location of the processing plant, specifically whether a new plant will be constructed at the Knocknacran West Mine or whether the proposed development will use the existing processing plant at the Knocknacran Mine. The current proposal allows for the continuation of use of the existing processing plant at Knocknacran Mine for processing of the gypsum from Knocknacran West Mine. A primary crusher and conveyor system (via a Cut and Cover Tunnel) will be constructed at the proposed Knocknacran West Mine to facilitate the transfer of material between the two sites. Whereas if a new processing plant were to be built within the Knocknacran West Mine site then the Knocknacran Mine processing plant becomes redundant and any plant that cannot or would not be economically viable to be moved to Knocknacran West Mine would become obsolete. A new plant on the Knocknacran West Mine site would also require a similar scale footprint within the site and this would sterilise the underlying gypsum reserve. The footprint required for just the conveyor and primary crusher within the Knocknacran West Mine would be much smaller, and have a lesser impact on the reserve, than the relocation of the processing plant and associated infrastructure.

Economically it is significantly less costly to reuse the existing processing plant and construct a transfer system (i.e. conveyor system and haul roads) between the two sites. It also would have less of a potential environmental impact as there would be less plant requiring monitoring and maintenance and less derelict plant to safely dispose of. At this stage of the development it is proposed that the best option for the processing plant is to reuse the existing plant at Knocknacran Mine. Consideration is currently being given to the design of the transfer system for materials (both gypsum and overburden/interburden) between the two sites to allow for maximum operational flexibility throughout the life-of-mine (LOM).

As the proposed extraction is both a recommencement and a continuation of the existing mining operations, which is an established practice with existing infrastructure, permitting and markets; the magnitude of impact of the Current Proposal has been deemed to be '*Slight Adverse*' and positive.

Alternative A - Development of a greenfield site within Ireland.

As mentioned previously, it is important to acknowledge that mineral reserves can only be worked where they naturally occur. This consideration dictates a number of social, environmental and economic factors.

Social

This Alternative seeks to establish an extraction operation in a greenfield site elsewhere in the region. Social considerations for this scenario have been deemed to be '*Significant Adverse*' which is defined as an effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.

Depending on the location of this greenfield site, the establishment of a mining operation in an area which may have no other industrial activities would be considered a '*Significant Adverse*' change in the character of the area. In quieter/more rural or tourism-centric areas the effects of establishing a mine could be considered '*Very Significant Adverse*' or '*Profound Adverse*'.

At present, the gypsum in Co. Monaghan is the only proven reserve of gypsum in the country. The development of a greenfield site for gypsum mining would require the establish of extensive exploration programs which would have to 'prove-up' new gypsum reserves (to ensure their viability) before any planning/permitting application would be made. This would take several years, if not decades, before a viable gypsum reserve could be proven in this country, if indeed it exists. The social implications of entering a greenfield site initially to explore, necessitates the entering of third-party lands and discussion around continued access and eventual land sales and further land take in an area where mining is unlikely to be well established. This would be considered to be a '*Very Significant Adverse*' or '*Profound Adverse*' effect.

If a viable greenfield site was identified, a construction phase would be required to establish the processing and office areas of the development. Consideration would also have to be given to the construction of a manufacturing facility close to the site if the haulage to the existing factory in Kingscourt was not viable. The effects of this phase of development would be deemed to be '*Significant Adverse*'.

Depending on the topography of a site, the effects of the visual impacts can be quite variable. The adoption of good design and planting, screening and restoration measures can go a significant way towards reducing any adverse effects on visual impacts. As planting matures it will assist in the visual integration and screening of working areas. With the correct implementation of mitigation measures the magnitude of visual impacts could be considered '*Slight Adverse*'. Within the immediate area of the greenfield site, there will be permanent change in the Landscape. With the absence of other previous or ongoing extraction activities such a change in landscape character would be considered '*Significant Adverse*'.

Environmental

The proposal to develop a greenfield site presents a higher level of environmental impact than the Current Proposal which proposes mining in an area where mining is well-established. Additional mitigation measures and infrastructure would need to be established for a greenfield site. Depending on the greenfield site and underlying geology, there may be surface water, groundwater and biodiversity issues which are less favourable than the Current Proposal.

Depending on the nature of the greenfield site, Alternative A could introduce nuisance sources of dust, noise and vibration.

The establishment of a new activity which may have connectivity to a sensitive ecological receptor would be considered to have '*Significant Adverse*' effects.

Economic

Through forgoing the proposed extraction at Knocknacran West Mine, and the pursuit of a new greenfield site, it would require that the valuable resource proposed to be worked in the 'Current Proposal' would not be utilised.

The establishment of a new facility with associated processing infrastructure would be considerably costlier than the 'Current Proposal'. Significant cost would be incurred through the exploration for suitable deposits, the acquisition of new lands, and the generation of the relevant planning documents including site specific surveys. In addition, all of the economic factors would be affected by the location, size and accessibility of the underlying resource. With these considerations this proposal would result in '*Significant Adverse*' economic effects.

Alternative B - Relocation of mining operations to another site abroad and the importation of material to be processed at the factory site in Kingscourt.

Social

The Alternative seeks to import gypsum from other mines abroad in order to maintain production of the associated services at the Kingscourt Factory. Overall, the effects of this Alternative on the social considerations is deemed to be '*Significant Adverse*'.

In this alternative the existing mines at Knocknacran and Drummond would close, and the sites would be restored, as would the processing area on the Knocknacran Mine site, therefore landscape and visual impacts are considered to be '*Slight Positive*'. In addition, closure and restoration of the Current Proposal would likewise have a '*Slight Positive*' effect upon cessation of works, the only difference is that in Alternative B restoration would be achieved sooner than the Current Proposal.

'Alternative B' does not require an extension in the duration of the processing activities at the mine site. This scenario is considered to have '*Significant Adverse*' effects due to the loss of jobs at the existing mines and processing facilities once the current reserves are exhausted in 2025 (Knocknacran Mine) and 2033 (Drummond) depending on market conditions.

The loss of a local supply of gypsum rock of an adequate quality and quantity to supply the local gypsum factory would also create a cost risk to the continuation of the factory at Kingscourt, seriously jeopardizing employment at that site.

Environmental

The scenario to import rock from other mines abroad presents a '*Slight Adverse*' level of environmental impact as no viable alternative country has been considered at this stage. However, it can be assumed that sourcing of gypsum from another European Country will likely ensure a similar level of environmental regulation and accountability as is present in Ireland. The environmental standards of a gypsum mine outside of the EU could present an uncertain environmental risk as it may be harder to track and regulate the extraction process.

Economic

In this scenario the Applicant could import rock from an existing gypsum mine abroad. The economic feasibility of this scenario is limited by the transport costs of importation and increased haulage on the national and local road networks to reach the factory site. If the importation costs of gypsum were too high to maintain the viability of manufacturing at the Kingscourt factory site, then the factory would have to close in addition to the closure of the mine sites at Knocknacran and Drummond and the failure to utilise the reserve at Knocknacran West. This is deemed to be a '*Significant Adverse*' economic effect.

Alternative C - Do Nothing Scenario

Social

This alternative scenario assesses a 'Do Nothing Scenario' where the reserve at Knocknacran West Mine is not pursued. In the 'Do Nothing Scenario' the restoration plan, which is currently in place for Knocknacran Mine, allows for the reinstatement of agricultural land at the site and for the creation of a lake within the former

opencast pit area. A viewing area would be created to the east of the Site where the local community or tourists may use the newly created amenity area for recreational use.

However, the proposed restoration plan for this Application would see this area be returned completely to agricultural land and the lake would instead be placed in Knocknacran West Mine open pit. In this regard, the 'Do Nothing Scenario' does not have a net amenity or social gain or loss as recreational space. This is considered to be a '*Negligible*' social effect.

In the 'Do Nothing Scenario' the existing Knocknacran and Drummond Mines would cease operations once the current permitted extractable reserves are exhausted in 2025 and 2033 respectively. The supply of local gypsum to the Kingscourt factory for plaster product production would also cease and an alternative supply of material would need to be found for the factory to remain in production. This supply of gypsum would most likely be sourced from abroad as there is currently no proven alternative sources of gypsum within the country to maintain the viability of the factory. After final restoration of the Knocknacran and Drummond Mines there would be a loss of ca. 30 direct jobs and a potential loss of ca. 140 jobs from the Kingscourt factory if no cost effective alternative supply was found to maintain the viability of the factory. Indirectly the mines and factory employ many people as subcontractors and suppliers. This is considered to be a '*Significant Adverse*' social effect.

Market demand for plaster products nationally would remain regardless of the closure of the mines. This demand would have to be met through the supply of another source of gypsum to the factory and the gypsum would need to have a similar quality as Knocknacran, Drummond and Knocknacran West gypsum. If a supply could not be found which maintains the high quality and low cost of the Irish gypsum, then the factory site would be unlikely to remain in production.

In the event that an alternative supply of gypsum is not found then the 'Do Nothing Scenario' would require all services offered by the existing and proposed mines to be met at another mine site abroad. This would require an intensification of HGV movements on the local, national and international transport networks as the supply will be brought to Ireland from abroad, arrive at a port and then be trucked to Kingscourt. This would create an operating cost pressure on the factory making it less secure into the future. This scenario is considered to be '*Moderate Adverse*' depending on the condition of the road networks.

Additionally, the existing Knocknacran West Mine site has had recent issues with subsidence and there is a risk that in the 'Do Nothing Scenario' the site would remain a brownfield site which would represent a '*Slight Adverse*' effect. It is also important to SGMI that the site's legacy is a positive one into the future and a 'Do Nothing Scenario' would contrast with this philosophy.

Environmental

In this scenario the old Drumgoosat underground mine workings would remain as a brownfield site unattractive for future development due to the presence of the underground workings. The loss of the local gypsum supply would also introduce an operating cost risk to the factory at Kingscourt, potentially reducing the active presence of the company as a key local stakeholder in the area. In such a scenario, where there no longer remains a requirement to operate in the Kingscourt area, the factory could ultimately be replaced with a warehouse located at the point of import of the material to the country.

In this Alternative, 'Do Nothing Scenario', where the resource at Knocknacran West Mine is not pursued, the Knocknacran Processing Plant would not continue to be used for processing and the restoration of Knocknacran Mine will not use material from Knocknacran West Mine, there would be '*Significant Adverse*' environmental impacts to source gypsum from elsewhere as demand for the products will remain the same nationally. At Knocknacran West Mine and Knocknacran Mine there would eventually be '*Slight Positive*' environmental effects once the final restoration for both sites has been implemented. Overall, the effects of this Alternative on the environmental considerations is deemed to be '*Moderate Adverse*'.

Economic

As noted in previous sections above the market demands nationally for plaster products currently met by Knocknacran and Drummond Mines will remain. If the local supply of materials were not to be sustained then this will increase costs for the producers and consumers of the materials, and in a scenario where there is no longer a compelling argument for local manufacture, the local manufacturing facilities could be replaced with warehouses losing the benefits of the economic activity to the local area.

When these economic considerations are coupled with the loss of direct and indirect employment related revenues the cumulative economic loss is considered '*Significant Adverse*'.

1.3.4 Summary of Alternatives for the Community Complex Development

The proposed development and one alternative (considered as a substitute to the proposed development) are presented below:

- **Current Proposal** – Enable development of the site to ensure the provision of suitable amenity and recreational sports facilities for the community; and
- **Alternative A** – Development of a greenfield site elsewhere within the area.

A 'Do Nothing Scenario' is not considered in this alternatives section as it is not considered appropriate that nothing is done by SGMI to facilitate the establishment of a new Community Complex in the locality.

1.3.5 Social, Environmental and Economic Considerations of the Alternatives for the Community Complex Development

The Current Proposal is considered the most favourable alternative. This option enables the placement of the Community Complex close to the site of the original facility and on lands which have no underground workings.

Alternative A is not considered to be viable due to its associated social, environmental and economic impacts. The sourcing of a greenfield site, importation of materials and relocation of operations would result in such a site being situated further away from the existing community complex thus, increasing the journey lengths and knock-on effects to road infrastructures. Refer to Table 2 below for a summary of the magnitude of impacts from each alternative.

Table 2: Assessment of Current Proposal and Alternatives and Estimation of Magnitude of Impact

Description of Alternatives	Social Considerations	Environmental Considerations	Economic Considerations
Current Proposal – Enable development of the site to ensure the provision of suitable amenity and recreational sports facilities in the community	Significant Positive	Slight adverse	Significant positive
Alternative A – Development of a greenfield site elsewhere within the area	Significant adverse	Significant adverse	Significant adverse

Current Proposal - Enable development of the site to ensure the provision of a suitable amenity and recreational sports facilities in the community.

Social

As a community complex is an intrinsic and important part of a community, it is necessary to ensure that the development is located within the community which uses it, and is proximal to the former facility, to create the least amount of disruption. Placement of the facility on the southern side of the R179 achieves this aim as the facility will be moving ca. 300 m south of the former facility. This is considered to be a '*Negligible*' effect.

Woodland and border scrubland/hedgerows will be maintained as much as is possible to offset any potential visual and landscape impacts created by the Current Proposal. The lit playing pitches will be placed distally from the R179 and houses, as is possible, to mitigate against any potential impact at night-time on road users and nearby residents. This is considered to be a '*Slight Adverse*' effect.

Within the immediate site area, there will be permanent change in Landscape, however, such change is consistent with nearby and adjacent sites in the locality. The proposed Community Complex will be visible from the R179, however, sports facilities are an intrinsic part of communities and are not necessarily considered a negative feature. Thus, there is considered to be a '*Negligible*' landscape impact and the visual impact of the development is deemed to be '*Negligible*'.

The provision of the Community Complex will be of significant benefit to the local community through the provision of a new facility with upgraded pitches, tracks and indoor areas. Overall, there would be a '*Significant Positive*' effect from the Current Proposal.

Environmental

The current proposal presents a low level of environmental impact as the site is currently part of the existing Knocknacran Mine area. Part of the woodland area will be removed to facilitate the construction and operation of the Community Complex. However, while there will be a loss of habitat locally on the site, the future closure and restoration of both Knocknacran West and Knocknacran Mines will create additional habitat adjacent to the Community Complex in the long-term. Environmental effects from this proposal are deemed to be '*Slight*'.

Economic

As part of the current proposal SGMI will facilitate the construction of the proposed Community Complex on land currently in their ownership. The current site chosen for the proposed development is a mixed-use brownfield and greenfield site with a known mining history. No underground workings are located beneath the site. Overall, there would be a '*Significant Positive*' effect from the Current Proposal.

Alternative A – Development of a greenfield site elsewhere within the area.

Social

This Alternative seeks to construct a Community Complex elsewhere in the locality. Social considerations for this scenario have been deemed to be '*Significant Adverse*' which is defined as an effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.

The existing community complex has been established in a location that is central to the community with easy and safe access to the main Kingscourt to Carrickmacross road for more than 40 years, something which is very valuable to the local community. Alternative potential locations were discussed by the company with community stakeholders for a number of years concluding that the proposed location was the favoured option.

Depending on the location, an alternative site may be situated on a greenfield or brownfield site with an unknown history and associated risk. The establishment of a Community Complex in an area which may have no other amenity facilities would be considered a '*Significant*' change in the character of the area.

In quieter/more rural or tourism-centric areas the effects of establishing a Community Complex could be considered '*Significant Adverse*'.

Environmental

The proposal to develop a greenfield or brownfield site presents a higher level of environmental impact than the Current Proposal. Additional mitigation measures and infrastructure would need to be established for a greenfield or brownfield site. Depending on the type of site and underlying geology, there may be surface water, groundwater and biodiversity issues which are less favourable than the Current Proposal. Additionally, there

may be an unidentified environmental liability associated with a brownfield site. In this Alternative the environmental effect is considered to be '*Significant Adverse*'.

Economic

The acquisition of a greenfield site would take time and a planning application and construction phase would likely not see a development built in the community in the short term compared to the current proposal. The acquisition of a brownfield site would similarly take time with additional time likely to be required for a due diligence to be carried out on the site. In this Alternative the economic effect is considered to be '*Significant Adverse*'.

2.0 DESCRIPTION OF THE SITE AND SURROUNDING AREA

2.1 Summary of the Site Operations and Proposed Development

The proposed development at the Site consists of the proposed extraction of gypsum (and overburden and interburden) from the Knocknacran West Mine site, and the construction of a Cut-and-Cover Tunnel under the Carrickmacross to Kingscourt regional road (R179) for the transport of gypsum (by haulage truck and covered conveyor depending on operational demands) to the existing processing plant at Knocknacran, and for the transport of overburden and interburden (by haulage truck) to the Knocknacran open pit mine; the proposed phased restoration of the existing Knocknacran Mine site located south of the R179, the continuation of use of the existing processing plant (including water treatment facilities and ancillary structures) on the existing Knocknacran Mine site, the demolition of a vacant house and farm sheds on the proposed Knocknacran West Mine site and the construction and operation of a Community Complex to the west of the existing Knocknacran Mine site (Figure 2).

The Site area is ca. 133 ha, of which the proposed Knocknacran West Mine comprises ca. 53.4 ha, ca. 21.7 ha comprises the processing plant, ca. 9.0 ha will comprise the Community Complex and ca. 48.9 ha will comprise the restoration area for the existing Knocknacran Mine. Each of these developments will be elaborated on in the following sections.

The town of Kingscourt is located ca. 4.5 km south of the site along the R179 and the town of Carrickmacross is located ca. 5 km north of the site along the R179.

The existing topography in the vicinity of the Site is undulating in nature and varies in level from approximately 50 to 70 m OD.

2.2 Knocknacran West Mine Site Location and Description

The proposed Knocknacran West Mine site is located in the townlands of Knocknacran (East & West) and Drumgoosat, Co. Monaghan (Figure 2).

The site currently is occupied by agricultural land (grazing), a disused community complex (soon to be demolished) and contains a vacant house and farm shed.

2.3 Knocknacran Mine Restoration Location and Description

The proposed restoration area is located within the townlands of Derrynascobe, Enagh, Derrynascobe, Knocknacran East and Drummond and within the existing Knocknacran Mine extraction area (Figure 2).

The material (interburden and overburden) will be transferred from the proposed Knocknacran West Mine via haul truck to be used in the phased restoration of Knocknacran Mine. Staff and subcontractors will enter the site using the existing entrance located on the L4816.

The existing Knocknacran Mine currently produces gypsum as a raw material for the manufacture of an extensive range of plasterboards, plasters and cement rock. The gypsum is processed through a series of crushing circuits, before homogenisation and dispatch.

During closure of the mine, it is proposed to use material from Knocknacran West Mine to restore the Knocknacran Mine site for agricultural use (with mixed planting of native woodland trees and shrub species). This will be achieved using material from the proposed Knocknacran West Mine. It is not expected that any excess material will need to be imported from another facility.

2.4 Knocknacran Processing Plant Location and Description

The existing Knocknacran Processing Plant is located on the existing Knocknacran Mine site to the south of the R179, in the townlands of Enagh, Derrynaglah, Drummond and Derrynascobe (Figure 2). The processing plant is currently used to process gypsum from the existing Knocknacran Mine and from the Drummond Mine before it is transported offsite, via truck, to the Saint-Gobain factory site in Kingscourt, Co. Cavan for final processing.

2.4.1 Site Operations

It is proposed to continue the use of the processing plant (including water management facilities and ancillary structures) currently permitted on the Knocknacran Mine site for use by the proposed Knocknacran West Mine during its lifetime (ca. 30 years depending on market conditions).

It is proposed that gypsum will be trucked and/or conveyed to the Knocknacran Processing Plant for further processing before it is hauled (via truck) to the Kingscourt factory site. The processed gypsum will leave the Knocknacran Mine site using the existing entrance as is the current practice.

2.5 Vacant House Location and Description

The existing vacant house and farm shed are located on the site of the proposed Knocknacran West Mine in the townland of Knocknacran West. They are also located ca. 160 m north-west of the R179 and within agricultural lands owned by SGMI.

As part of the proposed development the existing vacant house and farm shed will be demolished and, as such, there will be no site operations in relation to these structures.

2.6 Community Complex Development Location and Description

The proposed Community Complex site will be located to the south of the R179 and to the immediate west of the existing Knocknacran Mine site in the townlands of Drummond and Knocknacran West (Figure 2). The area is currently in the ownership of SGMI and contains several environmental monitoring points (dust, noise, vibration, water). Part of the area is occupied by thick scrub, trees and a pond. The area is not located over any areas which have previously been mined by underground methods. The Community Complex will be accessed using an existing entrance on the R179 and sightlines will be achieved as are appropriate.

2.7 Surrounding Land Uses

The overriding land use surrounding the Site is the existing gypsum open pit and underground mines whose gypsum reserves are processed to the south of the Site. The remaining lands surrounding the Site can be characterised as rural in nature, with land uses in the area being agricultural and single-house residential.

The lands contiguous to the boundaries of the Site are in agricultural use, residential use and commercial use (a petrol station adjacent to the proposed Community Facilities on the R179). There are scattered residential properties in the vicinity of the Site, primarily concentrated along the Regional Road (R179) and the local road network. The village of Drumgoosat is located to the northwest of the Site and contains a church, national school, mushroom farm, shops and several residential houses.

3.0 OUTLINE DESCRIPTION OF THE DEVELOPMENT

3.1 General

3.1.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

The proposed development is for the extraction of material from the Site using open-cast mining methods. Material will be extracted from the remaining pillars, overlying room beam / pillar and previously un-mined areas from both the Upper and the Lower Gypsum Units.

The construction stage will see the development of a Cut-and-Cover Tunnel system beneath the R179 and the construction of a primary crusher (and ancillary services) on the Knocknacran West Mine site. A service and contractor yard will be established to the northeast of the Site which will be in use during construction and future site operations.

The Site will be accessed by a privately-owned underground tunnel which will be constructed beneath the R179 and enter the existing Knocknacran Mine site to the south of the R179. Access through the tunnel will be for a covered conveyor system, haul trucks and service vehicles.

Additionally, there will be 4 Emergency Access Points to the Knocknacran West Mine site which will be used in the case of an emergency or when moving largescale equipment to site which cannot use the tunnel. One of these entrances (onto the L4900) will be used for access by SGMI employees and service vehicles only, all plant machinery (e.g. trucks and excavators) will use the Cut-and-Cover tunnel (Figure 4).

The existing entrance on the Knocknacran Mine site will continue to be used by employees, service vehicles and the transport of gypsum to the plasterboard factory in Kingscourt. Having completed a Geological Resource Estimate and subsequent Preliminary Mine Design and Operational Schedule for Knocknacran West a life-of-mine (LOM) of ca. 30 years was estimated based on a ramped-up through-put between ca. 250,000 tonnes/year and 500,000 tonnes/year (depending on market conditions). In summary the proposed development will comprise the following:

- Development of an open-cast mine at Knocknacran West over an area of ca. 53.4 ha, to a depth of ca. 100 m to extract gypsum rock;
- Continuation of use and refurbishment of the existing Knocknacran Processing Plant;
- Transport of gypsum via covered conveyor and/or haul truck from Knocknacran West Mine to Knocknacran Mine;
- Transport of material (i.e. overburden and interburden (including mudstone and dolerite)) via truck from Knocknacran West Mine to Knocknacran Mine (for the final restoration of Knocknacran Mine);
- Handling of overburden and interburden material by contractor; and
- Construction of a Cut-and-Cover Tunnel under the Carrickmacross to Kingscourt regional road (R179) to minimise planning, environmental and social concerns associated with the project.

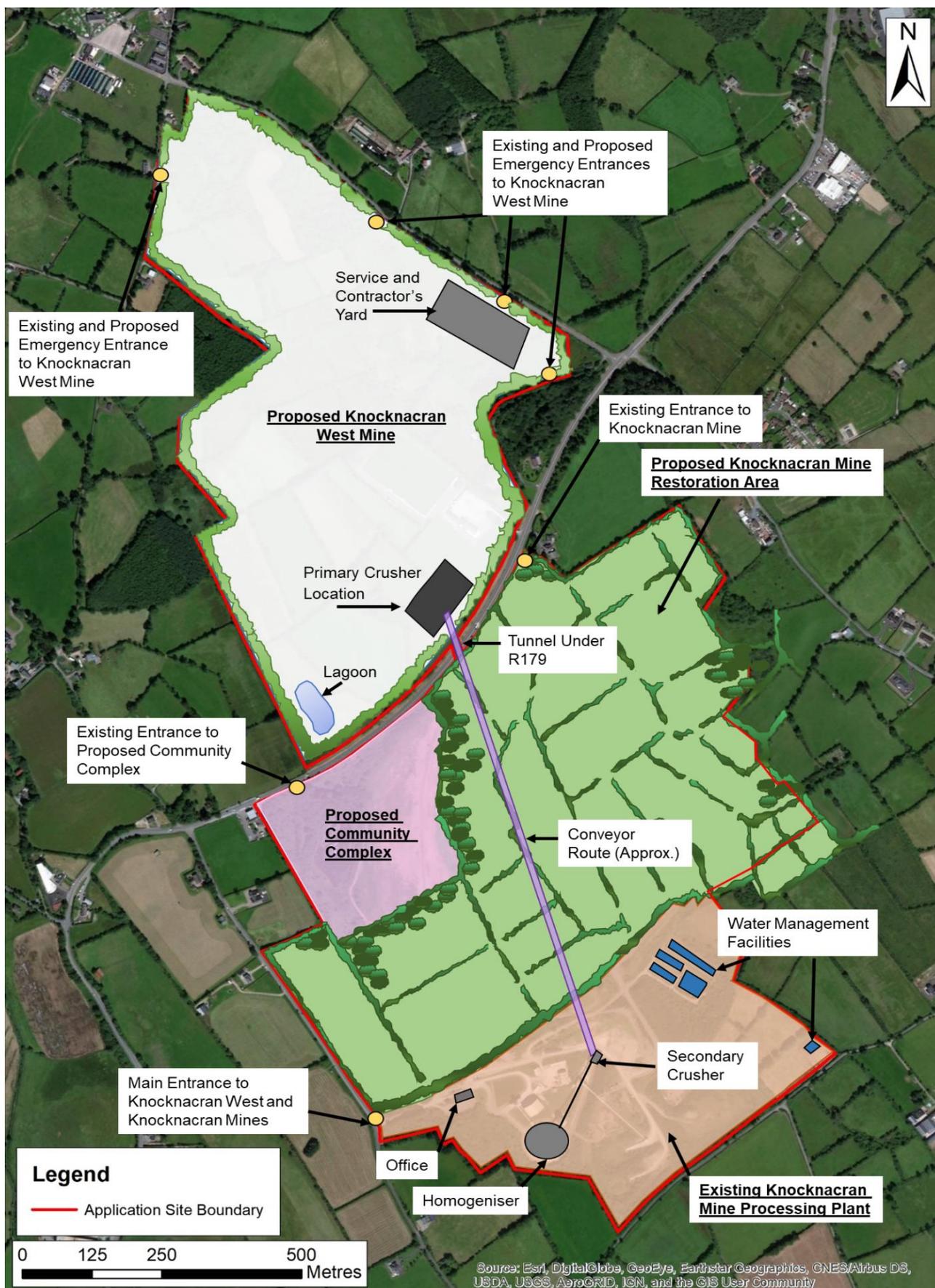


Figure 4: Proposed Operational Site Layout

The proposed extraction of gypsum will take place to a maximum depth of up to ca. 100 m OD.

The design of the proposed development will continue to follow industry best practice and having regard to its extraction design will adhere to the Mines and Quarries Act 1965 and all associated legislation. The preferred design incorporates the following:

- An up-to-date 3D topographical survey of the Site in Irish National Grid;
- Benching in overburden (depending on geotechnical assessment) to base of overburden (i.e. the rock-head);
- 3 m stand-off on rock-head (i.e. between base overburden slope and top of rock 'cut') (including edge protection);
- 70° slope from top of rock-head to bottom of Bench 1 and subsequent benches (dependent on geotechnical assessment);
- Maintain bench height where design, ground/geotechnical conditions and regulations/guidelines allow;
- Safety berms/edge protection to be >1.5 m or higher than the radius of the largest wheel / tyre;
- The construction of a primary crusher and ca. 1,000 m (1,200 mm wide belt) conveyor from Knocknacran West Mine to Knocknacran via a materials handling-link (i.e. tunnel) to allow gypsum to be transported to the Knocknacran Mine processing plant, and overburden and interburden material for the backfilling/restoration of Knocknacran Open-pit;
- Haulage ramp with passing bays (including room for safety berms and drainage channel); and
- Haulage ramp to have a gradient of no greater than 10°.

The operating processes involved in the mining of the gypsum will include:

- The use of hydraulic excavators and dump trucks to remove overburden and interburden for use in the restoration of the existing Knocknacran Mine, excess material will be stored in landscaping berms for future use in the restoration of the proposed Knocknacran West Mine;
- The extraction of gypsum in a series of benches primarily by blasting;
- The use of rock-breakers to carryout secondary breaking of over-size material; and
- The transportation of broken rock by dump truck to the primary crusher, where it is crushed to minus 300 mm;
 - The delivery of the minus 300 mm material to a vibrating grizzly feeder (via covered conveyor), where minus 75 mm material passes through the grizzly. Oversize material is route through a secondary crusher; and
 - The minus 75 mm material then travels to the on-site homogenizer within the Knocknacran Processing Plant.

Landscaping mounds (including screening berms) will be constructed on the Knocknacran West Mine site to mitigate against noise and potential dust emissions from operations, as well as to offer continued reduced visibility of the site from the public road network and surrounding lands. New screening berms will be constructed using topsoil and overburden stripped from the extraction area, remaining material will be stored in the designated temporary overburden storage areas for use in restoration works later in the development and for active restoration of the Knocknacran Mine. Overburden and topsoil will be stockpiled separately.

3.1.2 Community Complex

The proposed Community Complex will offer the following outdoor facilities (Figure 3):

- Sand based playing pitch complete with goals, ball stops, fencing, floodlighting and terrace;
- Sand based practice pitch complete with goals, ball stops, fencing and floodlighting;
- Sand based junior pitch complete with goals, ball stops, fencing, floodlighting and running track;
- All-weather pitch complete with goals, fencing and floodlighting; and
- Entrance, coach and car parking.

The Community Complex will include the following:

- Offices;
- Community/activity room;
- Multipurpose hall;
- Six changing rooms;
- Shop;
- Entrance foyer;
- Function room;
- Viewing gallery;
- Fully equipped kitchen;
- Meeting rooms;
- Public toilets; and
- Plant rooms.

3.2 Closure and Restoration of Knocknacran West Mine and Knocknacran Mine

A phased restoration plan will be implemented to minimise the extent and duration of the final restoration works.

Progressive restoration allows vegetation to become established during the course of the development, thereby reducing the overall impact of the development. During construction and earthworks on the proposed Knocknacran West Mine site, material will be used in the phased restoration of the existing Knocknacran Mine site to the south. Additionally, temporary stockpiles of topsoil and overburden will be used to store material for the future phased restoration of Knocknacran West Mine. The existing Knocknacran Mine will be restored during the operational lifetime of Knocknacran West Mine.

A phased restoration plan will be submitted with the EIAR. The proposed Knocknacran West Mine closure and restoration plan will be incorporated into the current closure and restoration plan. As such, the restoration and closure plan will be updated annually and will form part of the commitments under the future amended Mining Lease. An overall site closure plan (CRAMP) will also be agreed with the EPA as part of the future amended Industrial Emissions Licence (IEL) requirements which will incorporate the proposed development.

3.3 Employment

3.3.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

The proposed mining developments will continue to maintain direct employment associated with gypsum mining in the area. Indirect site employment will be generated in terms of contract drillers, explosive experts, maintenance contractors, consultants and suppliers of products and services such as fuel, oil and machinery suppliers. In total ca. 30 people will continue be employed by the proposed mining development over the LOM.

3.3.2 Community Complex

The proposed Community Complex will provide direct employment for ca. 5 people, with varying numbers volunteers depending on the activities undertaken. Indirect site employment will be generated in terms of contractors, suppliers and vendors providing services related to site maintenance and community events (e.g. matches, tournaments, classes etc.).

In addition, a number of construction jobs will be created during the two-three year construction phase of this development (e.g. pitches and buildings).

3.4 Vehicle Movement

A detailed traffic and transport survey will be carried out as part of the EIAR to assess the volume and potential impact of traffic on the local community and road network. There are two sources of traffic related to the Site, one related to the mining activities and the other related to the Community Complex. These will be addressed further in Section 5.3, below.

3.5 Hours of Operation

3.5.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

The proposed operational hours will remain as currently permitted with normal operating hours for the mine and restoration activity being from 08:00 to 20:00 hrs Monday to Saturday. There will be no operations on Sundays or Public Holidays (as permitted under Planning Reg. Ref. 17/217).

3.5.2 Community Complex

As is normal practice for such facilities, the Community Complex will cater for a wide range of activities for all days of the week, from morning until late evening depending on the activity undertaken and the time of the year.

3.6 Market for Knocknacran West Gypsum

The high-quality gypsum at the Knocknacran West Mine site and associated manufacturing facilities will continue to be of primary importance for the construction industry and the continued development of the country as a whole. As shown in the consideration of alternatives above, this is the only proven reserve of gypsum within the country and failure to utilise the reserve will not negate the market demand for the final product, it will only create a need to outsource the gypsum supply from abroad.

4.0 PLANNING CONTEXT

4.1 Planning Permission and Licenses of the Site

The original planning for the development of a gypsum mine in the area of the Site was submitted to Monaghan County Council in December 1983 (PI. Ref. No: 83461), with permission granted in July 1985.

An application was made in 2003 for the development of the underground mine at Drummond, extension of the period of use of the existing processing plant and construction of ancillary facilities. Permission was granted in July 2004 and this application was accompanied by an EIS.

An application to extend the extraction area (including associated earthworks) of the 1985 permission from 32.3 ha to 54.86 ha was submitted in March 2007 (PI. Ref. No: 07/430). An EIS was submitted with this application. Permission was granted in September 2007.

An application (PI. Ref. No: 17/217) to continue the extraction of gypsum from the open pit previously permitted under PI. Ref. No: 07/430 was granted in June 2017. An EIS was submitted with this application in April 2017.

The former community facilities which are located within the proposed Knocknacran West Mine site, and which are due to be demolished prior to the submission of this project for planning permission, originally obtained planning for the erection of a pavilion in September 1974 (PI. Ref. No: 74/249). Subsequent permission was granted in October 1993 (PI. Ref. No: 93/214) for the erection of a stand, toilet, storerooms and boundary wall. In October 1995 a decision was made to grant permission for the erection of dressing rooms and adequate sewerage facilities under PI. Ref. No: 95/393. In January 2003 permission was granted to demolish an existing extension to the side of the Community Centre Building and to erect a new single storey extension comprising an entrance hall, toilet facilities and meeting room in the same location (PI. Ref. No: 02/823).

Table 3 below provides a summary of the planning applications and consents associated with developments at or around the Knocknacran Site in County Monaghan.

Table 3: Planning Applications and Consents associated with the Proposed Development

	Description	Grant Date
17/217	Permission for the continuation of extraction of gypsum from a permitted open cast mine previously permitted under planning 07/430 to 2033 over an area of 54.86 hectares including progressive restoration and all associated site works. This application is accompanied by an Environmental Impact Statement (EIS).	22/06/2017
07/430	Extend the extraction area of the existing permitted opencast gypsum mine to allow for extraction and associated works within the company's property boundary to the permitted date of 2018 (Ref. No. 83/461). The proposed development area extends to 54.86 hectares (135.56 acres), which includes the permitted extraction area, the proposed extraction area and earthworks associated with this application. An Environmental Impact Statement has been submitted with this application.	05/09/2007
05/1245	Erect a gypsum rock storage shed, adjacent to existing quarrying facility in Drummond, Magheraclone.	21/02/2006

	Description	Grant Date
03/578	Underground gypsum mine.	20/07/2004
02/823	Demolish existing extension to side of Community Centre Building, and to erect a new single storey extension, comprising entrance hall, toilet facilities and meeting room, in same location	08/01/2003
95/393	Erection of dressing rooms and adequate sewerage facilities at Knocknacran West.	18/10/1995
93/214	Erection of stand, toilet/store, rooms and boundary wall m.o.p. 366/93.	27/10/1993
93/225	Retention of temporary entrance m.o.p. 270/93.	24/09/1993
90/372	Retention of temporary entrance m.o.p. 530/90.	10/01/1991
88/373	Provision of temporary entrance m.o.p. 393/88.	28/10/1988
86/415	Erection of processing facilities for opencast gypsum mine at Knocknacran East, Knocknacran West, Derrynascobe, Drummond, Enaghderrynaglagh and Clontrain.	09/04/1987
83/461	Development of opencast gypsum mine in townlands of Knocknacran West, Knocknacran East, Derrynascobe, Drummond, Derrynalagh and Enagh. Extension of time for issuing decision agreed until Oct.16 1984. m.o.p 328/84.	25/07/1985
83/248	Erect d'house m.o.p. 278/83.	29/07/1983
83/158	Erect d'house m.o.p. 248/83.	08/07/1983
82/319	Erect d'house m.o.p. 464/82.	18/10/1982
74/249	Erect a pavilion m.o.p 354/74.	16/9/1974
72/498	Erect d'house m.o.p. 36/73.	29/03/1973
65/176	Erection of leaching plant m.o. 15/66.	28/02/1966

4.2 Concurrent Permits

The mining activity within this EIAR Scoping Document, for the extraction of gypsum at Knocknacran West Mine, is an activity that will be regulated under multiple statutes besides planning permission. The current gypsum mine holds and operates in compliance with the terms and conditions of the requisite Mining Lease and IE Licence.

The Mining Lease, reference number M139, was issued in November 2002. An application will be made to the Department of Communications, Climate Action and Environment (DCCA) for an extension to the Mining Lease term as the current Mining Lease expires on 11th November 2032.

The proposed development has calculated a ca. 30 year LOM (giving an estimated closure of ca. 2055 (using 2025 as the commencement year for production)).

The mining operations at the Knocknacran and Drummond Mines are the subject of IE Licence Reg. No. P0519-03 that is transboundary applying to the townlands of Lisnabow, Kilmainham, Kells, County Meath, and in the townlands of Knocknacran, Magheracloone, Drummond, Derrynascobe, Derrynaglah, Ballycartlan, Enagh, Carrickmacross, Co Monaghan. The proposed development at Knocknacran West Mine is expected to be included within an amended IE Licence and a review of the Licence to achieve this will be requested by the Applicant once a planning application has been submitted.

The current IE Licence Reg. No. P0519-03 is an update of P5019-1 obtained in July 2002 and P0519-02 obtained in February 2005 on foot of the mine extension at Knocknacran and Drummond Mine.

4.3 Monaghan County Development Plan Context

The Site lies inside the administrative boundaries of Monaghan County Council. The current Development Plan for the County is for the period 2019 to 2025. Relevant sections of the Monaghan County Development Plan include Landscape Character, Ecological Designations, Water Quality and Archaeological Designations.

The Monaghan County Development Plan 2019 - 2025 acknowledges that the extractive industry makes an important contribution to the economy and that it is important that *“these significant natural resources...are safeguard for future use whilst also ensuring that impacts on the environmental and communities are acceptable”*. To address this the Council notes that planning applications must account *“for issues relating to noise, dust, vibration, visual intrusion, water pollution, traffic generation, etc”*.

Monaghan County Council has set out the following mineral extraction specific policies:

“ERP 1: *To safeguard for future extraction all identified locations of major mineral deposits in the County.*

ERP2: *To promote development involving the extraction of mineral reserves and their associated processes, where the Planning Authority is satisfied that any such development will be carried out in a sustainable manner that does not adversely impact on the environment or on other land uses. Consideration in this regard shall be given to the impact of the development on the local economy.*

EIP 1: *To require all applications for extractive development to submit the following as part of the planning applications;*

a) *Map detailing total site area, area of excavation, any ancillary proposed development and nearest dwelling and/or any other development within 1km of the application site.*

b) *Description of the aggregate to be extracted, method of extraction, any ancillary processes (crushing etc), equipment to be used, stockpiles, storage of soil and overburden and storage of waste materials.*

c) *Total and annual tonnage of extracted aggregates expected lifetime of the extraction, maximum extent and depth of working and a phasing programme.*

d) *Details of water courses, water table depth and hydrological impacts, natural and cultural heritage impacts, traffic impact and waste management.*

e) *Assessment of cumulative impact when taken with any other extractive operations in the vicinity.*

f) *Likely environmental effects, proposed mitigation measures and restoration and after-care proposals.*

EIP 2: *To prohibit extractive development within an area of primary or secondary amenity, Special Protection Area (SPA's) , Special Area of Conservation (SAC's), Natural Heritage Area/pNHA (NHA's)*

Architectural Conservation Area (ACA's) or on or near protected structures unless in exceptional circumstances where the Planning Authority is satisfied that the need for the resource outweighs the environmental impact.

EIP 3: *To restrict development proposals located in close proximity to existing extractive sites of significant resource potential where such developments would limit future exploitation.*

EIP 4: *To restrict extractive developments that may have a detrimental impact on the natural or built environment or matters of acknowledged public importance including the use of public rights of way."*

The Council refers to the *National Guidelines on Quarries and Ancillary Activities for Planning Authorities* (DOEHLG, 2004), *Guidelines for Environmental Management in the Extractive Sector* (EPA, 2006), *Guidance on Biodiversity in the Extractive Industry* (NPWS), GSI's *Geological Heritage Guidelines for the Extractive Industry*, the *Archaeological Code of Practice* and the *Irish Concrete Federation Environmental Code* (2005) and any other relevant superseding policy guidance as the guiding documents for these developments.

Section 15.30 (Appropriate Assessment) states the following:

"AAP 1: *All projects and plans arising from this plan⁴ will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and a Stage 2 Appropriate Assessment where necessary, that:*

1. The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or

2. The Plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of the Natura 2000 network; or The Plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of the Natura 2000 network.

⁴*Such projects include but are not limited to those relating to: agriculture; amenity and recreation; contaminated sites; electricity transmission; flood alleviation and prevention; forestry; mineral extraction; renewable energy projects; roads; telecommunications; tourism; wastewater and discharges; and water supply and abstraction."*

It is also acknowledged in the County Development Plan (Section 8.3) that the extractive industry is one of a number of pressures on water quality in the County.

Under Tables 9.2 and 9.3 (Land Use) the Council has identified that quarrying/extractive industry is a 'not permitted use' with the following land uses:

- Town Centre;
- Existing Residential;

- Strategic Residential Reserve;
- Industry, Enterprise and Employment;
- Existing Commercial;
- Community Services;
- Recreation and Amenity; and
- Landscape Protection/Conservation.
- Whereby 'not permitted use' is defined as a *“use that would be contrary to the zoning objectives and sustainable development. Extensions to existing non-conforming uses within any zoned area will be considered on their merits.”*

Additional policies in the County Development Plan which relate to the proposed developments include restrictions on destroying vegetation on uncultivated land between the 1st March and the 31st August each year, and policy TWP 1 which states the following in Section 6.15:

*“**TWP 1:** To minimise loss of tree(s) and hedgerow associated with any development proposal and encourage the retention of existing mature trees, hedgerows and woodlands in new developments. Where removal is unavoidable consideration should be given to transplanting trees and/or providing compensatory planting on the site.”*

The Council also has obligations to protect and enhance the water environment in the County as outlined in the following policies:

*“**WPP 16:** To support the implementation of the relevant recommendations and measures as outlined in the relevant River Basin Management Plan, and associated Programmes of Measures, or any such plans that may supersede same during the lifetime of the plan. Proposals for development should not have an unacceptable impact on the water environment, including surface waters, groundwater quality and quantity, river corridors and associated woodlands. Also, to have cognisance of, where relevant, the EU’s Common Implementation Strategy Guidance Document No. 20 which provides guidance on exemptions to the environmental objectives of the Water Framework Directive.*

***WPP 17:** To contribute towards the protection of existing and potential water resources, and their use by humans and wildlife, including rivers, streams, groundwater and associated habitats and species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009), the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). To also support the application and implementation of a catchment planning and Monaghan County Development Plan 2019-2025 170 Water Protection Policies management approach to development and conservation, including the implementation of Sustainable Drainage System techniques (SUDS) for new development.”*

4.4 County Development Plan Designations and Context

In addition to the above extraction policies and objectives of the County Development Plans, the Plans’ provisions in relation to land use zoning, landscape, natural and built designations and development management guidance will inform the EIAR.

5.0 ENVIRONMENTAL IMPACTS

5.1 Introduction

This section of the report outlines the potentially significant environmental impacts relating to the proposed development, operation and decommissioning / restoration of the proposed development, where relevant. The evaluation is based on an examination of the indicators in the study area.

5.2 Population and Human Health

5.2.1 Knocknacran West Mine, Knocknacran Mine Restoration, Knocknacran Processing Plant and Community Complex

The socio-economic impacts of the development will be assessed, including the potential impacts on continued employment, population, businesses and social factors of the proposed development. The assessment will consider job sustainability and security, and other links within the local economy. It will also examine the potential effects on local businesses, leisure and tourism in the local area. Where effects cannot be quantified, professional judgement and experience will be applied to the assessment. The current local economy will be examined using information on employment rates, population figures and household data from the statistics available from government and local authorities.

5.3 Traffic and Transportation

5.3.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

Traffic arising from the Knocknacran West Mine operational phase will not give rise to an increase in traffic on the local road network as the proposed development is seeking to maintain production levels currently produced by Knocknacran Mine and Drummond Mine. The subject development will not therefore involve an overall increase in processing output, nor associated increase in traffic movements from the Knocknacran sites. Workers will come to work through existing facilities and travel on internal roads to the proposed development subject to approval by the relevant authorities.

Traffic is likely to be slightly increased on the local road network during the initial construction phase of Knocknacran West Mine, this will be assessed within the traffic and transport survey.

Traffic related to the transfer of gypsum from Knocknacran West Mine to the processing facilities at Knocknacran Mine and the transfer of materials for the restoration of Knocknacran Mine will be contained within the Site using an underground tunnel system. As such, traffic exiting the existing Knocknacran Mine site and traversing the public road network will be for the transfer of crushed gypsum via covered trucks to the processing plant in Kingscourt, Co. Cavan or for staff and subcontractor access to the mines. Trucks and cars will continue to use the current entrance located on the Knocknacran Mine site. Emergency exits will be located at 4 locations on the Knocknacran West Mine site in the case of emergencies or when large items of plant cannot be transferred via the underground tunnel system during the construction phase.

5.3.2 Community Complex

Traffic associated with the Community Complex will be highly variable and dependent on the seasons, day of the week and time of day. The highest volume of traffic will be generated by large sports activities (e.g. football matches) which, while generating a high volume of traffic, will occur over a short duration prior (e.g. post-match) and most frequently on the weekends. The most frequent, but lowest volume of traffic will be generated by facility members attending scheduled classes and training sessions which largely occur on weeknights. Access to the community facilities will be via the R179 using an existing entrance which is currently under the control of the Knocknacran Mine site, but which will be for future use by the Community Complex only.

5.4 Biodiversity

One of the main considerations when assessing the effects of a development on ecology and nature conservation interests is to define the areas of land cover and the species and habitats that need to be assessed in detail in the EIAR.

Guidance in relation to defining the area for desktop study and ecological impact assessment is given by the Institute of Ecology and Environmental Management (IEEM) Ecological Impact Assessment Guidelines (2006). However, this does not outline the area to be assessed in relation to EU Annex I habitats and Annexed species and the designations for which they may be features. Therefore, as a general rule, a desktop study for up to 2 km surrounding the Site is used as a basis for scoping in this proposal, as recommended in the IEEM guidance. The Ecological Impact Assessment will follow IEEM guidance.

5.4.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

A Preliminary Ecological Appraisal (PEA) was carried out for the proposed Knocknacran West Mine in August 2018. The PEA aimed to identify the potential ecological constraints and opportunities that may influence the development of the mine site. It also recommended additional survey work which may be required to inform an ecological impact assessment (EclA) as part of the Environmental Impact Assessment Report (EIAR) for planning submission purposes. The PEA comprised the following components:

- An Ecology Desktop Review/Literature Review of existing ecological data pertinent to the Site;
- A Habitat Survey. Habitats are named and described following Fossitt (2000). The Habitat Assessment followed the Joint Nature Conservation Committee (JNCC) Phase One Habitat Survey methodology (JNCC, 1990, revised 2010). This involved a Site survey to map all areas of habitat on and up to 50 m from the Site boundary (where access allows); and
- A Protected Species Assessment. This survey assessed the suitability of habitats to support protected and notable species. Any incidental evidence of such species was recorded if encountered. This survey was conducted in conjunction with the habitat survey.

The desk-study identified the following:

- There are no statutory designated sites within the Study Area;
- The National Parks and Wildlife Service (NPWS) holds a single record within the desk study area (10 km grid square) for Bail Thyme (*Acionos aryensis*), however the freely available desk study results should not be considered definitive data sets for the desk study area; and
- An absence or limited desk study data does not necessarily correspond that a Site is absent of notable flora or fauna.

An ecological site walkover was conducted at the proposed Knocknacran West Mine site on 12th July 2018 to record the habitats currently present on, and adjacent to, the site. Habitats were named and described following Fossitt (2000).

Habitats identified on the Site include the following and are shown on Figure 5:

- Improved Grassland (GA1);
- Amenity Grassland (GA2);
- Wet Semi-Natural Grassland (GS4);

- Semi-Natural Broadleaved Woodland, and Scattered and Dense Scrub (WW4);
- Hedgerows (WL1); and
- Aquatic Habitat (Ponds) (FL4).

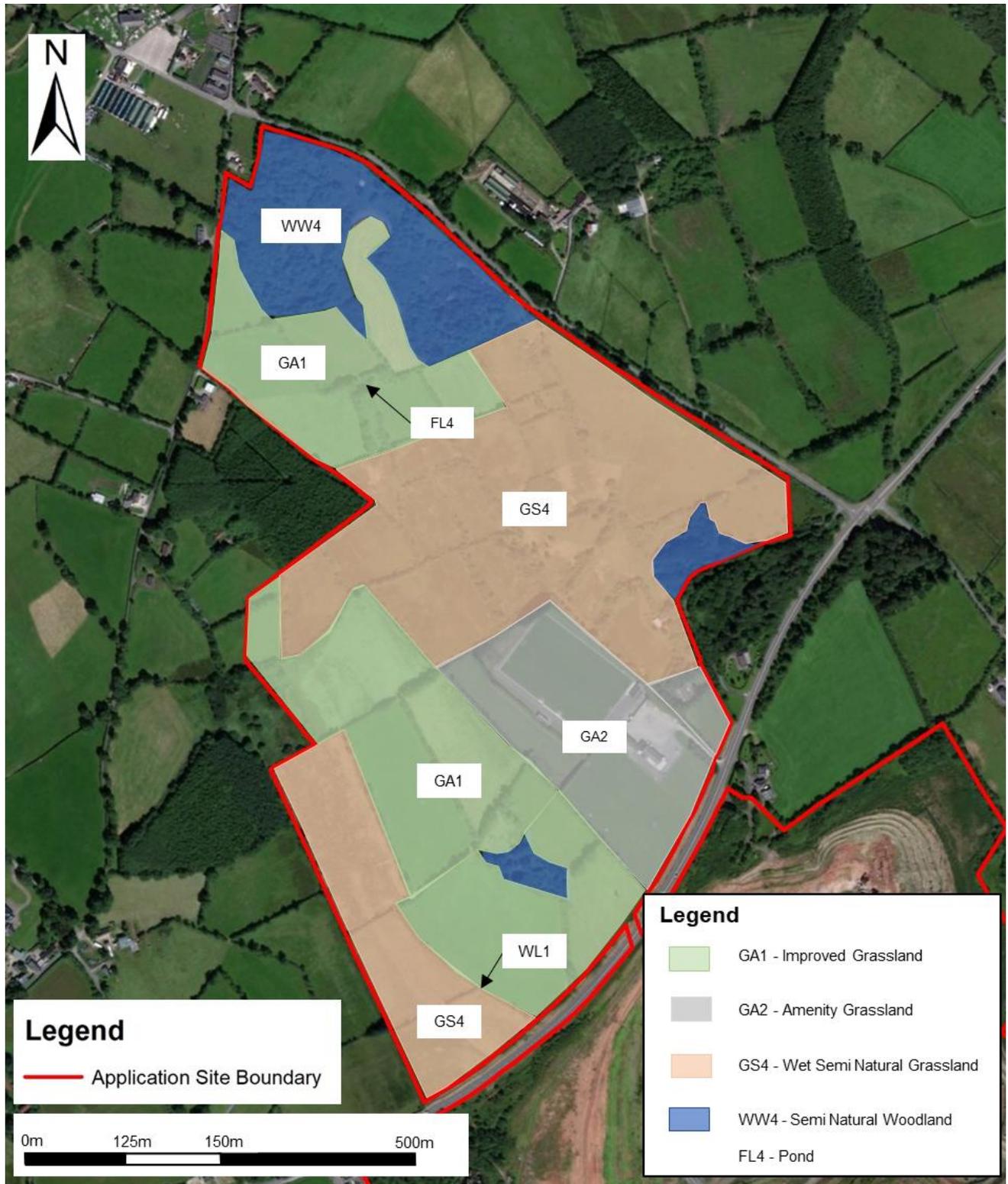


Figure 5: Habitat mapping of the Knocknacran West Mine site (after Fossitt, 2000)

No statutory sites for nature conservation were identified within the desk-study process. Given the relative distance between the site and the nearest protected sites (> 15 km) identified during the desk-study and the nature of the development proposals, residual effects to these sites are considered unlikely. However, follow up analysis will be carried out in the EIAR to confirm this. Habitats within the Knocknacran West Mine area vary in quality. No evidence of invasive species was recorded during the Site visit or within the desk-study. Habitats that would be primarily affected by Project proposals are ubiquitous at the site, local and regional scale. However, full habitat loss / gain calculations would need to be undertaken as part of an EclA and a mitigation, compensation and offsetting strategy implemented to address residual effects.

Proposals at the site have the potential to adversely affect protected species such as bats, breeding birds, small and medium mammals such as badger. As such, a suite of protected species baseline surveys has been initiated by SGMI to assess the presence or absence of such species. This baseline data will be evaluated and presented as a formal ecological impact assessment, including a mitigation strategy, in order to understand the potential for residual effects to species.

The following surveys are in progress at the time of writing this Scoping Report:

- **Bats** - A full inventory of all buildings and trees due for felling/demolition/alteration as part of planning proposals is being undertaken. A number of buildings exhibit at least moderate bat roosting potential and may require emergence and dawn re-entry surveys;
- **Breeding bird survey of the Site** - The presence of notable bird species should be understood as effects such as habitat removal, construction and operational noise have the potential to affect them; and
- **Hedgerows** - The objective of the methodology is to record the extent (i.e. quantitative survey), and floristic composition, context, physical structure, condition, and management of hedgerows (i.e. qualitative survey) in any given locality, County or region of Ireland using a semi-random sample selection (Foulkes, et al, 2013).

As part of the revised scope of the Project to include the Knocknacran Restoration and Knocknacran Process Plant, a site walkover is being undertaken of these areas at the time of writing of this report to identify any potential impact on biodiversity in the area. However, as the process plant is existing, it is not likely that there will be a significant impact from the proposed development on biodiversity. Similarly, the restoration of Knocknacran Mine to agricultural land will lead to a net gain for biodiversity with the reestablishment of hedgerows and terrestrial habitats.

In conjunction with the biodiversity chapter of the EIAR, it is proposed to complete a Natura Impact Statement (NIS) for the development at Knocknacran West with consideration given to the restoration and continued use of the process plant at Knocknacran.

5.4.2 Community Complex

The proposed Community Complex area contains a woodland area which is being assessed at the time of writing of this report for its biodiversity significance.

5.5 Soils, Geology and Land Use

5.5.1 Knocknacran West Mine

The proposed development will involve the removal and placement of soil, overburden and interburden, and subsequent blasting of bedrock. By its very nature, mining causes a permanent impact on the local bedrock through the removal of rock.

However, the final restoration plan will ultimately allow the proposed Knocknacran West Mine to be returned to a condition whereby there will be a negligible impact on the surrounding environment due to the removal of rock from the mine.

A review of publicly available data from the GSI online bedrock map viewer indicates that the Knocknacran West Mine area is underlain by the Kingscourt Sandstone Formation to the west and the Kingscourt Gypsum Formation to the east which are offset by a north-northwest – south-southeast orientated fault. This fault seems to be an extension of the Cormey Fault further south.

These geological formations are part of the 'New Red Sandstone' sequence from the Permo-Triassic boundary.

The Kingscourt Gypsum Formation is dated to the Permian Period and the Kingscourt Sandstone Formation is dated to the Triassic Period. These are stated by Gardiner and Visscher (1971) to be in conformable contact. The upper unit of the Kingscourt Gypsum Formation is also noted by Gardiner and Visscher (1971) to be a red mudstone which is ca. 26 to 35 m in thickness. The lower unit of the Kingscourt Sandstone Formation is noted to be a red siltstone which is ca. 80 to 100 m in thickness and may also be marked by a sandstone unit.

The major fault orientated north-northwest – south-southeast which offsets the two formations has not been found during the previous mining in the area. Several minor faults do exist, broadly mapped in the area of the major fault mapped by the GSI, however these do not appear to extend southwards to meet the Cormey fault. A review of the TELLUS online geophysical data also does not seem to identify any major geophysical anomalies attributable to the GSI mapped fault which offsets the two formations.

As part of the EIAR, a more comprehensive analysis will be carried out by completing a subsurface bedrock map using the historical bedrock data. This is of particular importance as the correct baseline for the geological and soil profiles needs to be understood to correctly assess any potential impacts to the surrounding environment from the proposed activities. This will also have an impact on the underlying bedrock aquifer properties and Site/biological connectivity.

According to the GSI (May 2019) soils in the area of the proposed Knocknacran West Mine are composed predominantly of acid brown earths or surface water/groundwater gleys with subsoils composed of sandstone and shale tills.

Consideration will be given in the EIAR to land take at the proposed mine site, whereby agricultural land will be lost in the short term life of the mine. However, the proposed restoration plan for Knocknacran Mine will see the reinstatement of agricultural lands onsite and it is proposed that final restoration for Knocknacran West Mine will also see the reinstatement of agricultural lands and the development of a waterbody which will promote biodiversity and visual amenities at the Site.

Additionally, geotechnical testing is being carried out currently on the drill-core recently obtained for the proposed development. This testing will inform SGMI on the geotechnical properties of the subsurface material and the open pit mine will be designed using information derived from this study.

5.5.2 Knocknacran Mine Restoration

With regards to the restoration area of the existing Knocknacran Mine, the geology is comprised of the Kingscourt Gypsum Formation which is currently being mined for its permitted gypsum. The proposed restoration plan will see the restoration of the Knocknacran Mine area to original ground contours, where possible and will be suitable for future agricultural use after final restoration is completed using material sourced from the proposed Knocknacran West Mine. In the long-term, land will return to its previous agricultural usage and be of net benefit to the local community.

5.5.3 Knocknacran Processing Plant

According to the GSI (May 2019), soils beneath the process plant area are predominantly classified as Made Ground with lesser acid brown earths to the east and south.

Subsoils beneath the process plant are also predominantly classified as Made Ground with lesser sandstone and shale tills to the southeast. Bedrock geology beneath the process plant area is predominantly Kingscourt Gypsum Formation which is in unconformable contact with the Cabra Formation to the southeast.

It is proposed that the development at Knocknacran West Mine will continue to use the existing processing plant located on the Knocknacran Mine site and, as such, it is not expected that soils, land and geology beneath the processing facility will be impacted by the development.

5.5.4 Community Complex

According to the GSI (May 2019), soils beneath the Community Complex area are predominantly classified as Made Ground with lesser acid brown earths to the west and north. Subsoils are predominantly classified as Made Ground with lesser sandstone and shale tills to the southeast. Bedrock geology beneath the Community Complex area is predominantly Kingscourt Gypsum Formation to the east which is in faulted contact with the Kingscourt Sandstone Formation to the southwest, however, as has been previously mentioned, the boundary of the sandstone unit in the area may not be accurate. A review of borehole data, if available in this area, will be undertaken to confirm what the bedrock formation is.

5.6 Water Environment

5.6.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

Extensive data is available on the surface water and groundwater regimes that exist at the mine sites. This data will be reviewed and used to determine any hydrological and hydrogeological impacts the proposed development may have on the mine sites and the surrounding environment. Six additional groundwater monitoring wells are being installed on the Knocknacran West Mine site by Golder to measure the baseline conditions and establish a monitoring program on the site (Figure 6). Stringent mitigation measures will be put in place with regard to the management of surface water from the proposed development.

The sedimentary rocks found in the subsurface beneath the mine sites are described as mudstones but in the field present as unconsolidated, soft red and grey marls/clays which appear to act as impermeable barriers to groundwater flow. The basaltic intrusions (dolerite sills and dykes) which crosscut the area present as highly altered and weathered sands or hard, almost unaltered mafic rocks which in their weathered/altered state are the main flow-paths to groundwater movement within the bedrock. As part of the EIAR, it is proposed to create a 3D geological model to identify the dolerite bodies and any faults which may be present in the extraction area to act as water flow pathways.

A review of the data available from the GSI (May 2019) indicates that the proposed Knocknacran West Mine is underlain by a Locally Important Aquifer to the west and a Poor Aquifer to the east which are broadly separated by a fault structure. As has been previously stated, a review of available drill logs and underground mapping does not seem to correlate with the publicly available data. As part of the EIAR a revised bedrock map will be made using available data.

Consideration will be given in the EIAR to the design and placement of a temporary water storage pond onsite as water will not be stored in the former underground workings during operations or post closure.

As part of the Knocknacran Mine Restoration and the continuation of use of Knocknacran Processing Plant, it is proposed to continue to monitor the current surface water and groundwater program to assess for any changes related to the proposed developments.



Figure 6: Water Monitoring Points (Surface Water and Groundwater)

5.6.2 Community Complex

As the proposed Community Complex is not a type of development which normally requires continuous monitoring of water quality during operations, it is not proposed to establish a monitoring programme to assess the baseline conditions or operational conditions at the Community Complex, nor will these be assessed in the EIAR.

The main focus in the EIAR in relation to the Community Complex will be the surface water management on the site. Drawings will be included with the EIAR and planning application which relate to the proposed layout of the surface drainage system onsite.

Consideration will also be given in the EIAR to the potential cumulative impact between the Community Complex and mining activities at the Site, in particular during the construction phase.

5.7 Air Quality and Climate

5.7.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

Dust may arise from on-site activities such as movement of vehicles, and movement and storage of rock and overburden and interburden material. Extensive historical data is available for air quality at the permitted Knocknacran Mine site. Updated guidelines published in 2014 will be used to determine impacts the proposed development may have on the surrounding environment.

Dust monitoring is carried out at four locations on a monthly basis on the permitted Knocknacran Mine site. Four dust monitoring locations will be set up on the proposed Knocknacran West Mine site to monitor the baseline conditions. These will also be monitored monthly during the life of the mine.

During the restoration of the existing Knocknacran Mine and the continuation of use of the Knocknacran Processing Plant, the four existing dust monitoring locations will provide dust and air quality information for these activities. The four proposed dust monitoring locations on the Knocknacran West Mine site will provide information related to air quality and dust from the proposed extraction activities. These four locations will be placed at the boundaries of the site and proximal to the nearest sensitive receptors.

One of the four current dust monitoring locations on the permitted Knocknacran Mine site will need to be relocated as the proposed Community Facilities will be built here. As this is a monitoring location which is conditioned by the IE Licence, a request will be made to the EPA to relocate the monitoring point so that it effectively represents dust levels from the permitted Knocknacran Mine site and during the proposed restoration works.

Figure 7 shows the location of the current dust monitoring locations on the existing Knocknacran Mine site and the location of the proposed dust monitoring points on the proposed Knocknacran West Mine site. MS2 is the dust monitoring location which will need to be relocated.

Monitoring at the Site will be carried out in accordance with Environmental Management in the Extractive Industry (2006), and Quarries and Ancillary Activities Guidelines for Planning Authorities (Department of Environment, Heritage and Local Government, 2004).

Mitigation measures will be put in place at the Site to ensure that the impact from future quarrying activities is minimal. Mitigation measures will include the following:

- The timing of operations will be optimised in relation to meteorological conditions;
- Material will be moved from the open-pit floor to the process areas. Should outdoor stockpiling be necessary these will be conditioned with water to minimise dust during dry and windy conditions. In addition, stockpiles will be sited to take advantage of shelter from wind;
- Overburden mounds will be grass-seeded and planted to eliminate wind-blown dust;
- Plant will be regularly maintained;
- Internal haul roads will be compacted and maintained;

- A water bowser/sprayer will be available at all times to minimise dust during dry and windy conditions where it is impractical or inappropriate to operate a fixed water spray/sprinkler system;
- On site speed restrictions will be maintained in order to limit the generation of fugitive dust emissions;
- All vehicles exiting the mine site will exit through the existing wheelwash; and
- The access road will be sprinkled with water via the existing sprinkler system.

Consideration will also be given to the climate at the site, in particular any matters relating to climate change.



Figure 7: Dust Monitoring Locations

5.7.2 Community Complex

As the proposed Community Complex is not a type of development which normally requires monitoring of dust and air quality during operations, it is not proposed to establish a monitoring programme to assess the baseline conditions or operational conditions at the Community Complex, nor will these be assessed in the EIAR.

Consideration will be given in the EIAR to the potential cumulative impact between the Community Complex and mining activities at the Site, in particular during the construction phase.

5.8 Noise and Vibration

5.8.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant Noise

As with air quality and dust, extensive data is available for the current extraction activities. Three noise monitoring locations are present on the Knocknacran Mine site which will provide a detailed baseline and be used for continued monitoring during the proposed restoration of Knocknacran Mine and the continued use of Knocknacran Process Plant. Four noise monitoring locations will be established to measure the baseline conditions for the proposed Knocknacran West Mine. These monitoring points will be located proximally to the nearest sensitive receptors (Figure 8).



Figure 8: Noise Monitoring Locations

Similarly to dust, one of the three current noise monitoring locations on the permitted Knocknacran Mine site will need to be relocated as the proposed Community Facilities will be built here. This will be achieved through a request to the EPA to relocate the monitoring point (MS2) which is conditioned by the IE Licence.

Monitoring for noise at the mine sites will be carried out adhering to appropriate guidance in accordance with the EPA's Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) (2016), Environmental Management in the Extractive Industry (2006), and Quarries and Ancillary Activities Guidelines for Planning Authorities (Department of Environment, Heritage and Local Government, 2004).

Noise mitigation measures will be incorporated into the mine site design, management and working practices. The following mitigation measures will be put in place to reduce the potential impacts from the proposed development:

- All haul roads to be kept clean and maintained in a good state of repair;
- Heavy goods vehicles entering and leaving the existing the Site will have tailgates securely fastened; all mobile plant used at the proposed development will have noise emission levels that comply with relevant guidance;
- Plant will be operated in a proper manner with respect to minimising noise emissions, e.g. minimisation of drop heights, no unnecessary revving of engines, plant used intermittently not left idling;
- Plant will be subject to regular maintenance, i.e. all moving parts kept well lubricated, all cutting edges kept sharpened, the integrity of silencers and acoustic hoods maintained;
- Plant will be fitted with effective exhaust silencers and maintained in good working order to meet manufacturers' noise rating levels. Defective silencers will be replaced; and
- Where practicable the use of rock breaking equipment will primarily be confined to the extraction void.

5.8.2 Community Complex

As the proposed Community Complex is not a type of development which normally requires monitoring of noise during operations, it is not proposed to establish a monitoring programme to assess the baseline conditions or operational conditions at the Community Complex, nor will these be assessed in the EIAR.

Consideration will be given in the EIAR to the potential cumulative impact between the Community Complex and mining activities at the Site, in particular during the construction phase.

5.8.3 Knocknacran West Mine Vibration

A potential impact of open-cast mining operations is the noise and vibration associated with blasting for excavation of rock. Blasting results in ground borne vibrations and air-over pressure impacts. It is acknowledged that humans are particularly sensitive to vibration stimuli and that any perception of vibration may lead to concern. Blasting will routinely take place as and when the market dictates. All blasting on the Site will comply with Part 5 of the Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008. Rock will be extracted by blasting in line with EPA and DoEHLG guidelines to meet the current maximum vibration limit of 12 mm/s ppv and air overpressure limit of 125 dB (Lin), within a 95% confidence limit.

Ground vibration at sensitive receptors is measured as peak particle velocity (ppv) in mm/s while the air-over pressure is measured in dB (Lin). The ppv is the maximum instantaneous velocity of a particle at a point during a given time interval. Air overpressure is energy transmitted from the blast site within the atmosphere in the form of pressure waves and is generally perceived as a loud bang.

Vibration monitoring at the site will be undertaken in accordance with:

- Environmental Management in the Extractive Industry, EPA;

- Good Environmental Practice in the European Extractive Industry: a Reference Guide, Centre Terre & Pierre – Tournai (Belgium);
- Department of the Environment, Heritage and Local Government – Quarries and Ancillary Activities: Guidelines for Planning Authorities, 2004;
- The “*Environmental Code*” (ICF), EPA guidelines in relation to blasting activities outlining the methodology and limits to be used for vibration measurement;
- The Evaluation of Human Exposure to vibration in buildings, BS 6472:1992;
- Evaluation and measurement for vibrations in buildings, BS 7385-1:1990; and
- Vibration Monitoring undertaken by the Applicant as part of the Environmental Management System in place at the Site.

The following mitigation measures will be put in place during the operation of the proposed development to minimise the potential impacts:

- All blasts will be initiated by electronic detonation system;
- Ensure that the optimum blast ratio is maintained and that the maximum amount of explosive on any one delay, the maximum instantaneous charge is optimised so that the ground vibration levels are kept below those specified;
- Explosive charges will be properly and adequately confined by using a sufficient quantity of stemming;
- Charges will be adequate confinement by means of accurate face survey and the subsequent judicious placement of explosives;
- No blasting carried out at weekends or public holidays;
- No exposed detonating fuse used in blasting;
- All blasts measured (ground vibration & Air Overpressure) at each monitoring location to ensure compliance with the aforementioned limits and, so that information can be employed in any necessary modification of future blast designs;
- All monitoring equipment calibrated regularly to ensure that peak particle velocity and Air Overpressure generated from each blast is accurately measured;
- Notice of blasting times will continue to be given as currently practiced; and
- Blasting to be carried out by professionally trained blast engineers.

5.8.4 Knocknacran Mine Restoration, Knocknacran Processing Plant and Community Complex Vibration

No blasting and subsequent vibration will be created during the restoration of the Knocknacran Mine site, the continuation of use of Knocknacran Processing Plant or during the construction and operation of the Community Complex as neither activity requires blasting.

5.9 Landscape and Visual Impact

5.9.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

A preliminary Landscape and Visual Constraints Study was undertaken by Macro Works Ltd. in July 2018 in relation to the proposed Knocknacran West Mine. The Site is ca. 1.5 km northeast of the County Cavan border, as such landscape considerations should review both the Monaghan and Cavan County Development Plans (CDP). The study also identified key sensitive receptors within the surrounding area that could be significantly impacted upon from a landscape and visual perspective and thereby might represent a significant planning risk for the proposed development.

A review of the of the CDPs for both counties has identified that the Site is not within 20 km of any Area of Primary Amenity Value, not within 3 km of an Area of Secondary Amenity and not within 10 km from any Views from Scenic Routes. There are no known/listed high-level landscape or visual constraints within the Monaghan CDP that are likely to preclude the proposed development. Nor are there any visual constraints within the Cavan or Meath CDPs that are likely to preclude the proposed development.

The study found that the elements that make up the landscape in this area instance include fields, woodland, ditches, transitional scrub, buildings and a sports ground with a community centre. These landscape elements will either be entirely removed, or substantially altered, as a result of the proposed development, or therefore notably impact the aesthetic and perceptual aspects of the landscape. Consequently, the proposed development is likely to impact the landscape fabric and character of the Site. However, the landscape character of the central study area is one which is partially defined by extractive industries, notably Knocknacran Mine located immediately east/south of the proposed development. In this regard, the landscape character of the proposed development is not inconsistent with the landscape character of the central study area.

Since the preliminary Landscape and Visual Constraints Study was undertaken in July 2018, the scope of the project as been amended to include the existing mine and processing plant at Knocknacran and the Community Complex as well as the use of an underground tunnel system to maintain access between the two mine sites. As such, a Landscape and Visual Impact Assessment (LVIA) will be undertaken for the Site with the revised details.

An LVIA comprises two related assessments that look at the impacts on the landscape as a whole and also the effects on visual receptors in the vicinity of the development.

The LVIA will consider the potential effects of the development upon:

- Individual landscape features and elements;
- Landscape character and quality (condition); and
- Visual amenity and the people who view the landscape.

Landscape and visual effects are two distinct but related areas and will be assessed separately in accordance with the approach outlined below. Landscape and visual impacts do not necessarily coincide and can be beneficial or adverse. A clear distinction will be drawn between landscape and visual impacts as follows:

- Landscape impacts relate to the effects of the proposals on the physical and other characteristics of the landscape and its resulting character and quality; and
- Visual impacts relate to the effects on views experienced by visual receptors (e.g. residents, footpath users, tourist's etc.) and on the visual amenity experienced by those people.

5.9.2 Community Complex

As part of the revised scope of the development, the landscape and visual impacts of the proposed Community Complex will be considered within the EIAR. Key areas to be considered in relation to the proposed Community Complex will be lighting and visual impact. Where possible it is proposed to maintain woodland or scrubland area, particularly in relation to the sensitive receptors to the west of the development.

5.10 Archaeology and Cultural Heritage

5.10.1 Knocknacran West Mine, Knocknacran Mine Restoration and Knocknacran Processing Plant

A preliminary Environmental Impact Assessment was carried out in August 2018 for the proposed Knocknacran Mine in relation to archaeology and cultural heritage.

This study assessed a wide variety of paper, cartographic, photographic and archival sources and all lands were visually inspected on the 29th August 2018. Consideration was given to the following sources of information for the assessment:

- Monaghan County Development Plan 2013-19;
- The Record of Monuments and Places (RMP) for County Monaghan;
- The Sites and Monuments Record;
- The National Inventory of Architectural Heritage;
- Aerial photographs;
- Previous investigations;
- Cartographic sources; and
- Documentary sources.

At the time of the study, the overall Archaeological and Cultural Heritage study area extended over an area of ca. 9.9 km² (Figure 9).

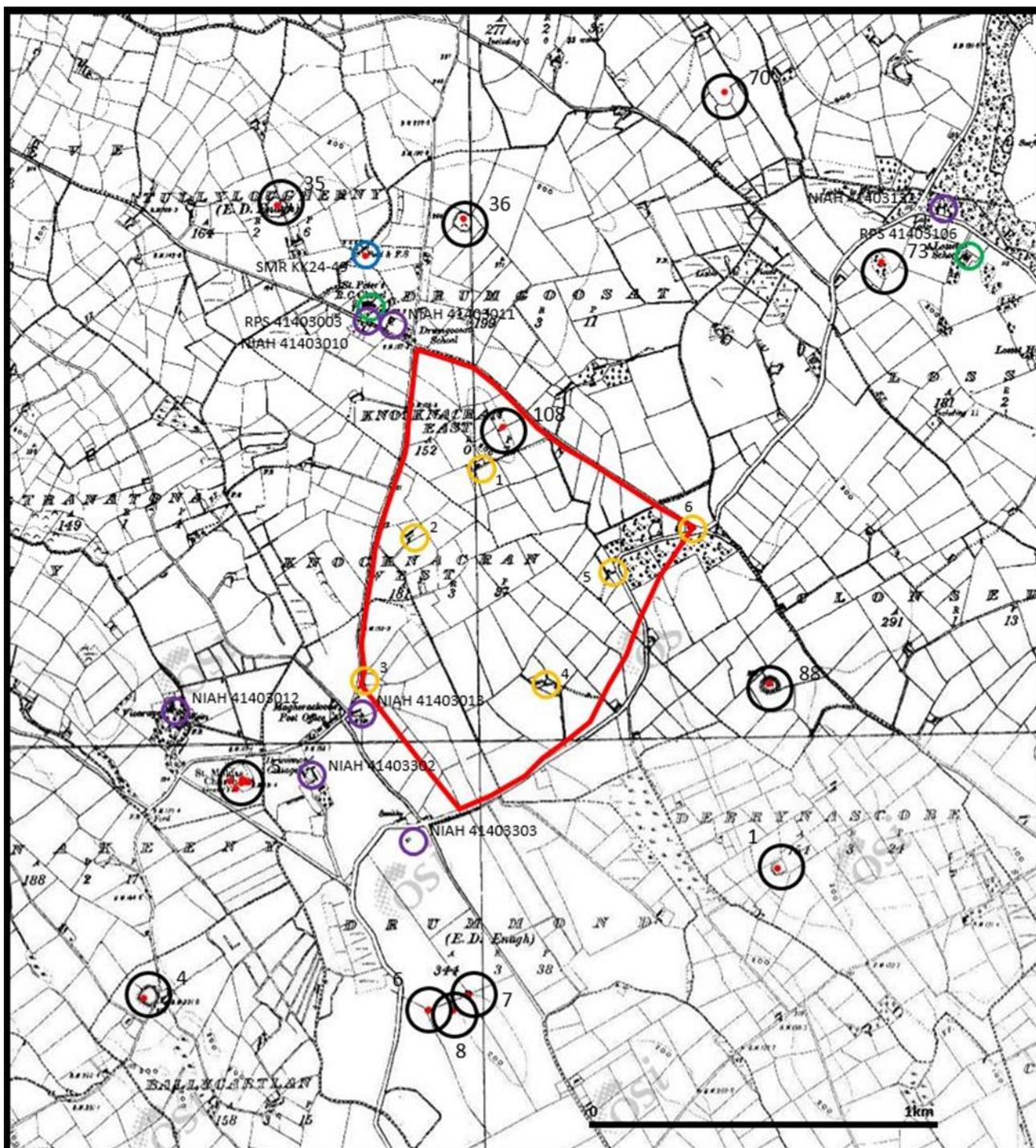


Figure 9: The study area superimposed on the Record of Monuments and Places map for Co. Monaghan. Recorded Monuments are indicated with black circles. Sites in the SMR with blue circles. Protected Structures are indicated with green circles. Structures in the NIAH

The desktop review identified the following:

- **Prehistoric period** - One monument, a mound of unknown type and date in Knocknacran East;
- **Early Medieval period** - Four ringforts, in Drumgoosat, Corrynbrackan, Knocknacran East and Derrynascobe. One earthwork in Tullyloughhenry and four enclosures in Corrybrackan and Drummond. One ecclesiastical site dedicated to the sixth century St. Molua in Camaghy townland;

- **Medieval period** – No known listed sites within the area; and
- **Post-medieval period** – Lands were part of the Devereux Estate which fell into co-heiress-ship and the study area came into the Shirley family until the twentieth century. During this period a fortified house and fortress were constructed.

A building assessment was taken of onsite buildings. A review of the Monaghan County Development Plan 2013-2019 established that there are no Protected Structures situated within the Site. There are two buildings listed in the Monaghan County Development Plan within the study area. These are St. Peter and St. Paul's Church in the townland of Drumgoosat and Losset School House in the townland of Losset. St. Peter and St. Paul's Church is closest to the Site at ca. 165 m to the north-west. However, neither structure requires mitigation measures due to the proposed development as they are far too distant to be directly or indirectly impacted.

The National Inventory of Architectural Heritage (NIAH) was examined during the assessment on 6th July 2018. The review established that there are no additional structures situated within the Site but there are seven additional structures within the greater study area. Of these seven, a ca. 1820 farmyard complex located in Drummond is the closest of the sites to the Site at ca. 86 m to the south-west. This is considered too far distant to be directly or indirectly impacted by the proposed development as are the more distal sites.

On 29th August 2018 fieldwork was carried out to identify any additional upstanding non-designated structures within the proposed Knocknacran West Mine area. This identified that there are 56 areas (fields) within the Site. A detailed report on the 56 areas examined during the field inspection can be seen in the full Golder EIAR Cultural Heritage Assessment.

The field survey assessed all upstanding structures that are marked on the 1902 edition of the six-inch Ordnance Survey mapping within the Site (Figure 9). There are 6 structures situated in this area which are not of heritage interest.

Examination of the Record of Monuments and Places for Co. Monaghan indicated that the site of one removed Recorded Monument is located within the proposed application area (Figure 9). The location of this possible monument has been removed by extraction as stated in the RMP.

The closest Recorded Monument externally to the Site is Drumgoosat Ringfort-rath and is situated 0.35 km to the north-east. This monument is considered to be far too distant to be directly or indirectly impacted by the proposal as are the more distally located monuments.

Examination of the Sites and Monuments Record (SMR) which is maintained by the Dept. of Culture, Heritage and the Gaeltacht on 28th June 2018 indicated that there are no undesignated monuments included within the proposed application area.

There is one additional undesignated monument included within the study area external to the proposed extraction areas. This is Drumgoosat Mass-rock which is ca. 0.28 km from the Site, and it is considered to be too far distant to be directly or indirectly impacted by the proposal.

The study did not identify any direct or indirect impacts on any known items of archaeology, cultural heritage or buildings of heritage interest due to the proposed development. However, In the worst-case scenario, the development might disturb previously unknown deposits or artefacts without preservation by record taking place. Due to the possibility of the survival of previously unknown subsurface archaeological deposits or finds within the unstripped part of the proposed mine area (except the existing GAA buildings and parking area) topsoil-stripping in the proposed Knocknacran West Mine area should be archaeologically monitored.

Since the completion of the EIA in August 2018, the scope of the project has changed to include the continuation of use of the processing plant, the restoration of Knocknacran Mine and the development of the Community Complex.

No additional surface structures are envisaged as part of the proposed development for the continuation of use of the processing plant at Knocknacran Mine and the restoration of Knocknacran Mine. The proposed restoration and process plant at Knocknacran Mine will not be considered in the EIAR as it is not expected that there would be an archaeological or cultural heritage impact during these operations as these will occur on a brownfield site with no proposal for further disturbance of the subsurface.

The EIAR will detail the full findings of archaeological and cultural heritage EIA for the proposed Knocknacran West Mine.

5.10.2 Community Complex

The EIA completed in August 2018 did not consider the area for the proposed Community Complex. However, this site is approximately half brownfield and half greenfield. The brownfield portion to the east-southeast is currently part of the existing Knocknacran Mine and has previously been assessed for its archaeological and cultural heritage potential in the previous continuation of extraction application in 2017 (17/217) by SGMI. The greenfield area comprises the woodland area on this site. It is currently proposed to partially remove the woodland in agreement with the Local Authority, which will be monitored for any archaeological significance during the works.

5.11 Conclusions

The items presented above will inform the EIAR, and the assessment will address each of these issues to and identify the significance of any potential impact from the proposed developments.

6.0 CONTENTS OF EIAR

6.1 Contents and Structure of the EIAR

The EIAR is to have a 'Grouped Format' structure. Each aspect of the environment will be dealt with as a separate chapter. The main volume of the EIAR will also include relevant appendices. Also included in the application will be the Planning Application Forms and Drawings.

The EIAR is divided into chapters as follows:

- **Chapter 1** forms an introduction by providing a background to the Applicant and the Site, together with outlining the structure and process of the EIA, and describing the scoping and consultation process;
- **Chapter 2** presents a description of the proposed underground mine and environs and provides details on the phased operation and restoration of the mine;
- **Chapter 3** will describe the planning and policy context which will be referred to throughout the report;
- **Chapters 4 to 13** will refer to the existing environment, the development, likely impacts and mitigation measures for the development and will include details on the following:
 - Description of the receiving environment;
 - The data necessary to identify and assess the main effects which the development has on the environment;
 - Identification of likely significant adverse impacts during the development;

- A description of the measures envisaged in order to avoid, reduce and, where possible, remedy significant adverse impacts;
 - Alternatives examined with reference to location, design and processes, as appropriate; and
 - Cumulative and residual Impacts remaining, if any.
- **Chapter 14** presents a summary of the inter-relationships and interactions between various aspects of the environmental impact assessment for the proposed development.

Separate chapters referring to Interactions and a Non-Technical Summary will also be provided.

Where appropriate, impacts arising from the existence of the development, the use of natural resources, the emission of pollutants, the creation of nuisances and the elimination of waste will be described as direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative. Listed in Table 4 are the proposed chapter headings and contributors to same.

Table 4: Proposed Chapter Headings and Contributors

Chapter No.	Title	Contributor
1.0	Introduction	Golder Associates
2.0	Project Description	Golder Associates
3.0	Policy	Golder Associates
4.0	Population and Human Health	Golder Associates
5.0	Biodiversity	Golder Associates
6.0	Soils, Land and Geology	Golder Associates
7.0	Water	Golder Associates
8.0	Air and Climate	Golder Associates
9.0	Noise	Golder Associates
10.0	Vibration	Golder Associates
11.0	Landscape	Macroworks
12.0	Material Assets	Golder Associates and PMCE (Traffic)
13.0	Archaeology and Cultural Heritage	Dr Charles Mount
14.0	Interactions	Golder Associates

6.2 Key Items to be addressed

As part of the preliminary mine options studies by the Applicant, early stage site visits and surveys have been undertaken in relation to biodiversity, landscape and visual and archaeology and cultural heritage to identify any potential key items which need to be addressed in the EIAR. As options and alternatives have been and continue to be considered, more studies will be undertaken at the site. A number of site visits and walkovers

will be conducted by the project team including; Ecologist, Archaeologist, Landscape Architect, Engineering Geologist, Mining Engineer and Hydrogeologist.

During these visits items of particular interest and will be focused on.

These items include:

- Mine Design (and Geotechnical considerations);
- Surface water and Groundwater;
- Traffic;
- Population and Human Health; and
- Biodiversity.

7.0 CLOSING

We invite submissions / observations from consultees on this Scoping Document and / or items that should be included in the EIAR document. Please send your comments at your earliest convenience to the following address:

Barry Balding,
Golder Associates,
Town Centre House,
Dublin Road,
Naas,
County Kildare,
W91 TD0P.

Telephone: 045 81 0200

Email: bbalding@golder.com

8.0 REFERENCES

- EU Environmental Impact Assessment Directive (Council Directive 2014/52/EU).
- EU (2018). Guidance on EIA Scoping.
- Gardiner, P.R.R. & Visscher, H., 1971. Permian-Triassic Transition Sequence at Kingscourt, Ireland. *Natural Physical Science* 229, 209 – 210.
- Guidelines on the Information to be contained in Environmental Impact Statement. Environmental Protection Agency, Johnstown Castle Estate, Co. Wexford, Ireland. EPA. 2002.
- Department of the Environment, Quarries and Ancillary Activities, Guidelines for Planning Authorities 2004.
- Environmental Management in the Extractive Industry: Guidelines for Regulators 2006.
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Environment, Community and Local Government, August 2018).
- Institute of Geologist of Ireland (2013). Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements.
- Draft - Revised Guidelines on the Information to be contained in Environmental Impact Statements. EPA 2015.
- Advice Notes on Current Practice in the preparation of Environmental Impact Statements (Environmental Protection Agency, 2003), and, Advice Notes for Preparing Environmental Impact Statements (Draft, Environmental Protection Agency, 2015).
- Key Issues Consultation Paper - Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems, 2nd May 2017.
- Circular Letter PL 1/2017 - Implementation of Directive 2014/52/EU on the Effects of Certain Public and Private Projects on the Environment (EIA Directive), 15th May 2017.
- Monaghan County Council. Monaghan County Development Plan 2019 – 2025.
- Environmental Protection Agency Envision Map Viewer:
<https://gis.epa.ie/EPAMaps/> Accessed 15th May 2019.
- Geological Survey of Ireland Datasets Public Viewer:
<http://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228>
Accessed 14th May 2019.

Signature Page

Golder Associates Ireland Limited



Hannah McGillicuddy
Scientist



Barry Balding
Project Manager

HMC/BB/ar

VAT No.: 8297875W



golder.com

Hassett, Lynn

From: DialBeforeYouDig (ESB Networks) <dig@esb.ie>
Sent: Tuesday, June 25, 2019 4:06 PM
To: McGillycuddy, Hannah
Subject: GENERAL: Electrical Network Information Request Reference No: 20190625-076_A0
Attachments: ESB Construction Safety 28th 11.40.pdf; 20190625-076_Map1_A0.pdf; 20190625-076_Map2_A0.pdf; ATT00001.txt; ATT00002.htm

EXTERNAL EMAIL

ESB Networks Reference: 20190625-076_A0

To Whom it May Concern,

Thank you for your recent enquiry regarding the location of ESB electrical network. . Please find notice below of documentation which must be reviewed carefully in advance of site works at the requested location.

- Attached PDF map(s) of requested location.
- ESB Networks ‘Avoiding Danger From Overhead Electricity Lines’.
 - <https://esbnetworks.ie/docs/default-source/publications/avoid-electrical-hazards-when-working-near-overhead-electric-lines.pdf?sfvrsn=4>
 - https://www.esbnetworks.ie/docs/default-source/publications/code-of-practice-for-avoiding-danger-from-overhead-electricity-lines.pdf?sfvrsn=425d33f0_8
- ESB Networks ‘Safe System of Work for Digging’.
 - <http://esbnetworks.ie/docs/default-source/publications/avoid-electrical-hazards-when-digging.pdf>
- ESB Networks Code of Practice ‘Safe Construction with Electricity’.
 - -See Attached Document.

Please fully read the contents of this e-mail and all attached or referenced Documentation carefully before you proceed.

The attached PDF map(s) indicate the approximate location of ESB underground (UG) cables and overhead (OH) lines. ESB makes no representation that the maps accurately show the location of ESB cables.

ESB Networks has issued this map as a PDF document. If printing a paper version of this map and to maintain a clear and correct representation of the electrical network information, it must be ensured that

- (1) It has been printed in colour to fit the page size that has been indicated within each PDF document (The PDF document indicates if the map should be printed on either of A4, A3, A2, A1, A0).**

(2) Each of the colours indicated on the colour code legend (incorporated in the PDF document) are clear and distinct from each other.

If works don't commence before or continue beyond 6 weeks following the date of issue, then you must obtain an updated map. Each new job requires a new map. It is imperative that before any works commence you first locate and trace the routes of all electric cables by using appropriate locator equipment (in both power and radio modes). Before using a mechanical excavator, ONLY MANUAL means should be employed to prove the location of ESB cables. Even where manual excavation is used, extreme caution must always be exercised, as failure to do so could result in serious injury or electrocution. Under no circumstances should iron bars be used during manual excavation. Careful Hand Digging of Trial Holes using 'HSA Code of Practice for Avoiding Danger from Buried Services' should be used for accurate cable location and prior to using a mechanical excavator in the vicinity of electrical cables. See H.S.A. Code of Practice publication "Avoiding Danger From Underground Services" for further guidelines

Please note that, if during excavation, damage or interference occurs to our cables, causing damage to any property, injury or death to any person or loss of supply to any customers, ESB may at its discretion serve a STOP WORK Notice, and notify the relevant Health and Safety Authority immediately. The user will also be liable to reimburse the ESB on a full indemnity basis, The full costs, expenses and damages arising (directly or indirectly) as a result. It is essential before excavating in the vicinity of ESB cables that the ESB Network Controller in the area you are working in is contacted.

ESB will extend every assistance in indicating the route of the cables and arrangements can be made by contacting the relevant ESB office. ESB cannot, however, accept responsibility for the absence or incorrect position of any particular cable on ESB's records and drawings supplied. Please note that a charge may be made where a movement of networks is required, and/or where ESB provide staff outside of normal working hours.

Please ensure that all contractors and their personnel involved in excavations have been furnished with this map.

In the event that you have any issues of concern please do not hesitate to contact Central Networks Mapping, ESB Network by the means

E-Mail: dig@esb.ie

Telephone: 1850 928 960

Address:
Central Networks Mapping,
ESB Networks,
St. Margaret's Road,
Finglas,
Dublin 11.

Yours faithfully,
Central Networks Mapping,
ESB Networks



From: McGillicuddy, Hannah [mailto:Hannah_McGillicuddy@golder.com]
Sent: 20 June 2019 15:45
To: DialBeforeYouDig (ESB Networks) <dig@esb.ie>
Subject: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development

CAUTION: This email is from an external sender. If you are unsure about any links or attachments, please forward it to ESB Cybersecurity Operations at spammonitor@esb.ie

Dear Sir/Madam,

We, Golder Associates Ireland are acting on behalf of the applicant Saint-Gobain Mining (Ireland) Ltd. Please find attached a scoping document for the Knocknacran West Open-Cast Mine and Community Complex Development, Knocknacran, Co. Monaghan.

We invite you to submit any relevant information for the Environmental Impact Assessment Report that you may hold, and/or highlight any issues that you feel should be addressed in the Environmental Impact Assessment Report, preferably by 2nd August 2019.

Yours Sincerely,
Hannah McGillicuddy

Hannah McGillicuddy (M.Sc., B.Sc. (Hons))

Geo-Environmental Scientist

Town Centre House, Dublin Road, Naas, Co. Kildare, W91 TD0P, Ireland

T: +353 45 81 0200 | **M:** +353 87 958 4724 | **E:** hmcgillicuddy@golder.com golder.com

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VAT No.: 8297875W

Registered in Ireland Registration No. 297875
Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Directors: S. Copping, A. Harris (British), DRV Jones

Please consider the environment before printing this email.



TITLE:
20190625-076_Map2_A0

COLOUR CODE:

BLACK	- 38KV & HIGHER VOLTAGE OVERHEAD LINES
GREEN	- MV(10KV/20KV) OVERHEAD LINES
BLUE	- LV (400V/230V) OVERHEAD LINES
CYAN	- 38KV & HIGHER VOLTAGE UNDERGROUND CABLE ROUTES
RED	- MV/LV (10KV/20KV/400V/230V) UNDERGROUND CABLE ROUTES

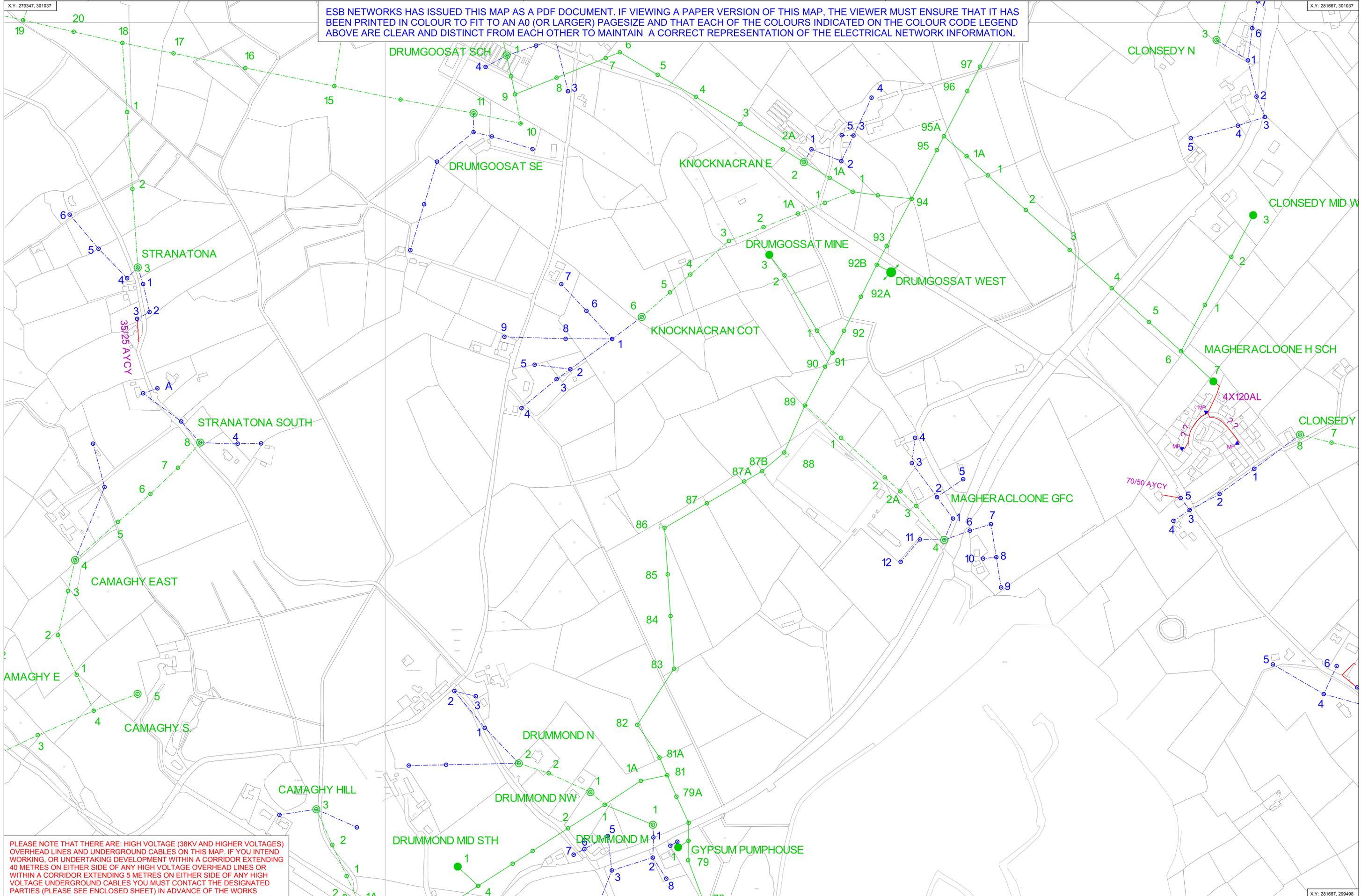
DATE: 25-Jun-2019

** SCALE: 1:2000

** SCALE WHEN PRINTED ON AN A0 PAGE
XY COORDINATES DISPLAYED IN IRISH GRID COORDINATE SYSTEM

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Copyright Ordnance Survey Ireland Government of Ireland

WARNING
THIS MAP INDICATES THE APPROXIMATE LOCATION OF ESB TRANSMISSION (400KV, 220KV, 110KV, 38KV) AND DISTRIBUTION (20KV, 10KV, 230V/400V) UNDERGROUND CABLES AND OVERHEAD LINES IN THE GENERAL AREA OF THE PROPOSED WORKS. ESB NETWORKS TAKES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE MAP. IT IS THE USER'S RESPONSIBILITY TO INDEPENDENTLY VERIFY THE INFORMATION AND THE LOCATION OF UNDERGROUND CABLES AND OVERHEAD LINES. LOW VOLTAGE (230V/400V) SERVICE CABLES (E.G. HOUSE SERVICES, FACTORY/SHOP SERVICES, PUBLIC LIGHTING LAMP SERVICES, ETC) ARE NOT INCLUDED BUT THEIR PRESENCE SHOULD BE ANTICIPATED. THE DEPTHS OF UNDERGROUND CABLES MUST NEVER BE ASSUMED. ADDITIONAL MORE DETAILED INFORMATION IS AVAILABLE FOR HIGH VOLTAGE TRANSMISSION UNDERGROUND CABLES (38KV, 110KV, 220KV, 400KV) FROM THE LOCAL ESB NETWORKS TRANSMISSION REPRESENTATIVE - SEE ATTACHED LIST FOR CONTACT DETAILS OR CALL 1850 372 757. NO WORK SHOULD BE CARRIED OUT IN THE VICINITY OF 38KV OR HIGHER VOLTAGE UNDERGROUND CABLES WITHOUT PRIOR CONSULTATION WITH ESB NETWORKS. BEFORE ANY MECHANICAL EXCAVATION IS UNDERTAKEN, THE ACTUAL LOCATION OF ALL UNDERGROUND ELECTRICITY CABLES MUST BE ESTABLISHED AND VERIFIED ON THE SITE USING:
(A) UP-TO-DATE MAP RECORDS;
(B) CABLE LOCATOR EQUIPMENT OPERATED IN BOTH POWER AND RADIO MODES;
(C) CAREFUL HAND DIGGING OF TRIAL HOLES USING 'SAFE DIGGING PRACTICE'. REFER ALSO TO IHA CODE OF PRACTICE FOR AVOIDING DANGER FROM UNDERGROUND SERVICES. ESB TAKES NO RESPONSIBILITY FOR AND SHALL BEAR NO LIABILITY, HOWSOEVER ARISING, IN RELATION TO ANY DAMAGE, INJURY/DEATH OR LOSS OF SUPPLY AS A RESULT OF DAMAGE OR INTERFERENCE WITH ITS NETWORKS.



ESB NETWORKS HAS ISSUED THIS MAP AS A PDF DOCUMENT. IF VIEWING A PAPER VERSION OF THIS MAP, THE VIEWER MUST ENSURE THAT IT HAS BEEN PRINTED IN COLOUR TO FIT TO AN A0 (OR LARGER) PAGESIZE AND THAT EACH OF THE COLOURS INDICATED ON THE COLOUR CODE LEGEND ABOVE ARE CLEAR AND DISTINCT FROM EACH OTHER TO MAINTAIN A CORRECT REPRESENTATION OF THE ELECTRICAL NETWORK INFORMATION.

PLEASE NOTE THAT THERE ARE: HIGH VOLTAGE (38KV AND HIGHER VOLTAGES) OVERHEAD LINES AND UNDERGROUND CABLES ON THIS MAP. IF YOU INTEND WORKING, OR UNDERTAKING DEVELOPMENT WITHIN A CORRIDOR EXTENDING 40 METRES ON EITHER SIDE OF ANY HIGH VOLTAGE OVERHEAD LINES OR WITHIN A CORRIDOR EXTENDING 5 METRES ON EITHER SIDE OF ANY HIGH VOLTAGE UNDERGROUND CABLES YOU MUST CONTACT THE DESIGNATED PARTIES (PLEASE SEE ENCLOSED SHEET) IN ADVANCE OF THE WORKS

Hassett, Lynn

From: DIG <Dig@gasnetworks.ie>
Sent: Monday, June 24, 2019 1:58 PM
To: McGillicuddy, Hannah
Subject: RE: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development
Attachments: Knocknacran Co Monaghan (1).pdf; Knocknacran Co Monaghan (2).pdf; GNI A5 Safety Advice Booklet April 2019.pdf

EXTERNAL EMAIL

Dear Hannah,

Please find attached Gas Networks Ireland [GNI] Details for: **Knocknacran Co Monaghan**

As requested in your e-mail of 20/06/2019, please find attached **PDF files** of the information requested.

Gas network information is provided as a general guide. Gas Networks Ireland [GNI] cannot guarantee its accuracy and it should not be relied upon for accurate distance or depth of cover measurements. The exact location and depth of distribution gas pipes must be verified on site by hand digging trial holes along the route of the pipe. Service pipes are not generally shown but their presence should always be anticipated.

You must have a current plot (hard copy or pdf) of the relevant gas network on site, when working in the vicinity of gas mains.

If you identify a Transmission pipeline (highlighted red) on your map, and you intend working in the vicinity, you must contact Gas Networks Ireland before commencing any works. Supervision is not required when working in the vicinity of Distribution gas pipes (highlighted blue and/or green on GNI network maps), however, safe digging practices are required. You are also reminded that all work in the vicinity of GNI Pipelines and Installations must be completed in accordance with the current edition of the Health & Safety Authority publication, 'Code of Practice For Avoiding Danger From Underground Services' which is available from the Health and Safety Authority (1890 28 93 89) or can be downloaded free of charge at www.hsa.ie.

Where Aurora Telecom data is present within the Network plot (highlighted purple on maps), please contact:

Donal Bracken Project Engineer, Aurora Telecom at 086 8344473 and 01 6026190, Donal.Bracken@ervia.ie and darkfibre@auroratelecom.ie.

Emergency number: 1850-427399

Please note:

Gas Networks Ireland does not record domestic gas services.

Please refer to **Gas Networks Ireland** "Safety Advice" booklet attached/Link. This booklet contains important safety advice which should be read before any work commences.

This booklet (together with other safety advice) can be located on the Gas Networks Ireland website as a pdf document using the following links:

<https://www.gasnetworks.ie/home/safety/dial-before-you-dig/GNI-A5-Safety-Advice-Booklet-Small.pdf>

<https://www.gasnetworks.ie/home/safety/dial-before-you-dig/>

<https://www.gasnetworks.ie/business/safety-in-the-business/dial-before-you-dig/>

For assistance in locating Domestic Gas Services please refer to the following pages of the **Safety Advice for working in the vicinity of natural gas pipelines** booklet [25602/12/14].

Page 5/6: Risk of damage to and from a gas pipe.
Page 12: Depth of cover.
Page 16: Gas services.

Please note, Gas Networks Ireland have no right or entitlement to reproduce official Ordnance Survey information in Vector format (whether for map backgrounds or otherwise). The user shall obtain any such rights or entitlements directly if required.

Thank you for your patience and co-operation.

Kind Regards,

Kevin O'Callaghan
Gas Networks Ireland,
Networks Services Centre,
St. Margaret's Road,
Finglas,
Dublin 11



Type of Development:

- Development Projects
- Planning Applications
- Utility Works
- Property Conveyance

Enclosures

- Distribution Networks Disclaimer ✓
- Safety Advice Booklet DO- SQ-IS-002: Rev1 ✓
- H.S.A. Code of Practice Reference ✓

From: McGillicuddy, Hannah [mailto:Hannah_McGillicuddy@golder.com]

Sent: 20 June 2019 15:46

To: DIG <Dig@gasnetworks.ie>

Subject: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development

Dear Sir/Madam,

We, Golder Associates Ireland are acting on behalf of the applicant Saint-Gobain Mining (Ireland) Ltd. Please find attached a scoping document for the Knocknacran West Open-Cast Mine and Community Complex Development, Knocknacran, Co. Monaghan.

We invite you to submit any relevant information for the Environmental Impact Assessment Report that you may hold, and/or highlight any issues that you feel should be addressed in the Environmental Impact Assessment Report, preferably by 2nd August 2019.

Yours Sincerely,

Hannah McGillycuddy

Hannah McGillycuddy (M.Sc., B.Sc. (Hons))



GOLDER

Geo-Environmental Scientist

Town Centre House, Dublin Road, Naas, Co. Kildare, W91 TD0P, Ireland

T: +353 45 81 0200 | **M:** +353 87 958 4724 | **E:** hmcgillycuddy@golder.com

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Directors: S. Copping, A. Harris (British), DRV Jones

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Tá an fhaisnéis á seachadadh dírithe ar an duine nó ar an eintiteas chuig a bhfuil sí seolta amháin agus féadfar ábhar faoi rún, faoi phribhléid nó ábhar atá íogair ó thaobh tráchtála de a bheith mar chuid de. Tá aon athsheachadadh nó scaipeadh den fhaisnéis, aon athbhreithniú ar nó aon úsáid eile a bhaint as, nó aon ghníomh a dhéantar ag brath ar an bhfaisnéis seo ag daoine nó ag eintitis nach dóibh siúd an fhaisnéis seo, toirimiscthe agus féadfar é a bheith neamhdhleathach. Níl Líonraí Gáis Éireann faoi dhliteanas maidir le seachadadh iomlán agus ceart na faisnéise sa chumarsáid seo nó maidir le haon mhoill a bhaineann léi. Ní ghlacann Líonraí Gáis Éireann le haon dliteanas faoi ghnímh nó faoi iarmhairtí bunaithe ar úsáid thoirmiscthe na faisnéise seo. Níl Líonraí Gáis Éireann faoi dhliteanas maidir le seachadadh ceart agus iomlán na faisnéise sa chumarsáid seo nó maidir le haon mhoill a bhaineann léi. Má fuair tú an teachtaireacht seo in earráid, más é do thoil é, déan teagmháil leis an seoltóir agus scríos an t-ábhar ó gach aon ríomhaire.

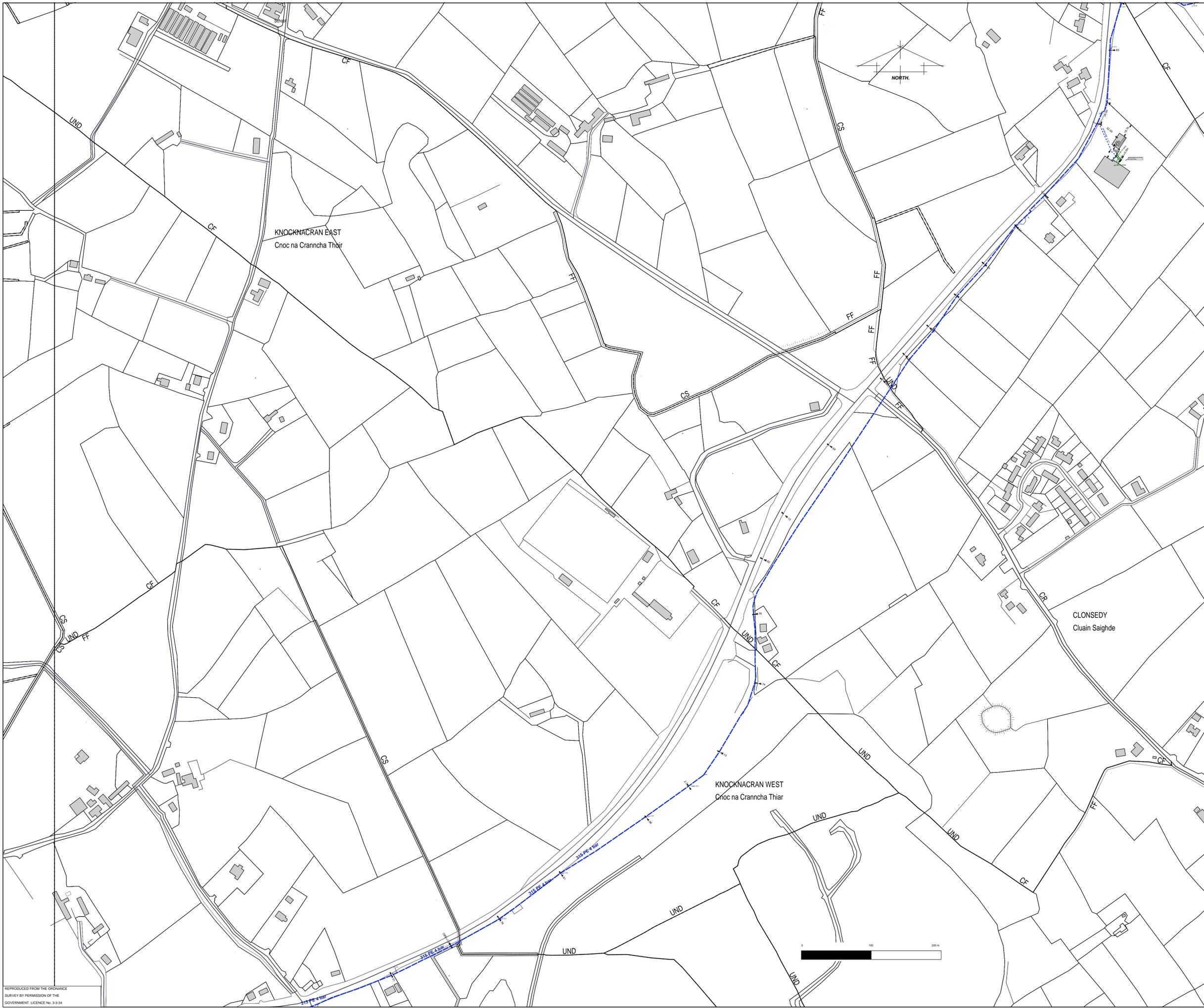
Féadfar ríomhphost a bheith soghabhálach i leith truailithe, idircheaptha agus i leith leasaithe neamhúdaráithe. Ní ghlacann Líonraí Gáis Éireann le haon fhreagracht as athruithe nó as idircheapadh a rinneadh ar an ríomhphost seo i ndiaidh é a sheoladh nó as aon dochar do chórais na bhfaighteoirí déanta ag an teachtaireacht seo nó ag a ceangaltáin. Más é do thoil é, tabhair faoi deara chomh maith go bhféadfar monatóireacht a dhéanamh ar theachtairreachtaí chuig nó ó Líonraí Gáis Éireann chun comhlíonadh le polasaithe agus le caighdeáin Líonraí Gáis Éireann a chinntiú agus chun ár ngnó a chosaint. Líonraí Gáis Éireann cuideachta ghníomhaíochta ainmnithe, faoi theorainn scaireanna, atá corpraithe in Éirinn leis an uimhir chláráithe 555744 agus a tá hoifig chláráithe ag Bóthar na nOibreacha Gáis, Corcaigh, T12 RX96.

Go raibh maith agat as d'aird a thabhairt.

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Thank you for your attention.



Important Safety Notice:
 Damage to gas pipelines can result in serious injury or death. Gas network information is provided as a general guide. The exact location and depth of medium or low pressure distribution gas pipes must be verified on site by carrying out necessary investigations, including, for example, hand digging trial holes along the route of the pipe.
 Service pipes are not generally shown but their presence should always be anticipated.

High pressure transmission pipelines are shown in red. If a transmission pipeline is identified within 10m of any intended excavations then work must not proceed before GNI has been consulted. The true location and depth of a transmission pipeline must be verified on site by a representative of GNI. Contact can be made through 1850 427 747.

All work in the vicinity of the gas network must be completed in accordance with the current edition of the Health & Safety Authority publication, Code of Practice For Avoiding Danger From Underground Services which is available from the Health and Safety Authority (1890 289 389) or can be downloaded at www.hsa.ie.

Legal Notice:
 Gas Networks Ireland (GNI) and its affiliates, accept no responsibility for the accuracy of any information contained in this document including data concerning location and technical designation of the gas distribution and transmission network (the Information). The Information should not be relied on for accurate distance or depth of cover measurements.

Any representations and warranties, express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect or consequential loss, arising out of or in connection with the use or re-use of the Information.

	Aurora Telecom Fibre Optic Cable
	Aurora Telecom Duct
	Aurora Telecom Sub-duct
	Aurora Telecom Inserted Gas Pipe

Contact Aurora Telecom on 1850-427-399 or (01)203-0120.

	Transmission Pipe (High Pressure)
	Transmission Pipe (Construction Issue)
	Distribution Pipe (Medium Pressure)
	Distribution Pipe (Low Pressure)
	Service Pipe (Medium Pressure)
	Service Pipe (Low Pressure)
	Strategic Pipe (Medium Pressure)
	Strategic Pipe (Low Pressure)
	Inserted Pipe (Medium Pressure)
	Inserted Pipe (Low Pressure)
	Distribution Pipe (Abandoned)

	Cover (depth in meters)		Pressure Monitor
	CP Test Point		Protection (Sleeve)
	End Cap		Protection (Slabbing)
	Hot Tap		Reducer
	Installation		Service Terminator
	Valve		Tee
	Mains Verification **		Transition

** Please contact GNI on 1850-427747 for specific information.

REPRODUCED FROM THE ORDNANCE SURVEY BY PERMISSION OF THE GOVERNMENT LICENCE No. 3-3-34
 Not Approved - Alternative - Plotwork Maintenance Dublin 2015, Kevin Pitts

Design Department - CORK		
GAS NETWORK INFORMATION		
Issue:	Golder	
Location:	Knocknacran Co Monaghan	
Plot Date:	24/06/2019	Contact: HM
Plotted by:	KOC	Scale: 1:2500



Important Safety Notice:
 Damage to gas pipelines can result in serious injury or death. Gas network information is provided as a general guide. The exact location and depth of medium or low pressure distribution gas pipes must be verified on site by carrying out necessary investigations, including, for example, hand digging trial holes along the route of the pipe. Service pipes are not generally shown but their presence should always be anticipated.

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All work in the vicinity of the gas network must be completed in accordance with the current edition of the Health & Safety Authority publication, Code of Practice For Avoiding Danger From Underground Services which is available from the Health and Safety Authority (1890 289 389) or can be downloaded at www.hsa.ie.

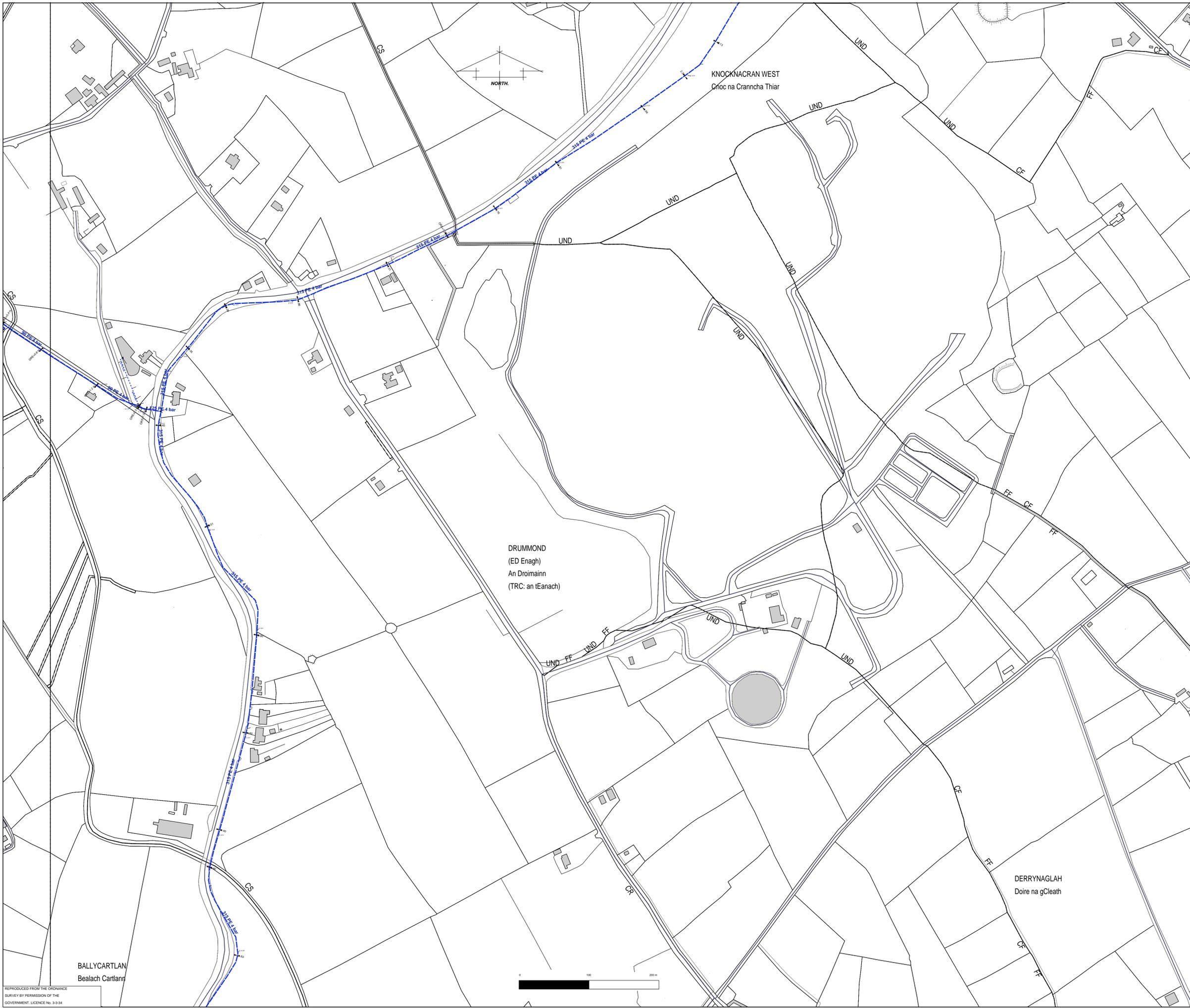
Legal Notice:
 Gas Networks Ireland (GNI) and its affiliates, accept no responsibility for the accuracy of any information contained in this document including data concerning location and technical designation of the gas distribution and transmission network (the Information). The Information should not be relied on for accurate distance or depth of cover measurements.

Any representations and warranties, express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect or consequential loss, arising out of or in connection with the use or re-use of the Information.

- | | |
|--|----------------------------------|
| | Aurora Telecom Fibre Optic Cable |
| | Aurora Telecom Duct |
| | Aurora Telecom Sub-duct |
| | Aurora Telecom Inserted Gas Pipe |
- Contact Aurora Telecom on 1850-427-399 or (01)203-0120.
- | | |
|--|--|
| | Transmission Pipe (High Pressure) |
| | Transmission Pipe (Construction Issue) |
| | Distribution Pipe (Medium Pressure) |
| | Distribution Pipe (Low Pressure) |
| | Service Pipe (Medium Pressure) |
| | Service Pipe (Low Pressure) |
| | Strategic Pipe (Medium Pressure) |
| | Strategic Pipe (Low Pressure) |
| | Inserted Pipe (Medium Pressure) |
| | Inserted Pipe (Low Pressure) |
| | Distribution Pipe (Abandoned) |

- | | | | |
|--|-------------------------|--|-----------------------|
| | Cover (depth in meters) | | Pressure Monitor |
| | CP Test Point | | Protection (Sleeve) |
| | End Cap | | Protection (Slabbing) |
| | Hot Tap | | Reducer |
| | Installation | | Service Terminator |
| | Valve | | Tee |
| | Mains Verification ** | | Transition |

** Please contact GNI on 1850-427747 for specific information.



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Design Department - CORK			
GAS NETWORK INFORMATION			
Issue:	Golder		
Location:	Knocknacran Co Monaghan		
Plot Date:	24/06/2019	Contact:	HM
Plotted by:	KOC	Scale:	1:2500

From: [Wayne Cox](#)
To: [McGillycuddy, Hannah](#)
Cc: [Balding, Barry](#); [EMD Info](#)
Subject: Scoping Document for Knocknacran west Open Cast Mine
Date: Wednesday, July 29, 2020 12:12:29 PM

EXTERNAL EMAIL

Dear Hannah,

Thank you for your recent email dated 15 July 2020 inviting the Exploration and Mining Division (EMD) to comment on Golder's scoping document entitled 'Environmental Impact Assessment Report (EIAR) Knocknacran West Open Cast Mine and Community Complex Development'.

In relation to this report, EMD notes that it makes only limited reference to the subsidence events that have affected the site. In recent years, there has been a significant subsidence event that affected a large part of the proposed development site and also a number of crownhole events. Some sections of an undermined local road (L4900) have undergone significant settlement (more than 1 metre) over the past two decades. EMD considers that it would be beneficial for the EIAR to outline the impacts that the proposed open cast mine development will have in relation to future subsidence. Obviously, for a substantial part of the site, excavation of an open cast into the underlying mine workings will have a positive effect, removing the potential for subsequent ground subsidence events. However, in other parts of the site, such as within the vicinity of the R179 and L4900, some mine voids will remain. The impact of the proposed development on the long term stability of these voids should be given consideration, as well as any potential mitigation measures that might be undertaken to minimize future subsidence of the L4900 and R179.

If you would like to discuss this issue further, you are very welcome to contact me on 087 775 9369 or alternatively via email (wayne.cox@dccae.gov.ie).

Kind regards

EurGeol Dr. Wayne Cox, P.Geo, Senior Geologist
Exploration and Mining Division

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Tá eolas sa teachtaireacht leictreonach seo (agus b'fhéidir sa chomhaid ceangailte leis) a d'fhéadfadh bheith príobháideach nó faoi rún. Is le h-aghaidh an duine/na ndaoine nó le h-aghaidh an aonáin atá ainmnithe thuas agus le haghaidh an duine/na ndaoine sin amháin atá an t-eolas. Murab ionann tusa agus an té a bhfuil an teachtaireacht ceaptha dó bíodh a fhios agat nach gceadaítear nochtadh, cóipeáil, scaipeadh nó úsáid an eolais agus/nó an chomhaid seo. Más trí earráid a fuair tú an teachtaireacht leictreonach seo cuir, más é do thoil é, an té ar sheol an teachtaireacht ar an eolas láithreach. Deimhnítear leis seo freisin nár aims odh víreas sa phost seo tar éis a scanadh.



Scoping Report Assessment

Open Cast Mining and Ancillary Development at Knocknacran and Knocknacran West

On behalf of

Monaghan County Council



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Title: Scoping Report Assessment, on an Open Cast Mining and Ancillary Development at Knocknacran and Knocknacran West, on behalf of Monaghan County Council

Job Number: E1656

Prepared By: Stephen Coakley

Signed: _____

Checked By: Kenneth Goodwin

Signed: _____

Approved By: Kevin O'Regan

Signed: _____

Revision Record

Issue No.	Date	Description	Remark	Prepared	Checked	Approved
01	12/06/'20	Report	Final	SC	KG	KOR
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Scoping Report Assessment
Open Cast Mining and Ancillary Development at Knocknacran and
Knocknacran West
Monaghan County Council

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APPENDICES

Appendix A: Meeting Minutes

1 INTRODUCTION

Monaghan County Council (the Council) has retained Malone O'Regan Environmental (MOR) to undertake a peer review of the Scoping Document for a proposed Gypsum Open-Cast Mining Project and Community Complex at Knocknacran West (together "the Proposed Development"). The Scoping Document was submitted to the Council by Golder Associates Ireland Ltd (Golder) on behalf of its client Saint-Gobain Mining (Ireland) Limited (the Applicant).

This report, titled a Scoping Report Assessment (SRA), incorporates an opinion on whether an Environmental Impact Assessment (EIA) is required (EIA Screening) and whether an EIAR based on the Scoping Document submitted may potentially identify likely and significant impacts of the Proposed Development.

2 METHODOLOGY

As part of the peer review, the following tasks were undertaken by MOR:

2.1 Desk-based Review

A desk-based study was undertaken by MOR to inform our review of the supplied Scoping Document. The study included a review of relevant information related to:

- Policy;
- Population and human health;
- Biodiversity;
- Soils;
- Land and geology;
- Water;
- Air (including climate);
- Noise and vibration;
- Archaeology and cultural heritage;
- Landscape and visual; and,
- Material assets.

The following statutory documents and guidance were considered in preparing this SRA:

- EU Environmental Impact Assessment Directive (2014/52/EU);
- Guidance on EIA Scoping (EU 2018);
- EPA Guidelines on the Information to be contained in Environmental Impact Assessment Reports Draft (EPA, 2017);
- EPA Draft Advice notes on current practice in the preparation of Environmental Impact Statements (EPA, 2015);
- NRA Guidelines on Environmental Impact Assessment of National Road Schemes – A Practical Guide (NRA, 2008);
- EPA Advice notes on current practice in the preparation of Environmental Impact Statements (EPA, 2003); and
- EPA Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002).
- Relevant sections of Planning and Development Act, 2000 of the Planning & Development Regulations (2001-2018)
- Relevant EU Directives, including Directive 2014/52/EU on the effects of certain public and private projects on the Environment (EIA Directive);
- Planning permission history on/adjoining the site;
- Any updated amended legislation.

2.2 Site Visit and Meeting with Council Planners

A visit to Knocknacran and a separate meeting with representatives of the Council was undertaken on 27th February 2020 by a MOR Principal Consultant and Environmental Geologist to gain a better understanding of the receiving environment and the planning history of the Site. The meeting minutes are included in Appendix A of this report.

3 LIMITATIONS

This SRA has been prepared based solely on the review of the Scoping Document supplied by Golder and Associates to the Council, and does not pertain to the assessment of any other aspects that may be deemed relevant for a valid application including, though not limited to, site notices, planning application, planning drawings and Appropriate Assessment Screening.

This SRA and the correspondence arising therefrom are provided to the Council for guidance only and may in no way be taken to pre-empt or assume the statutory decision making role of the Council or the powers of the Council to request the submission of further information(s) regarding the proposed application. The comments made should not be construed as negating or reducing the Applicant's requirements in assessing all potential impacts of the Proposed Development.

4 GENERAL OBSERVATIONS ON SCOPING DOCUMENT

We have reviewed the detailed Scoping Document and have set out below our initial comments in relation to the proposed EIA before breaking down any issues arising under individual prescribed topics.

The detailed Scoping Document submitted by Golder presents important preliminary information and identifies aspects of the Proposed Development that should be considered within the EIA process and to be assessed within the EIAR. The Scoping Document's aim as stated is to provide consultees including the Council enough details so that they can be confident that the EIA process will be executed in an acceptable manner and to avoid future unforeseen issues. The list of contributors at Table 4 of the Scoping Document includes the expertise to be provided by Golder Associates supported by Macroworks, PMCE and Dr Charles Mount. To be fully transparent, the qualifications and professional membership of relevant key personnel should be presented within the EIAR.

It is our opinion that the scope of works as outlined lacks clarity on whether key content will be provided within the EIAR. These gaps, based on the information provided, are as far as possible highlighted in this SRA and the items that will require further development in the EIAR are listed in Section 4.1 (General Approach), in Chapter 5 (for each environmental topic) and in Chapter 6 (for other matters) of this SRA. The Council should emphasize in its response that it retains the powers to request submission of further information in relation to the EIAR.

4.1 Comments on General Approach

1. The need for EIA screening is appropriately considered at Section 1.2.1 of the Scoping Document and is required as outlined under:
 - a. Part 1 of Schedule 5 of the Planning and Development Regulations 2001-2018 (the Regulations),
 - i. item 19 - Quarries and open-cast mining where surfaces of the site exceeds 25 hectares; and
 - b. Part 2 of Schedule 5, of the Planning and Development Regulations 2001-2018 (the Regulations),
 - i. item 2 (c) extraction of minerals within the meaning of the Minerals Development Acts, 1940 to 1999.
2. As the mining operations and Community Complex are presented as a single Proposed Development, the EIAR must consider impacts related to the proposed Community Complex and other elements of the Proposed Development unless clearly scoped out¹.
3. With the exception of the lettered items below, it is not clear at this point if specific aspects of EIA are to be scoped out. It is therefore assumed, based on the Scoping Document presented, that the EIAR will address all relevant aspects of all environmental topics with the following exceptions:
 - a. Chapter 5.7.2 No air quality monitoring programme will be undertaken to assess baseline or operational conditions at the Community Complex and no EIAR assessment of the Community Complex.

¹ Scoping is the process of assessing the content and approach of the EIAR, it should use 'Likely' and 'Significant' as the principal criteria for determining what should be addressed. Any issues that do not pass this test should be omitted (scoped out) from further assessment. A section of the EIAR should describe the scoping process explaining why such issues have been scoped out and they are not being considered further. All the prescribed environmental factors need to be listed in the scoping section of the EIAR. It is important to note that the environmental factors themselves cannot be scoped out and must feature in the EIAR. Only topics and headings related to each factor can be scoped in or out. Each environmental factor should be clearly covered by one or more specific section headings in the EIAR. If scoping determines that no likely significant issues arise under any heading, then an explanatory text should be included. EPA "Guidelines on the information to be contained in environmental impact assessment reports", draft 2017.

- b. Chapter 5.8.2 No noise monitoring programme will be undertaken to assess baseline or operational conditions at the Community Complex and no EIAR assessment of the Community Complex.
- c. Chapter 5.10.2 No archaeological and cultural assessment will be undertaken of the brownfield portion of the community complex (as it was previously assessed and forms part of the exiting Knocknacran Mine site).

We would agree with the points raised within the Scoping Document, as summarised in 3a to 3c above. We would recommend that the Council seek clarification of the reasons for scoping out of air quality and noise assessments at the proposed Community Complex. This is considered in further detail at section 5.7 and 5.8 of this SRA. The Scoping out of archaeological and cultural assessment of the brownfield portion of the proposed Community Complex is considered acceptable as outlined.

- 4. The Scoping Document presents the chapter headings for the EIAR in Table 4. The headings are consistent with the prescribed environmental topics in Schedule 6 of the Planning and Development Regulations 2001-2018 and Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, August 2018.
- 5. The Scoping Document provides significant information on the Proposed Development, incorporating some of the mitigation measures proposed for specific items within the description. The following should be considered by the Applicant preparing the EIAR:
 - a. The development is described as consisting of several distinct elements related to:
 - i. Extraction,
 - ii. Mineral processing,
 - iii. Restoration,
 - iv. Community complex development, and,
 - v. Demolition of a vacant house.
 - b. A number of these elements may include distinct phases such as construction phase, operational phase and decommissioning phase. It is recommended that the assessments clearly and systematically address impacts for these elements and for each stage of each element for the sake of clarity. Any likely post-decommissioning, long term impacts must be considered.
 - c. In some elements of the description the mitigation proposals appear to be already incorporated into the impact description. The assessments and EIAR should establish the baselines, consider and state the potential unmitigated impacts, state the proposed mitigation and state the final mitigated impact to present clarity of the impacts from the Proposed Development and to the predicted benefit of mitigation works.
 - d. The Applicant should be advised to consider guidance provided in “Project Types 17 and 18” in the EPA Draft Advice notes on current practice in the preparation of Environmental Impact Statements (EPA, 2015).
 - e. Certain items considered in the Scoping Document refer to “no change” in volumes of activities associated with the Knocknacran Mine under the Proposed Development (for example truck movements/traffic and processing activities). However, whilst volumes may not change, the continuation of these or other relevant activities for the projected period under the planning application requires assessment.

5 OBSERVATIONS ON PROPOSED CHAPTERS/TOPICS

5.1 Introduction and Project Description

The introduction, considered together with the Project Description presents significant information in relation to site conditions, however there are areas that would require much greater detail to effectively enable the authorities to identify specific conditions, studies and areas of concern or to suggest alterations to scope and focus. Points 1 to 9 below outline the key points that we consider require development within the EIAR:

1. The overall site environmental baseline is not clearly described/established for each topic, except for the following topics: Archaeology and Cultural heritage. The environmental baseline for each topic will need to be presented in detail within the EIAR.
2. A key item currently missing is an up to date description of the receiving environment that includes a description of the subsidence in the area, associated with the use of the underground mine and related impacts this has/may have on the topics considered in the impact assessment.
3. The extent and condition of underground existing mine infrastructure needs to be described.
4. The demolition of the former community facility and loss of amenities on the Knocknacran West Mine Site should be included in the EIAR either as part of the pre-development description (up to date existing site conditions) or within the assessment chapters, depending on the current condition at the time of submission of the EIAR for the Proposed Development.
5. The proposed outcome of the restoration plans for the proposed Knocknacran West mine is not sufficiently described, nor the rock and soil volumes that are proposed to be moved for restoration to the existing Knocknacran Mine and those to be used at Knocknacran West. A cut and fill estimation would be expected on a key aspect of the existing and Proposed Development restoration.
6. The overriding surrounding land-use is described as related to the existing mines, however the existing mines appear to fall predominantly within the boundary of the Proposed Development. This should be clarified and expanded on.
7. The EIAR should expand on the initial description of operations at the Site prior to the Proposed Development and should establish relevant baselines.
8. The proposed operations and any relevant operational alternatives considered should be outlined. The consideration of alternatives (Section 1.3 in the Scoping Document) should be expanded in the EIAR to include details of any alternative site layouts, project and process designs by which the Proposed Development could be carried out and their environmental effects.
9. Any likely change in the volumes of material processed at the existing facilities, in the use of water treatment facilities and ancillary buildings on the existing Knocknacran open pit mine site should be described.

5.2 Policy

We agree with the outline of the policy framework within which the Proposed Development will be considered as part of the assessment. The Applicant should also ensure:

1. Prior consultation with the EPA in relation to Industrial Emissions Directive Licencing associated with the Proposed Development and how this will impact on the license - these may include changes to the agreed Closure Rehabilitation After-care Management Plan, and Environmental Liabilities Risk Assessment, along with any changes to emissions. Where such changes will be made, the EIAR should present the changes and the impact, if any arising.

5.3 Population, Human Health and Community

It is recommended that this section clearly incorporate consideration of potential impacts on the community and that the heading be amended to *Population, Human Health and the Community*. It is noted that this section will incorporate the items listed at section 5.2.1 of the Scoping Document. The following should also be considered:

1. Potential impacts of each stage of the Proposed Development and the cumulative impact on the community, the population of the area and their health and safety.
2. Potential impacts on the community, population of the area and their health and safety of any amenity loss that may occur related to the removal of a large area of lands, including impacts on educational, sporting and community facilities within or in the vicinity of the Proposed Development area and any impact related to relocation of residents for health and safety reasons.
3. Measures to protect local residents from disasters², as per the 2014 Directive need to be presented.

5.4 Biodiversity

The Scoping Document proposed several specific ecological surveys within the proposed extension land of the Knocknacran West mine. Both farmland and quarries are known to have the potential to support a variety of protected and notable species. The following should also be considered:

1. The biodiversity surveys must cover the entire extent of the application boundary and not be limited to the Knocknacran West mine site area.
2. The scope of the biodiversity assessment must include an assessment of all protected species potentially occurring on Site or having the potential to be impacted by the works. To inform the scope of the protected species surveys required for the proposed development, the entire application boundary must be surveyed. It is noted no mammal surveys have been outlined, or if an assessment on the impact to such species commuting routes are to be assessed.
3. It is unclear if the biodiversity net gain, from the proposed change of the closure plan of the existing open cast mine, has been, or is proposed, to be considered.
4. The assessment of impacts and compensatory and mitigation measures must be based on the findings of detailed survey work and assessments.
5. Given the scale of the existing and Proposed Development, the potential zone of influence will need to be fully considered and justified both in the context of protected species and Sites.
6. Potential off-site impacts associated with water management at the proposed mine must be fully considered.

5.5 Soils – Land – Geology

The Proposed Development will likely have a permanent impact on soils, land and geology via their removal across a large portion of the Site. It is noted that the baseline conditions are not yet established and that a detailed baseline bedrock map will be produced as part of the EIAR with a recent topographical survey. The following items should also be considered:

² To address unforeseen or unplanned effects the Directive further requires that the EIAR takes account of the vulnerability of the project to risk of major accidents and /or disasters relevant to the project concerned and that the EIAR therefore explicitly addresses this issue. 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. EPA "Guidelines on the information to be contained in environmental impact assessment reports", draft 2017.

1. To present the scale of the impact, the EIAR document should clearly state the total magnitude of the soils, land or bedrock, including both material to be permanently removed from site and material excavated but remaining on the Site.
2. Information in relation to volumes extracted to date and remaining resource potential should be provided as part of the baseline.
3. A map should be provided that indicates the vertical and lateral extent of existing mines beneath the site and surrounding areas, as it is understood that these historic features form an integral aspect to the Proposed Development.
4. The potential impacts of the proposed activities, including on stability, should then be assessed for the Site, adjoining properties and existing infrastructure, including in particular any impacts for the roads in the area. The assessment of the impact of activities on ground stability in peripheral areas, including on the R179 road and L4900 road, should be expanded on.
5. Recent subsidence should be described and explained.
6. Information on design or mitigation measures should be provided to ensure future stability of bedrock and soils.
7. The EIAR should provide information on the impact of the proposed dewatering methods on bedrock or overburden stability and on any proposed monitoring and action programme adequate to identify and prevent or mitigate future subsidence. Details relating to interim stabilisation methods, and any risks, if present, to residential property in the locality should form part of the assessment.
8. The future groundwater regime and the stability of any legacy mine workings including after cessation of operations and dewatering, and any potential impacts arising therefrom, should also be considered in the EIAR.
9. The final condition of the Knocknacran Mine West after restoration needs to be clarified and expanded on in the EIAR.
10. Potential long-term impacts and aftercare needed, and risk to land, soils and geology post operation should be addressed. Any remaining/residual risk following cessation should be quantified in terms of the potential risk, the potential receptors and the duration.

5.6 Water

The location of the Proposed Development is mapped as poorly productive and within the Neagh Bann Basin District with extreme to high groundwater vulnerability due to the shallow bed rock across much of the area.

1. The EIAR should expand on whether the Locally Important Aquifer is currently used or may be used in future, and what the impacts of the Proposed Development may be.
2. The groundwater regime (including consideration of quantities, quality, and flows), both within and, particularly given recent subsidence events, outside the old underground mine / new open-pit footprint, must be described.
3. It is unclear whether there is currently water in the underground mine and further detail should be provided in relation to proposed water storage either for water stored in the underground mines or future water encountered, including in emergency conditions.
4. The impact of any proposed extraction on the hydrogeological groundwater regimes should be assessed. The volumes of water required for the various operating stages should be considered, whether there is an existing confirmed source of water supply and any impacts on existing supplies to the existing operations or developments in the area.
5. The management of surface, groundwater and wastewater that occurs at the existing operations should be included. This will permit assessment of potential adverse impacts on surface water or aquatic or terrestrial environments by the proposed

activities, to include all relevant activities at all relevant stages of the Proposed Development.

6. Current water quality in nearby surface water bodies should be outlined with description of the existing water management arrangements for the baseline.
7. There are areas mapped by the OSI as Flood Risk to the northeast of the Site and these should be incorporated to the assessment.
8. The EIAR should consider the prevention of discharge of any form of deleterious or polluting matter, silt or suspended solids to the aquatic environment, ground and surface waters in both normal and emergency operating conditions. The Proposed Development is c.15km from the nearest Natura 2000 site. The River Glyde flows into the Dundalk Bay SAC c. 30km to the east of the Proposed Development. Two tributary streams to the River Glyde are within 2km of the Proposed Development. An assessment of surface water as a potential contaminant pathway to protected areas therefore should be included.
9. The EIAR should define an adequate and appropriate water quality monitoring plan.

5.7 Air – Climate

5.7.1 Air Quality

Operations such as the Proposed Development have significant potential to impact on air quality, especially in terms of ambient dust, in particular PM₁₀, which in turn has a potential to impact human health. The proposed assessment of the baseline environment only refers to the existing dust monitoring required under the mine's IE Licence Reg. No P0519-03. The proposed monitoring only includes dust deposition monitoring using the Bergerhoff method, which is applied for nuisance dust monitoring. Such monitoring does not describe ambient air quality, which is required for EIAR to assess human health impacts from proposed developments. The following should therefore be considered:

1. To assess appropriateness of the proposed additional dust deposition monitoring locations, sensitive receptors need to be identified as well as predominant wind conditions.
2. The proposed new community complex must be included as a sensitive receptor, and therefore potential impact of the mining operations on the ambient air quality at this complex needs to be assessed.
3. For the complete assessment of air quality, the following steps are required:
 - a. assess background level of ambient PM₁₀ (i.e. suspended dust) in the area,
 - b. identify sensitive receptors,
 - c. identify the existing mining activities and proposed additional activities that could lead to dust generation, such as blasting, crushing, stockpiling, transport, etc.
 - d. assess impacts of topography and wind/rainfall on dust dispersion;
 - e. based on the above, determine if more detailed assessment or monitoring is required.
4. Reference to a more recent mineral dust guidance is recommended, for example Institute of Air Quality Management, "Guidance on the Assessment of Mineral Dust Impacts for Planning", London, 2016.
5. Where pollutants, other than PM₁₀, are known by the Applicant, these should also form part of the assessment.

5.7.2 Climate

Whilst the Scoping Document notes that the applicant will consider climate change, there is no information on the extent of the assessment proposed. As a minimum the following would be expected from a development of this scale and should be contained in the assessment:

1. Energy usage required for the operation of the Proposed Development per annum should be assessed, including transport requirements.
2. The climate change impact of removal of 50ha of agricultural grassland should be assessed.
3. Mitigation measures should be proposed to present any off-set where needed.

5.8 Noise

The Scoping Document states extensive data is available for the current extraction activities from 3 No. monitoring locations, with 4 No. additional locations to be established for the new Knocknacran West Mine. The methodology to be followed references the three documents of:

1. EPA's - Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4), 2016,
2. EPA's - Environmental Management Guidelines Environmental Management in the Extractive Industry (Non-Scheduled Minerals), 2006,
3. Department of the Environment, Heritage and Local Government - Quarries and Ancillary Activities Guidelines for Planning Authorities April 2004

The following should also be considered:

4. Attention should be paid to the Environment Noise Regulations 2018 (S.I. 549/2018) and how the Proposed Development may impact on future action plans by the relevant competent authorities. Relevant activities include surface drilling and plant activities, blasting, process plant noise including from crushing and grinding and transport noise from internal and external haulage.
5. Noise monitoring locations should be selected to ensure future works will be adequately monitored. It would appear from the supplied figures, that additional sensitive receptors, including a school premises, will arise from this proposal. Such receptors should be fully presented, and, in the case of high sensitivity receptors (medical and educational premises) assessment should take into consideration speciality guidance for the proper use of such from an acoustic perspective.
6. It is unclear if the Applicant is proposing long term monitoring, compliance monitoring or baseline monitoring as outlined within NG4. It would be recommended that baseline monitoring is conducted, and that the Site is screened for both Low Noise and Quiet Area as per NG4.
7. Where the Site is not Low Noise, consideration should be clearly presented on the predicted change, if any, to sensitive receptors from the Proposed Development. BS4142 supplies a meaningful method to assess the development of industrial activities in proximity to residential.
8. Noise monitoring locations should be selected to ensure future works will be adequately monitored. It would appear from the supplied figures, that additional sensitive receptors, including a school premises, will arise from this proposal. Such receptors should be fully presented, and, in the case of high sensitivity receptors (medical and educational premises) assessment should take into consideration speciality guidance for the proper use of such from an acoustic perspective.
9. It is unclear from the scoping document whether the noise assessment will take the form of an impact assessment or compliance assessment. It is recommended that reference is made to the IOA/IEMA guidance on assessment of noise within EIA. For a comprehensive assessment the use of the IEMA guidance or BS4142 should be considered.
10. Details of the frequency and predicted noise and vibration levels from construction and operational phases and also blasting events should be provided.

5.9 Vibration

Vibration and air overpressure arising from blast events at the Site are detailed within the Scoping Document, along with the compliance criteria. Although this is sufficient for the protection of the environment, it is recommended the assessment considers the following in line with the protection of human health (including mental health):

1. Details of the frequency and predicted noise and vibration levels from blasting events should be provided.
2. Activities specified in relation to noise above should also be assessed and included for vibration where relevant. Vibration related to haulage and blasting activities should be expanded on. An appropriate and adequate monitoring regime to include relevant structures and any other relevant receptors in the area should be outlined in the EIAR.
3. The ANC Guidelines on '*Measurement & Assessment of Groundborne Noise & Vibration*' provides methodologies and assessment techniques, in line with best international standards.
4. It should be clearly presented whether a likely vibration will be 'felt' within sensitive receptors, based on relevant guidance and the understanding the Applicant has of the underlying geology of the Site.
5. The interactions of vibrations on other topics, should be clearly outlined. It would be expected that vibration would have impacts on sleeping /nesting of nocturnal species and historic buildings

5.10 Archaeology & Cultural Heritage

The Scoping Document presents detail in relation to this topic. The scope of the assessment should consider the point 1 raised below:

1. The potential for impacts from vibration, including from blasting, should be included. In the assessment of the impact of vibration the rationale for any exclusions from assessment based on distance from the Proposed Development should be clearly explained. This should include information on the distance or magnitude at which any predicted vibrations or subsidence related to the Proposed Development will have no impact.

5.11 Landscape

The following observations in relation to this topic are presented below and should form part of the EIAR developed:

1. Any photomontages should include existing mine infrastructure where present.
2. The proposed assessment of the Community Complex should consider the proposed removal of forestry at the site of the Community Complex in addition to the items presented.
3. The EIAR should consider the potential significant impact from the change of use to open-cast mining on the character and quality of the landscape.

5.12 Material Assets

The Scoping Document does not present Material Assets under Section 5 'Environmental Impacts', though Section 6.1 does include it as part of the EIAR to be developed, while Table 4 identifies it will be handled by both Golder Associates and PMCE.

Section 3 'Outline Description of the Development' does provide an overview of Material Assets, but does not provide clarity on the assessment methodology to be provided.

It is our opinion the EIAR should include assessment of the following:

1. All stages of the Proposed Development on structures, roads, water supplies (including the potential for future downgradient groundwater use) and the geological heritage of

- the area. This should include the potential effects of vibrations or subsidence related to all phases of the Proposed Development.
2. The proposed processing methods, plant and machinery to be used, internal and external transport and fuel or chemical storage methods should be assessed.
 3. Although the Scoping Document notes no change to existing truck movements, the proposed continuation of use over ca. 30 years needs to be addressed by a comprehensive traffic model to ensure current and future truck movements will not result in an impact, and if so, what mitigation works should be developed.
 4. Transport details should include swept-path analysis for HGV movements using the proposed facility, operation and construction parking and impact of the Proposed Development on the surrounding public road network.
 5. A Traffic and Transport Assessment (TTA) of the Proposed Development on any Primary Roads and other public roads in the area should be undertaken to comply with relevant guidelines.
 6. Consultations should be undertaken with the Council and the Transport Infrastructure Ireland (TII) as relevant with regard to the location of existing and future road schemes and how the Proposed Development may impact on same.
 7. The submission should include a risk assessment for major accidents and disasters. These should include assessment for potential spillages from operations, transport and loading of Proposed Development on site to include transport methods.
 8. A road safety audit should be undertaken to include the use of an existing mine entrance by the proposed Community Centre.
 9. An assessment of waste management proposals for the stages of the Proposed Development should be included.
 10. Access to and adequacy of water supply in the event of a fire and the adequacy of facilities for containment of chemicals / effluents that would result from waste spillage or firefighting activities should be covered in the EIAR.

5.13 Interactions

The Scoping Document indicates that Chapter 14 of the EIAR will present inter-relationships and interactions between various aspects of the environmental impact assessment.

It is noted that indirect and cumulative/in combination impacts will be clearly stated within the EIAR, and, where present, the methodology to control such aspects should be included.

6 OTHER MATTERS

Full copies of all original and expert reports should be submitted as appendices to the EIAR.

As noted within Section 6 of the Scoping Document, A non-technical summary will be provided. The Non-Technical Summary must be provided in a manner to ensure that the public are made aware of the environmental implications of the Proposed Development in a clear, simplified and lay-persons language.

A clear Schedule of Commitments, summarising the commitments from throughout the EIAR, should be presented.

APPENDICES

APPENDIX A

MEETING NOTES

Ground Floor – Unit 3, Bracken Business Park, Bracken Road, Sandyford
 Dublin 18, D18 V32Y Tel: +353-1-567 7655 e-mail: enviro@mores.ie



Project: E1656 Project kick-off meeting	Attendance K. Goodwin S. Coakley Laura Nulty Adrian Hughes	MOR MOR Monaghan Co.Co. Monaghan Co.Co.
Location: Municipal District Offices Monaghan County Council, Carrickmacross, Co. Monaghan		
Date of Meeting: 27 th February 2020 Date of Issue: 15 th May 2020		

ITEM	DESCRIPTION	ACTION
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1	<p>Three mines are currently present at Knocknacran:</p> <ul style="list-style-type: none"> (a) Open cast to South (operating); (b) Drummond underground mine (operating); (c) Historical underground mine to the north (not operating). <p>Current proposal is to remove remaining resource at the northern historical mine (pillars and other remaining resource) by open cast mining</p> <p>Consultation has occurred extensively with the community - dialogue occurred between stakeholders after the 2019 subsidence incident.</p> <p>Gyproc agents have met with local residents and the Council and agreed a programme for the development of a new Community Centre and sports grounds. The old facilities were located at an area where subsidence occurred. Demolition of the existing Community Centre has been agreed between stakeholders.</p> <p>Two (2 No.) pre-planning meetings were held between the Council and the applicant to date.</p>	Informative
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ITEM	DESCRIPTION	ACTION	DUE
2	<p>Pumping of water occurs in the existing mining operations.</p> <p>The historic mine to the north was used for the storage of pumped groundwater. It is believed a number of mine pillars partially dissolved and collapsed, resulting in the collapse of parts of the mine and subsidence at the surface.</p> <p>Collected surface water is currently discharged to the local river, in line with agreements/licensing in place with the Environmental Protection Agency.</p>	Background	
3	<p>Public Process – Relevant Potential Issues</p> <p>Is the Scope of the EIA adequate?</p> <p>Are suitable Methodologies provided?</p> <p>Are Best Practice Guidance methods provided for?</p>	Scope	
4	<p>Human health</p> <p>Have nuisance and health been adequately addressed within the Scoping report, such as:</p> <ul style="list-style-type: none"> • Noise • Vibration • Dust. <p>Note the increased proximity of the northern mine to potential receptors including housing, school and small settlement to the north.</p> <p>Note also that several residents agreed to be relocated (some permanently) due to subsidence – so not all homes visible on aerial photography are now occupied.</p>	Scope	
5	<p>Characterisation of the existing environment</p> <p>Does the Scope address the extent of the historic mining tunnels and the long-term integrity of these structures arising from this application?</p> <p>Note that the extent of existing mine tunnels extend beyond the surface boundary of the Site.</p>	Scope	
6	<p>Alternatives</p> <p>Are alternatives adequately considered as per the EIA Directive?</p>	Scope	
7	<p>Proposed Development</p> <p>Does the Scoping Document present the life cycle stages of the proposed development – construction – operational – closure/restoration?</p>	Scope	

	<p>Note that in the construction stage the regional road may require diversion during construction of the proposed operations tunnel beneath it.</p> <p>Is a clear interaction between the varying mining operations and their life cycles presented?</p>		
--	---	--	--

From: [EIAPanning](#)
To: [McGillycuddy, Hannah](#)
Subject: Scoping Opinion under Article 5(2) of Directive 2011/92/EU as amended by Directive 2014/52/EU (EIA Directive) (Our Ref: 2281)
Date: Friday, August 23, 2019 9:59:02 AM

EXTERNAL EMAIL

Dear Madam,

I refer to the scoping request for Saint-Gobain Mining (Ireland) Limited, Knocknacran West-Cast Mine and Community Complex Development, Knocknacran, Co Monaghan, received by the Agency on 20 June 2019. In accordance with the requirements of Article 5 (2) of Directive 2011/92/EU as amended by Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (EIA Directive), the Agency has consulted with the Planning Authority Monaghan County Council and the Health Services Executive in this instance. The authorities have not provided a response within the timeframe set out.

Having regard to the specific characteristics of the project, including location and technical capacity, and likely impact on the environment, the Agency is of the opinion that the scope and level of detail to be included in the environmental impact assessment report should as a minimum:

- (i) identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on each of the factors listed in Article 3 of the EIA Directive;
- (ii) have regard to the requirements of the draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, as appropriate;
- (iii) have regard to the relevant topics contained in the EPA's Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) September 2003.
- (iv) satisfy the requirements of the EIA Directive.

If you require any further information in relation to this matter, please contact the undersigned.

For all further queries and correspondence relating to planning and EIA matters, please contact eiapanning@epa.ie

Yours faithfully,

Environmental Licensing Programme
Office of Environmental Sustainability
Tel: 053-9160600



**Iascach Intíre Éireann
Inland Fisheries Ireland**

Hannah McGillicuddy,
Geo-Environmental Scientist,
Golder Associates Ireland,
Town Centre House,
Dublin Road,
Naas,
Co. Kildare

Our Ref: MK/2i

7th August, 2019

Re: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development, Co. Monaghan

Dear Ms. McGillicuddy,

We refer to your email dated 20th June last in relation to the above-mentioned scoping document for Knocknacran West Open-Cast Mine and Community Complex Development, Co. Monaghan.

Inland Fisheries Ireland (IFI), formerly known as Eastern Regional Fisheries Board, is a Statutory Body established on the 1st July 2010. Under section 7(1) of the Inland Fisheries Act 2010 (No. 10 of 2010) *the principal function of IFI is the protection, management and conservation of the inland fisheries resource.*

The watercourses to the east and south of the site are part of the River Bursk and the watercourse to the west of the site is part of the Maghaeraclóone River, both are sub-catchments of the River Glyde.

The Bursk River contains salmonid spawning and nursery habitat in its upper reaches and adult salmonid and coarse fish habitat in its lower reaches. The river supports stocks of salmon, trout, European eel, perch and roach among other species.

The Maghaeraclóone River contains salmonid spawning and nursery habitat and supports stocks of salmon, trout and lamprey.

Note: Salmon and Lamprey species are listed as an Annex II Species under the European Habitats Directive.

The Ecological status of the waterbodies at this location (Glyde_020 and Glyde_030) is Good in both cases. This information can be accessed at <http://www.epa.ie/water/watmg/wfd/wfdapp/>

The potential impact of developments of this nature on fisheries habitats includes discharges to watercourses of:

- silt laden water
- fuels & oils.

Discharge of silt-laden waters to fisheries streams is of particular concern. Silt can clog fish spawning beds, and juvenile fish species are particularly sensitive to siltation of gill structures. Plant and macroinvertebrate communities can literally be blanketed over, and this can lead to loss or degradation of valuable habitat. It is important to incorporate best practices into establishment and operation methods to minimise discharges of silt/suspended solids to waters.



**Iascach Intíre Éireann
Inland Fisheries Ireland**

Stockpile areas for sands, gravel, etc., should be kept to minimum size, well away from any watercourse. Runoff from stockpiles should only be routed to the watercourse via suitably designed and sited silt traps/settlement ponds.

Silt traps (i.e. containment and treatment) shall be constructed at locations that will intercept run-off to streams. Traps shall not be constructed immediately adjacent to natural watercourses. A buffer zone should remain between the silt trap and the watercourse with either natural vegetation left intact or imported materials such as terram, straw bales, coarse to fine gravel used either separately or in combination as appropriate so as to remove suspended matter from discharges.

Silt traps/settlement ponds should be inspected daily and maintained regularly.

Discharges of fuels and oils can be directly toxic to aquatic life, and at sub lethal levels lead to tainting of fish tissues, rendering fish inedible. Oil films on water can seriously interfere with the diffusion of oxygen from the atmosphere into waters, and in extreme cases result in oxygen depletion.

All oils and fuels shall be stored in secure bunded areas, and particular care and attention taken during refuelling and maintenance operations on plant and equipment especially when sited such that taking account of gradient and ground conditions, there is the possibility of discharge to waters.

Please keep us informed of progress with this proposed development.

Yours faithfully,

Michaela Kirrane
Senior Fisheries Environmental Officer – IFI, Dublin

From: nadine.silverton@water.ie
To: Michelle.Silvert@water.ie
Subject: Irish Water Ref: 190056639
Date: Thursday, October 10, 2019 5:29:07 PM

EXTERNAL EMAIL

Good afternoon Hannah,

Thank you for your email following up on your matter.

I have updated our system with information that you have provided and passed it on to the Escalation department within Irish Water.

When further information becomes available, a member of our team will be in contact with you. Your Irish Water reference number for the information that I have passed on today is 8231569154, should you require it in the future, and quote in correspondence with Irish Water on operations@water.ie

I appreciate this matter is a source of concern for you so please bear with us while we investigate this matter further for you.

If you have any further queries in the meantime, please don't hesitate to contact us.

Thank you for contacting Irish Water.

Yours sincerely,

Nadine Silverton
Customer Service Advisor
Uisce Éireann
Bosca OP 860, Oifig Sheachadta na Cathrach Theas, Cathair Chorcaí, Éire
Irish Water
PO Box 860, South City Delivery Office, Cork City, Ireland

T: 1850 278 278
Minicom: 1890 378 378
www.water.ie

The information transmitted is intended only for the person or entity to which it is addressed and may contain confidential, commercially sensitive and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited and may be unlawful. Irish Water accepts no liability for actions or effects based on the prohibited usage of this information. Irish Water is neither liable for the proper and complete transmission of the information contained in this communication nor for any delay in its receipt. If you received this in error, please contact the sender and delete the material from any computer. Thank you for your attention.

----- Last Email Communication -----
Subject:

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Thank you for your attention.

Tá an faisnéis a seachadadh dírithe ar an duine nó ar an cinnleas chuig a bhfuil sí seolta amháin agus féadfar éibhear faoi rún, faoi phribhléid nó éibhear atá fogair ó thabhairt tráchtála de a bheith mar chuid de. Tá an aitheascadh nó scaipeadh den fhaisnéis, an athbheithnín nó an t-úsáid eile a bhaint as, nó an ghléas a dhéanar ag brath ar an bhfaisnéis seo ag daoine nó ag cinnleas nach dóibh sínd an fhaisnéis seo, iormisce agus féadfar é a bheith neamhdhleathach. Níl Uisce Éireann faoi dhliteanas maidir le seachadadh ionlán agus ceart na faisnéise sa chumarsáid seo nó maidir le haon mhóil a bhaineann léi. Ní ghlacann Uisce Éireann le haon dliteanas faoi ghlinn nó faoi iarmhairt bunaithe ar úsáid thoirmeisce na faisnéise seo. Níl Uisce Éireann faoi dhliteanas maidir le seachadadh ceart agus ionlán na faisnéise sa chumarsáid seo nó maidir le haon mhóil a bhaineann léi. Má faoir tú an teachtaireacht seo in carráid, más é do thoil é, déan teagmháil leis an scoltóir agus scríos an t-ábhar ó gach aon ríomhaire. Féadfar ríomphost a bheith soghabhálach i leith truaillithe, idircheaptha agus i leith leasaithe neamhdáraithe. Ní ghlacann Uisce Éireann le haon fiteascraic as athruithe nó as idircheaptha a rinneadh ar an ríomphost seo i ndiaidh é a sheoladh nó as aon dochar do chórais na bhfiúchtóirí déanta ag an teachtaireacht seo nó ag a ceangalláin. Más é do thoil é, tabhair faoi deara chomh maith go bhféadfar monatóireacht a dhéanamh ar theachtairreachtaí chuig nó ó Uisce Éireann chun comhlíonadh le polasaithe agus le caidreamh Uisce Éireann a chinntiú agus chun ár ngnó a chosaint. Feolduachta gníomhaíochta de chuid Ervia is ea Uisce Éireann atá faoi theoirim scaireanna, de bhun fhorálacha an Acht um Sheirbhís Uisce 2013, a bhfuil a bpríomh ionad gnó ag 24-26 Teach Colvill, Sráid na Talbóide, BÁC 1.

Go raibh maith agat as d'áird a thabhairt.

Mr. Barry Balding
Golder Associates
Town Centre House
Dublin Road
Naas
Co. Kildare
W91 TD0P

RECEIVED
08 JUL 2019

Dáta | Date
04 July 2019

Ár dTag | Our Ref.
TII19-106172

Bhur dTag | Your Ref.
19121210.R01.A0

RE: EIAR Scoping Request: Proposed Knocknacran West Open-Cast Mine and Community Complex Development, Co. Monaghan on behalf of Saint-Gobain Mining (Ireland) Limited.

Dear Mr. Balding,

Transport Infrastructure Ireland (TII) acknowledges receipt of the above EIAR consultation document received by email on 21 June 2019 in respect of the above proposed project.

National Strategic Outcome 2 of the National Planning Framework includes the objective to maintain the strategic capacity and safety of the national roads network. It is also an investment priority of the National Development Plan, 2018 – 2027, to ensure that the extensive transport networks which have been greatly enhanced over the last two decades, are maintained to a high level to ensure quality levels of service, accessibility and connectivity to transport users.

The issuing of this correspondence is provided as best practice guidance only and does not prejudice TII's statutory right to make any observations, requests for further information, objections or appeals following the examination of any valid application referred. The approach to be adopted by TII in making such submissions or comments will seek to uphold official policy and guidance as outlined in the Spatial Planning and National Roads Guidelines for Planning Authorities (2012). Regard should also be had to other relevant guidance available at www.tii.ie.

In this instance, the proposal is for an open cast mine as an extension of an underground mine (Drummond) and an open cast mine at Knocknacran on the opposite side of the R179 from those operational mines. The proposal, area not stated, includes for a community facility and playing fields in the townlands of Drummond and Knocknacran West. The application site is approximately 5km south west of Carrickmacross and 6km south west of the N2.

With respect to EIAR Scoping issues, the recommendations indicated below provide only general guidance for the preparation of EIAR, which may affect the national road network. The developer should have regard, *inter alia*, to the following:

1. As outlined in the Spatial Planning and National Roads Guidelines, it is in the public interest that, in so far as is reasonably practicable, the national road network continues to serve its intended strategic purpose. The EIAR

Próiseálann BIÉ sonraí pearsanta a sholáthraítear dó i gcomhréir lena Fhógra ar Chosaint Sonraí atá ar fáil ag www.tii.ie.
TII processes personal data in accordance with its Data Protection Notice available at www.tii.ie.

RECEIVED
08 JUL 2019

- should should identify the methods/techniques proposed for any works traversing/in proximity to the national road network in order to demonstrate that the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of that network.
2. Consultations should be had with the relevant local authority/national road design office with regard to locations of existing and future national road schemes, including the N2 Ardee to south of Castleblaney identified for pre-appraisal and early planning in the National Development Plan 2018-2027.
 3. Clearly identify haul routes proposed and fully assess the network to be traversed. Separate structure approvals/permits and other licences may be required in connection with the proposed haul route and all structures on the haul route should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal load proposed.
 4. Where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site with reference to impacts on the national road network and junctions of lower category roads with national roads. TII's Traffic and Transport Assessment Guidelines (2014) should be referred to in relation to proposed development with potential impacts on the national road network. The scheme promoter is also advised to have regard to Section 2.2 of the TII TTA Guidelines which addresses requirements for sub-threshold TTA.
 5. TII Standards should be consulted to determine the requirement for Road Safety Audit (RSA) and Road Safety Impact Assessment (RSIA).
 6. Assessments and design and construction and maintenance standards and guidance are available at TII Publications that replaced the NRA Design Manual for Roads and Bridges (DMRB) and the NRA Manual of Contract Documents for Road Works (MCDRW).
 7. The developer, in conducting Environmental Impact Assessment, should have regard to TII Environment Guidelines that deal with assessment and mitigation measures for varied environmental factors and occurrences. In particular;
 - a. TII's Environmental Assessment and Construction Guidelines, including the *Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes* (National Roads Authority, 2006),
 - b. The EIAR should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (1st Rev., National Roads Authority, 2004)).

Notwithstanding any of the above, the developer should be aware that this list is non-exhaustive, thus site and development specific issues should be addressed in accordance with best practice.

I hope that the above comments are of use in your EIAR preparation.

Yours sincerely,


Michael McCormack
Senior Land Use Planner

From: [McGillycuddy, Hannah](#)
To: Manager.DAU@chg.gov.ie
Subject: FW: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development
Date: Monday, October 7, 2019 2:33:00 PM
Attachments: [image001.jpg](#)
[FW Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development .msg](#)
[image003.jpg](#)

Good afternoon,

Following on from my earlier email, would you be able to forward on any comments that you may have in relation to the scoping document at your earliest convenience, please?

Kind regards,
Hannah

From: Manager DAU <Manager.DAU@chg.gov.ie>
Sent: Friday 21 June 2019 09:27
To: McGillycuddy, Hannah <Hannah_McGillycuddy@golder.com>
Subject: RE: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development

EXTERNAL EMAIL

Our Ref: G Pre00169/2019 (Please quote in all related correspondence)

A Chara

On behalf of the Department of Culture, Heritage and the Gaeltacht, I acknowledge receipt of your recent consultation.

In the event of observations, you will receive a co-ordinated heritage-related response by email from Development Applications Unit (DAU) on behalf of the Department.

The normal target turnaround for pre-planning and other general consultations is six weeks from date of receipt. In relation to general consultations from public bodies under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 to 2011, the Department endeavours to meet deadline dates, where requested.

If you have not heard from DAU and wish to receive an update, please email manager.dau@chg.gov.ie.

Connor Rooney
Executive Officer

—
An Roinn Cultúir, Oidhreacht agus Gaeltachta
Department of Culture, Heritage and the Gaeltacht

Aonad na nIarratas ar Fhorbairt
Development Applications Unit

Bóthar an Bhaile Nua, Loch Garman, Contae Loch Garman, Y35 AP90
Newtown Road, Wexford, County Wexford, Y35 AP90

—
T +353 (0)53 911 7464
manager.dau@chg.gov.ie
www.chg.gov.ie
—

From: McGillicuddy, Hannah [mailto:Hannah_McGillicuddy@golder.com]
Sent: Thursday 20 June 2019 15:52
To: Manager DAU <Manager.DAU@chg.gov.ie>
Subject: FW: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development

Dear Sir/Madam,

We, Golder Associates Ireland are acting on behalf of the applicant Saint-Gobain Mining (Ireland) Ltd. Please find attached a scoping document for the Knocknacran West Open-Cast Mine and Community Complex Development, Knocknacran, Co. Monaghan.

We invite you to submit any relevant information for the Environmental Impact Assessment Report that you may hold, and/or highlight any issues that you feel should be addressed in the Environmental Impact Assessment Report, preferably by 2nd August 2019.

Yours Sincerely,
Hannah McGillicuddy

Hannah McGillicuddy (M.Sc., B.Sc. (Hons))
Geo-Environmental Scientist
Town Centre House, Dublin Road, Naas, Co. Kildare, W91 TD0P, Ireland
T: +353 45 81 0200 | **M:** +353 87 958 4724 | **E:** hmcgillicuddy@golder.com golder.com
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VAT No.: 8297875W

Registered in Ireland Registration No. 297875
Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Directors: S. Copping, A. Harris (British), DRV Jones

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From: [McGillycuddy, Hannah](#)
To: wcu@hsa.ie
Subject: FW: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development
Date: Monday, October 7, 2019 2:31:00 PM
Attachments: [image001.jpg](#)
[Knocknacran West Scoping Report.A0.19121210 - V.4 200619.pdf](#)
[image002.jpg](#)

Good afternoon,

Following on from my earlier email, would you be able to forward on any comments that you may have in relation to the scoping document at your earliest convenience, please?

Kind regards,
Hannah

From: McGillycuddy, Hannah
Sent: Thursday 20 June 2019 15:52
To: wcu@hsa.ie
Subject: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development

Dear Sir/Madam,

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We invite you to submit any relevant information for the Environmental Impact Assessment Report that you may hold, and/or highlight any issues that you feel should be addressed in the Environmental Impact Assessment Report, preferably by 2nd August 2019.

Yours Sincerely,
Hannah McGillycuddy

Hannah McGillycuddy (M.Sc., B.Sc. (Hons))

Geo-Environmental Scientist

Town Centre House, Dublin Road, Naas, Co. Kildare, W91 TD0P, Ireland

T: +353 45 81 0200 | **M:** +353 87 958 4724 | **E:** hmcgillycuddy@golder.com golder.com

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Registered in Ireland Registration No. 297875
Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Directors: S. Copping, A. Harris (British), DRV Jones

Please consider the environment before printing this email.

From: [PR](#)
To: [McGillycuddy, Hannah](#)
Subject: Stakeholder Relations Team
Date: Thursday, June 20, 2019 3:51:14 PM

EXTERNAL EMAIL

Dear Stakeholder,

Thank you for your e-mail. It will be forwarded to the relevant person/**team** in Coillte for review and response.

We appreciate your contact and will come back to you as soon as we can.

Kind regards,

Stakeholder Relations Team

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From: [McGillycuddy, Hannah](#)
To: ["ehnationaloffice@hse.ie"](mailto:ehnationaloffice@hse.ie)
Subject: Scoping document for Knocknacran West Open-Cast Mine and Community Complex Development
Date: Thursday, June 20, 2019 4:45:00 PM
Attachments: [image001.jpg](#)
[Knocknacran West Scoping Report.A0.19121210 - V.4 200619.pdf](#)
[image003.jpg](#)

Dear Sir/Madam,

We, Golder Associates Ireland are acting on behalf of the applicant Saint-Gobain Mining (Ireland) Ltd. Please find attached a scoping document for the Knocknacran West Open-Cast Mine and Community Complex Development, Knocknacran, Co. Monaghan.

We invite you to submit any relevant information for the Environmental Impact Assessment Report that you may hold, and/or highlight any issues that you feel should be addressed in the Environmental Impact Assessment Report, preferably by 2nd August 2019.

Yours Sincerely,
Hannah McGillycuddy

Hannah McGillycuddy (M.Sc., B.Sc. (Hons))

Geo-Environmental Scientist

Town Centre House, Dublin Road, Naas, Co. Kildare, W91 TD0P, Ireland

T: +353 45 81 0200 | **M:** +353 87 958 4724 | **E:** hmcgillycuddy@golder.com golder.com

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VAT No.: 8297875W

Registered in Ireland Registration No. 297875
Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Directors: S. Copping, A. Harris (British), DRV Jones

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From: plantalterations@eir.ie
To: [McGillycuddy, Hannah](#)
Subject: FW: Query in relation to an Eir cable in Knocknacran, Co. Monaghan
Date: Monday, April 6, 2020 9:04:39 AM
Attachments: [image001.jpg](#)
[image003.jpg](#)
[Knocknacran Map - Eir.pdf](#)
[Knocknacran West Scoping Report.A0.19121210 - V.4 200619.pdf](#)
[Legend.pdf](#)
Importance: High

EXTERNAL EMAIL

Hi Hannah,

Thank you for your email.

Please see the attached associated legend in relation to the map you have downloaded.

I have also attached the plant alteration process for your information.

If you are happy to go ahead with the work in question, I will require the details mentioned above in order to process your application

Kind Regards,

Máiréad ,

Plant Alterations

from: McGillycuddy, Hannah [mailto:Hannah_McGillycuddy@golder.com]
Sent: 03 April 2020 17:45
To: Plant Alterations
Cc: Balding, Barry
Subject: Query in relation to an Eir cable in Knocknacran, Co. Monaghan

Good afternoon,

We're writing to you in relation to a proposed project at Knocknacran, Co. Monaghan. The proposed project is for the development of an open-cast mine to the north of the R179 which would be connected to the existing open-cast mine at Knocknacran via a cut-and-cover tunnel beneath the R179 (see attached scoping report for further details). We've downloaded a copy of your service map for the area and note that there is a mapped Eir service line within the area where it's proposed to construct the tunnel (see attached Eir map).

At this stage in the project we would be looking to clarify what kind of cable is shown on the map

and what preliminary steps would you advise are warranted at this stage given that the project is pre-planning? We have also been in consultation with Gas Networks Ireland as there is also a gas line along the R179 and it is likely that the line would be temporarily diverted during construction works – would this be likely for the Eir line as well?

Thanks.

Kind regards,
Hannah

Hannah McGillycuddy (M.Sc., B.Sc. (Hons))

Geo-Environmental Scientist

Town Centre House, Dublin Road, Naas, Co. Kildare, W91 TD0P, Ireland

T: +353 45 81 0200 | **M:** +353 87 958 4724 | **E:** hmcgillycuddy@golder.com golder.com

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PLANT REQUESTED FROM eircom emaps CBYD SERVICE

<https://cbyd.emaps.eircom.ie/>

Scale: 1:1500

Date
01/10/2019

Irish National Grid Co-Ordinates
Centre XY: 280926 m, 299781 m

emaps CBYD

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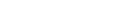
Proposed eircom Plant Legend

-  DP
-  Internal CD
-  External CD
-  DUG Point
-  ETU
-  Call Point
-  eircom Kiosk
-  Coupling
-  Buried Box
-  Chamber
-  Manhole
-  Handhole
-  Cabinet TE Copper
-  Cabinet TE Fibre
-  Fibre DP
-  Fibre Customer Node
-  Trench Route
-  Overhead Route

Existing eircom Plant Legend

-  DP
-  Internal CD
-  External CD
-  DUG Point
-  ETU
-  Call Point
-  eircom Kiosk
-  Coupling
-  Buried Box
-  Chamber
-  Manhole
-  Handhole
-  Cabinet TE Copper
-  Cabinet TE Fibre
-  Fibre DP
-  Fibre Customer Node
-  Trench Route
-  Overhead Route

Electric & Gas Legend

-  Electric MV/LV Underground
-  Electric MV/LV Overhead
-  Electric HV Underground
-  Electric HV Overhead
-  Gas HP Transmission Network
-  Gas MP Distribution Network
-  Gas LP Distribution Network



APPENDIX 2.2

Summarised 2019 Scoping Responses Tables 1 and 2

Table 1: Stakeholder engagement during the scoping process

Stakeholder/Consultee	Response Received	Response	Items Addressed in EIAR
1. ESB	25 th June 2019	<p>Sent through a service map of the area. Followed up with a phone call and advised Form NW1 is warranted to relocate a structure for the Proposed Development. Refer to Appendix 2.2 for ESB correspondence.</p> <p><i>(In advance of the submission of the 2023 EIAR, the service maps were requested and received from the ESB in January 2023. These confirmed no changes since 2019 and no updates were required.)</i></p>	Chapter 16.0 (Material Assets)
2. Gas Networks Ireland (GNI)	24 th June 2019	<p>Sent through a service map of the area. Followed up with emails and calls to see if location of pipeline by R179 could be clarified and what works may be required prior to construction/pre-planning. Refer to Appendix 2.3 for GNI correspondence.</p> <p><i>(In advance of the submission of the 2023 EIAR, the service maps were requested and received from GNI in January 2023. These confirmed no changes since 2019 and no updates were required.)</i></p>	Chapter 16.0 (Material Assets)
3. EMD (Exploration and Mining Division) of DCACNT (Department of Climate Action, Communications Networks and Transport) Formerly - DCCAE (Department of Communications, Climate Action and Environment)	29 th June 2020	<p>Considers it “beneficial for the EIAR to outline the impacts that the proposed open cast mine development will have in relation to future subsidence.” Acknowledges the positive effect that excavation will have for a substantial part of the site in removing the potential for subsidence events. However, requests stability of remaining voids should be given consideration and requests any mitigation needed to be detailed to minimize future subsidence of the L4900 and R179. Refer to Appendix 2.4 for the EMD response.</p>	Chapter 7.0 (Land, Soils and Geology)

5.	EPA	23 rd August 2019	<p>Identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on each of the factors listed in Article 3 of the EIA Directive.</p> <p>Have regard to the requirements of the draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, as appropriate.</p> <p>Have regard to the relevant topics contained in the EPA's Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) September 2003.</p> <p>Satisfy the requirements of the EIA Directive.</p> <p>Refer to Appendix 2.6 for the EPA correspondence.</p>	All chapters
6.	Inland Fisheries	7 th August 2019	<p>Potential impacts from the development are silt laden waters and fuels and oils.</p> <p>Correct mitigation measures (best practice, stockpiling away from water courses, secure bunds for fuel storage, silt traps and regular inspections) should be undertaken during the development.</p> <p>Refer to Appendix 2.7 for the Inland Fisheries correspondence.</p>	Chapter 6.0 (Biodiversity) and Chapter 8.0 (Water)
7.	Irish Water	21 st June 2019 Reminder request for comments sent 10 October 2019 – no formal response received	<p>No formal response received to the scoping report.</p> <p>The scoping report was forwarded to the relevant team for consideration in June 2019 and was then forwarded to the escalation department in October 2019 after a reminder request for a response was sent.</p> <p>A copy of the Irish Water services network was received in November 2019 (requested by Golder to confirm if Irish Water had ownership of the water pipe network map originally sent by Cavan County Council for the Site) and no Irish Water network was identified at the Site.</p> <p>Refer to Appendix 2.8 for the Irish Water correspondence.</p>	
8.	TII (Transport Infrastructure)	8 th July 2019	<p>It is in the public interest that the road network continues to serve its strategic purpose, where practicable. The EIAR should identify</p>	Chapter 3.0 (Project Description), Chapter

	Ireland)		<p>methods/techniques proposed for the works which may traverse/in proximity to the national network and how the network will maintain its function in light of the development.</p> <p>Engagement should be undertaken with MCC regarding the N2 Ardee to south Castleblaney scheme.</p> <p>Identify haul routes.</p> <p>Carry out a TTA where required.</p> <p>Consult TII's standards regarding the requirement for a Road Safety Audit and Road Safety Impact Assessment.</p> <p>Refer to TII's guidelines regarding relevant aspects of the EIAR.</p> <p>Refer to Appendix 2.9 for TII correspondence.</p>	7.0 (Land, Soils and Geology) & Chapter 16.0 (Material Assets)
9.	Department of Housing, Local Government and Heritage (DHLGH) Formerly - DCHG (Department of Culture, Heritage and the Gaeltacht))	Acknowledgment only 21 st June 2019	<p>Acknowledgment of receipt of scoping report, in the event of observations a co-ordinated response will be sent.</p> <p>A reminder response request was emailed on 7 October 2019.</p> <p>No further correspondence was received.</p> <p>Refer to Appendix 2.10 for DHLGH (DCHG) correspondence.</p>	N/A
10.	WCU HSA (Workplace Contact Unit Health and Safety Authority)	No response received	<p>A reminder response request was sent on 7 October 2019.</p> <p>No response was received.</p> <p>Refer to Appendix 2.11 for WCU HSA correspondence.</p>	N/A
11.	Coillte	Acknowledgement 20 th June 2019	<p>Acknowledgment of receipt of scoping report, will be reviewed and a response issued.</p> <p>Refer to Appendix 2.12 for Coillte correspondence.</p>	N/A
12.	EH (Environmental Health) HSE (Health Service Executive)	No response received	<p>No response received.</p> <p>Refer to Appendix 2.13 for EH HSE correspondence.</p>	N/A
13	EIR	Yes (scoping issued 3 rd April 2020)	<p>EIR sent through their plant alteration process.</p> <p>Refer to Appendix 2.14 for EIR correspondence.</p>	Chapter 16.0 (Material Assets)

Table 2: Summary of Topics raised in Monaghan County Council Scoping Opinion and how these have been addressed in EIAR

Topic	Summary of Topics Raised	Reference in EIAR
General	Qualifications and professional membership of relevant key personnel should be presented within the EIAR	Section 1.5
	Provide clarity on key content to be provided within the EIAR	Section 2.3
	Clarification on reasons for scoping out of air quality and noise assessments at the proposed Community Complex	These assessments have both considered the community complex
	All elements of the development (Extraction, Mineral processing, Restoration, Community complex development, Demolition of a vacant house) need to be assessed systematically with reference to the with distinct phases of construction, operational, decommission, post-decommission and long-term impacts	Throughout EIAR, as appropriate
	Provide clarity regarding unmitigated impacts if they remain	Throughout technical chapters of EIAR
	Recommendation to refer to “Project Types 17 and 18” in the EPA Draft Advice notes on preparation of EIAR	Throughout technical chapters of EIAR
	Although volumes of activities (truck movement/traffic) are stated to remain unchanged, the continuation of these impacts is needed to be assessed	Throughout technical chapters of EIAR (in particular Chapter 14.0)
	Full copies of original and expert reports to be submitted as appendices	Appended as appropriate (in particular to Chapter 3.0, Chapter 7.0 and Chapter 8.0)
	EIAR to present any changes in relation to Industrial Emissions Directive Licencing	Throughout technical chapters of EIAR
Introduction and Project Description	Up to date description required of receiving environment with reference to subsidence (a description of the event and how it has impacted the topics to be examined for this EIAR)	2018 Subsidence event is explained in Glossary to facilitate cross-reference and inter-relationship with environmental topic areas addressed within technical chapters of EIAR
	Description of the extent and condition of existing underground mine infrastructure	Section 7.8.1
	Demolition of former community facility and loss of amenities on the Knocknacran West Mine Site to be included either in pre-development conditions or in the assessment	N/A
	Further information needed on the outcome of restoration plans for Knocknacran West and the rock and soil volumes to be moved for restoring the existing mine and to be used at Knocknacran West	Section 3.4
	Surrounding land use to be described beyond just related to the existing mine as that is mostly within the boundary of the Proposed Development	Section 3.2
	Expand description of current operations and establish baselines	Section 3.3, Baseline descriptions in technical chapters of EIAR
	Expand alternatives to include consideration of alternative site layouts and designs	Section 4.3.3
	Address any changes in volumes of materials processed at facilities (including water treatment facilities)	There will not be any change to volumes of materials processed

Population & Human Health	Amend heading to 'Population, Human Health and the Community' and incorporate community impacts	Chapter 5.0 heading kept as 'Population and Human Health' in line with standard practice, but impacts in community assessed
	Include impacts of each stage and the cumulative impacts on the community and their health and safety	Section 5.5.3, Section 5.5.5, Section 5.6
	Include potential impacts related to loss amenity/land (including loss of educational/sports/community facilities) and relocation of residents for health and safety	Section 5.5.3, Section 5.5.5
	Include measures to protect locals from disasters	Section 5.5.5, Section 17.9, Chapter 17.0 in its entirety
Biodiversity	Ecological surveys must cover the entire proposed boundary and not just Knocknacran West	Section 6.2.3
	Include assessment of all protected species potentially occurring on Site or which may potentially be impacted by the works for the entire application boundary	Section 6.3.3, Section 6.3, Section 6.5
	Potential need to include mammal surveys and assessment of impact to species commuting routes	Section 6.3.3, Section 6.5.7
	Address biodiversity net gain due to the closure of the existing mine	Section 6.9
	All discussed impacts, compensatory and mitigation measures need to be based on surveys and assessments	Throughout Chapter 6.0
	Consider and justify the potential zone of influence in the context of sites and protected species	Section 6.3.5
	Discuss potential off-site impacts due to water management	Section 6.5.1, Section 6.5.5
Land, Soils & Geology	Establish baseline conditions, detailed baseline bedrock map and a recent topographical survey	Section 7.5 and Planning Drawings based on recent topographical survey
	Include total magnitude of soils/land/bedrock to be permanently removed and to be excavated and remain on-site	Section 3.4, Section 7.5.13
	Include volumes extracted to date and remaining resource potential as part of baseline	Section 3.1, Section 3.4.6
	Include map with vertical and lateral extent of existing mines	Various maps in Chapter 7.0 and Planning Drawings
	Assess impacts (including on stability) of proposed activities for the site, surrounding properties and roads (expand on peripheral areas including R179 and L4900)	Throughout technical chapters of the EIAR. In particular Section 7.8.1
	Describe and explain the subsidence event	2018 Subsidence event is explained in Glossary to facilitate cross-reference and is discussed within technical chapters of EIAR. In particular Chapter 7.0
	Discuss design and mitigation aimed to ensure stability	Section 7.7
	Include information on impact, monitoring, action programme and mitigation for dewatering	Section 7.8.1, Section 7.7, Section 8.5.1

	methods and future subsidence	
	EIAR should provide information on the impact of the proposed dewatering methods on bedrock or overburden stability and on any proposed monitoring and action programme adequate to identify and prevent or mitigate future subsidence. Details relating to interim stabilisation methods, and any risks, if present, to residential property in the locality should form part of the assessment	Section 7.8.1, Section 8.4, Section 8.5.3.9
	Include future groundwater regime and stability of legacy mines following closure and their potential impacts	Section 8.5
	Clarify and further discuss the final condition of Knocknacran West following restoration	Appendix 3.3 and throughout relevant technical chapters
	Include long-term potential impacts and required aftercare risk to land/soil/geology following operation and any residual risks in terms of potential risks, receptors, and duration	Appendix 3.3
Water	Detail the current and potential future usage of the Locally Important Aquifer and how the development may impact it	Section 8.3.5, Section 8.5.3
	Describe the groundwater regime (quantities, quality and flows) included in the development area and in the surrounding area	Section 8.4
	Clarify whether there is currently water in the underground mine and expand on the proposed water storage for water currently in the mines, future water encountered and emergency conditions	Section 8.3.8, Section 8.5.1, Section 8.5.4, Section 8.5.6
	Assess impacts of proposed extraction on hydrogeological groundwater regimes, with consideration to all operating stages, existing confirmed source of water supply and impacts on existing supplies	Section 8.4, Section 8.5
	Include surface, groundwater and wastewater management at existing operations in order to enable assessment of adverse impacts on water of Proposed Development	Section 3.3.6, Section 3.5.4, Section 8.5.1
	Outline current water quality of nearby surface water bodies and describe existing water management arrangements for the baseline	Section 8.3.4, Section 8.3.7
	Incorporate areas to the northeast in the assessment which are mapped by OSI as Flood Risk	Section 8.5.6
	Add in considerations for the prevention of discharge from any pollution matter, silt or suspended solids to the aquatic environment, ground and surface waters in normal and emergency conditions as the Proposed Development is ~15km from the nearest Natura 2000 site and the River Glyde, which has two tributary streams within 2km of the site, is an inflow to the Dundalk Bay SAC ~30km away	Section 3.5, Section 6.4, Section 8.3.7, Section 8.6
	Define an adequate and appropriate water quality monitoring plan	Section 8.6, Chapter 19.0

Air Quality	Additional monitoring required to include ambient air quality, ambient air quality beyond EPA Licensing monitoring requirements (e.g. PM ₁₀) needs to be considered to ensure human health impacts are addressed as well as environmental	Section 10.4.4
	Include the proposed community complex as a sensitive receptor and assess the potential mining operations impacts on air quality at the complex	Section 10.4.2
	Completely assess air quality by assessing background level of ambient suspended dust, identifying sensitive receptors, identifying existing and proposed activities potentially leading to dust generation, assessing impacts of topography and weather on dust dispersion and determining the detail of assessment and monitoring required based on the obtained information	Section 10.5, Section 10.6, Section 10.7
	Reference more current mineral dust guidance	Section 10.2.4
	Include pollutants other than PM ₁₀ in assessment if known	Section 10.2 and Section 10.6
Climate	Further detailed required on the extent of climate assessment including energy usage (including transport) required per annum, the climate impacts of removal of 50ha agricultural grassland and mitigation measures to off-set	Section 9.5.4
Noise	Consider the Environment Noise Regulations 2018 (S.I. 549/2018) and impacts of the Proposed Development (including surface drilling, plant activities, blasting and process plant noise) on future action plans by competent authorities	Section 11.2.1, Section 11.2.3
	Ensure noise monitoring locations are adequate for future works. The local school is classed as a high sensitivity receptor and needs to be considered in assessment	Section 11.1.4
	Clarify whether there will be long-term monitoring, compliance monitoring or baseline monitoring as outlined in NG4. Baseline monitoring is recommended and screening of the site for Low Noise and Quiet Area as per NG4	Section 11.2.2.1, Section 11.2.3, Section 11.3.3, Section 11.3.7
	Areas of the site that aren't Low Noise should have clearly presented predicted change to sensitive receptors from the Proposed Development and BS4142 is recommended for a method to assess industrial activities in proximity to residence	Section 11.2.3, Section 11.5
	Refer to the IOA/IEMA guidance on assessment of noise and consider using IEMA guidance or BS4142	Most relevant guidance used as identified in Section 11.2.2
	Provide details on the frequency and predicted noise and vibration levels from construction, operation and blasting events	Section 11.3.9, Section 11.5, Section 12.7.1, Section 12.8

Vibration	Details are sufficient for protection of the environment but not for human health – details on frequency/noise/vibration from blasting needed	Section 12.1, Section 12.5.3, Section 12.8
	Expand on vibration due to haulage and blasting to include monitoring regime and receptors	Section 12.10
	Refer to ANC Guidelines on ‘Measurement & Assessment of Ground borne Noise & Vibration’	Section 12.4.2
	Clarify whether likely vibration will be felt within sensitive receptors	Section 12.8.2
	Discuss interactions between vibration and other topics (nocturnal species and historic buildings)	Section 12.5.3
Archaeology & Cultural Heritage	Include impacts from vibration (the distance/magnitude that predicted vibrations/subsidence will have no impact)	The closest designated /non- designated culturally important structures are located ca. 180 m/121 m, respectively, from the Application Site and are not deemed to be at risk
Landscape & Visual	Include existing mine infrastructure in photomontages	Appendix 13.1
	Consider the removal of forestry at the site of the Community Complex	Section 13.13.2
	Assess the potential significant impact from the change of use to open-cast mining on the character and quality of the landscape	Section 13.13
Material Assets	Include assessment of impacts of all stages of the development on structures, roads, water supplies (incl. future downgradient groundwater use) and geological heritage with reference to potential effects of vibrations or subsidence	Throughout technical chapters of EIAR
	Assess proposed processing methods, plant and machinery, internal and external transport, and fuel/chemical storage	Chapter 3.0, Chapter 14.0 and throughout technical chapters of EIAR
	Address the continuation of truck movements over ~30 years by a traffic model for current and future truck movements and include mitigation	Section 14.11. In accordance with TII Guidelines Opening Year, +5 Years and +15 Years of Proposed Development have been assessed
	Include swept path analysis for HGV movements using the proposed facility, operation and construction parking and impact of the Proposed Development on surrounding public road network	Swept path analysis has already been undertaken for Phase 1 of Community Complex permitted under Reg. Ref. 20/365. Swept path analysis for the proposed new mine entrance is contained in Appendix E of Appendix 14.1 of Chapter 14.0 Traffic.
	Carry out TTA on primary and public roads in the area	Appendix 14.1
	Consult with the Council and TII regarding the location of existing and future road schemes and the	Section 14.11.4.1

	impact of the Proposed Development on these	
	Include risk assessment for major accidents and disasters (incl. for potential spillages)	Chapter 17.0
	Road safety audit is needed including use of the existing mine entrance by the proposed community centre	Addressed through Reg. Ref. 20/365
	Cover the access and adequacy of the water supply in the event of fire and the facilities for containment of chemicals/effluent resulting from a waste spillage or firefighting activities	Section 16.4.1.5, Chapter 17.0

APPENDIX 2.3

Summarised Statutory Correspondence from Reg. Ref. 22/34 – Table 1

Table 1: Summary of Relevant Topics raised in statutory consultees during submissions under Reg. Ref. 22/34 and how these have been incorporated into the EIAR

Stakeholder/Consultee	Date	Summary of Topics Raised	Reference in EIAR
DCCAIE (Department of Communications, Climate Action and Environment)	Reg. Ref. 22/34 Submission 16 th March 2022	<p>Reg. Ref. 22/34 Submission</p> <p>The gypsum deposit in the Kingscourt area currently represents the only known, viable and indigenous source of high quality gypsum to the construction sector over the next 30-35 years, allow for the restoration of the existing open-cast to original ground level and also aid the long term stability of the area, which in recent years has been affected by a number of subsidence events. GSRO (and Wardell Armstrong) primarily considered mining and mine closure issues.</p> <p>No fundamental problems with the application, however, additional geotechnical assessments including updated finite element modelling should be provided:</p> <ol style="list-style-type: none"> 1. Account for existing open-cast and proposed backfilling, effect of restoration backfill in Knocknacran West Open-Cast Mine; 2. Roof beam stability for safe unsupported spans for max slope configurations; 3. Roof beam instability consideration as confined pressure is release after removal of overburden, interburden and Upper Gypsum; 4. Slope stability assessment to include potential failures in the uppermost section of the slope adjacent to the remaining building with the cut slope formed in drift to east; 5. Slope stability assessment should take into consideration the presence of the underground workings which will be close to maximum extent slopes; 6. Kinematic failure mechanisms and planar failure mechanism should be analysed to determine the potential for joint and bedding plane failures. 7. Health and safety risks associated with quarrying above underground mine voids should be considered through developing safe working practices during operations. 8. Slope stability assessments for the truck haulage route of the initial phase of mining should be considered. 9. Ongoing subsidence/ground stability monitoring commitment for both L4900 and R179 throughout mining life. 10. Planning for mine closure – in advance of closure, commit to further 	<ol style="list-style-type: none"> 1. Section 7.6.5.2 of Chapter 7.0 & Appendix 7.14 2. Section 7.5.5.4 of Chapter 7.0 & Appendix 7.17 3. Section 7.5.5.4 of Chapter 7.0 & Appendix 7.17 4. Section 7.6.5.9 of Chapter 7.0 & Appendix 7.12 5. Section 7.6.5.9 of Chapter 7.0 & Appendix 7.12 6. Appendix 7.12 7. Appendix 7.16 (a live document to be further developed during future operations) 8. Appendix 7.12 9. Section 7.8.4 of Chapter 7.0 10. Section 8.7.6.1 of Chapter 8.0 & Chapter 19.0

		hydrogeological assessments to validate assumptions made regarding stability of underground mining voids. Commit to amalgamating the closure plans for Knocknacran West, Knocknacran and Drummond mines to ensure all are coordinated and for these to be submitted to all relevant regulatory authorities for consideration in advance of commencement of mining Knocknacran West.	
EPA (EIA Planning Section)	Reg. Ref. 22/34 Submission 1 st March 2022 (also included item 22 of the MCC RFI requested dated June 2022)	Reg. Ref. 22/34 Submission Notified that at the time, a review of the existing IE Licence was ongoing and an EIAR was provided for that development. Stated that the IE Licence may need to be reviewed or amended to accommodate the proposal in Reg. Ref. 22/34. In this regard, for any licence review application that is received by the EPA, this will be made subject to EIA. Should the review application be received by the EPA, all matters to do with emission to the environment from the activities proposed, the licence review application documentation and EIAR will be considered and assessed by the EPA. Should the EPA assess that the activities cannot be carried on or cannot be effectively regulated under a licence, they would not grant a licence. Should the EPA decide to grant the licence it will incorporate conditions that will ensure the appropriate National and EU standards are applied and that BAT techniques will be used in carrying on of the activities.	N/A
Inland Fisheries Ireland (IFI)	Reg. Ref. 22/34 Submission included in Item 16 of the MCC RFI requested dated June 2022	<ol style="list-style-type: none"> 1. Proposed methodology and associated mitigation measures associated with the stripping of the mine sites should be included. 2. Include comprehensive details for surface water management during the construction stage of the proposed road works and further development of the Community Sports Complex. 3. Provide details of existing surface water treatment on the Knocknacran mine site in terms of <ol style="list-style-type: none"> i) Volumes of water arising on site during all phases of the development ii) Details of the capacity of the settlement ponds to be used iii) Efficiency of the ponds in treatment on site surface water iv) Details regarding the maintenance of the ponds v) Contingency plans in the event of a major accident as happened in 2018, or 	<ol style="list-style-type: none"> 1. Section 8.7.4.1 of Chapter 8.0 and Section 16.7.4.1 of Chapter 16.0 and Chapter 19.0 2. Section 8.6.1 and Section 8.7.1 of Chapter 8.0 3.i. Sections 8.4.8, 8.6.2.1, 8.6.4.3 and 8.6.6.4 of Chapter 8.0 3.ii. Section 8.4.7 of Chapter 8.0 3.iii. Section 8.4.7 of Chapter 8.0 3.iv. Section 8.7.4.1 of Chapter 8.0 and Section 16.7.4.1 of Chapter 16.0

		other failures in the treatment system to safeguard the receiving water, the River Burs	3.v. Section 8.6.4.1 of Chapter 8.0
	Reg. Ref. 22/34 submission dated 24 th November 2022	IFI recommend the inclusion of surface water monitoring sites on the relevant surface water courses during construction works and to be agreed with MCC. IFI also recommends daily visual inspections of these site with regular physico-chemical analysis. It is important that there is no deterioration of existing conditions.	Section 8.7.2.2 of Chapter 8.0 and Chapter 19.0
Cavan County Council (Environment Section)	Reg. Ref. 22/34 Submission 28 th November 2022	The project provides for four parts; excavation of Knocknacran West Open-Cast Mine, restoration of Knocknacran Open-Cast Mine, continuation of use and refurbishment of the Knocknacran Processing Plant and further development of a Community Sports Complex. Of most relevance to Cavan County Council is the excavation of Knocknacran West Open-Cast Mine	N/A
		Main concern is potential impact on drinking water sources in the area serving users in County Cavan and other environmental impacts in Co. Cavan in particular surface waters. Note that in consideration of data submitted in the previous RFI under Reg. Ref. 22.34, the proposed development will not have an adverse environmental effect in Co. Cavan	Chapter 8.0 also addresses this topic under Section 8.6.
Geological Survey of Ireland (GSI)	Reg. Ref. 22/34 Submission 16 th November 2022	GSI would request that the operator might assist in the GSI's geological heritage goals with regard to the allow access to the mine during extraction to check for new stratigraphies/relationships as they might become exposed and to establish if the mine is worthy of recognition post extraction through aftercare/restoration planning and if deemed appropriate, to leave representative sections at the end of mine life or inclusion of information panels to promote the geology to the public or develop tourism or educational resources (if appropriate). Alternatively, the GSI would ask that digital photographic record of significant new excavations could be provided.	Section 7.6.5 of Chapter 7.0 <i>"Access requests from interested geological stakeholders (e.g. the Geological Survey of Ireland) would be facilitated during the extraction life of the Knocknacran West Mine to allow for geological features to be recorded prior to extraction and/or backfilling of the mine."</i>
Development Applications Unit (Dept of Housing, Local Government and	Reg. Ref. 22/34 Submission 14 th March 2022	The department recommends that all groundworks associated with the new proposed mine area (except area 28, the site of the former subsidence events and subsequent remediation works) be archaeologically monitored.	Section 15.7.2.2 of Chapter 15.0 <i>"Due to the possibility of the survival of previously unknown</i>

Heritage)			subsurface archaeological deposits or finds within the unstripped part of the new proposed mining area (Knocknacran West Mine site) in all areas except No. 28 in the application area should be archaeologically monitored during topsoil stripping."
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APPENDIX 2.4

Summarised Correspondence from MCC during Reg. Ref. 22/34 – Table 1

Table 1: Summary of Relevant Topics raised in Monaghan County Council RFI dated 15th June 2022 under Reg. Ref. 22/34 and how these have been incorporated into the EIAR

Topic	Summary of Topics Raised	Reference in EIAR
Phasing of Proposed Development (Item 1)	Clearly define the phasing within the proposed construction programme as a whole.	Figure 2.4, Chapter 2.0 and Figure 3.3 in Chapter 3.0
	Clarify whether the EPA licence will control emissions and activities within the proposed mine during the opening phase, i.e. prior to mineral extraction, the activity to which the licence applies.	Section 1.6 of Chapter 1.0, Section 3.3.2 of Chapter 3.0 and all relevant technical chapter numbers under Section chapter Number "x".7.2
	Assess construction phase in EIAR	All relevant technical chapters under Sections technical chapter Number "x".6.1 and chapter Number "x".6.2
	Clarify if the EPA licence will control emissions during site restoration of the existing mine.	Figure 2.4, Chapter 2.0 and Figure 3.3 in Chapter 3.0, Section 1.6 of Chapter 1.0 and all relevant technical chapter numbers under Section Technical chapter Number "x".7.6
Natura Impact Statement (Item 2)	Assessment of cumulative effects should include an assessment of plans or projects that could potentially lead to in-combination effects with the proposed project including non-mining projects.	All relevant chapter numbers under Section Chapter Number "x".10.2
Consideration of Alternatives (Item 3)	Include an analysis of the potential for processing recovered gypsum for raw materials.	Section 4.3 of Chapter 4.0
Construction/Operational Stage and CRAMP (Item 4)	Provide details of restored levels in the proposed mine, and the method by which this can be brought to near original ground levels. Include the depth and cross section of the proposed lake and the measures which are proposed to develop this water body to a habitat.	Section 3.6 of Chapter 3.0
	Provide detail of the measures to be used to store emergency water on the site and how this will be controlled.	Section 8.6.4.1 of Chapter 8.0
	Provide details on the proposed method of sealing workings which lie at the edge of the slope or where workings straddle the site boundary.	Section 7.6.5.5 of Chapter 7.0
	Provide details on the methods of demolition, and whether salvage is possible and/or whether the proposed demolition of buildings will be used as infill or waste removed from the site.	Section 16.6.2 of Chapter 16.0 and Section 3.4 of Chapter 3.0
	Details should be provided on the variation to the existing CRAMP and proposed CRAMP. In particular, proposal to retain the processing plant site area for future industrial use and not full restoration. The impact of this variation to the CRAMP should be assessed including any potential loss of any amenity in the future.	N/A The proposed CRAMP does not introduce a variation around retention of the processing plant for future use. The existing CRAMP already mentions this.
	Provision of detailed cross sections of restoration, the safety measures on the benches proposed and the measures to support the water body transition to a biodiverse habitat should be presented.	Section 3.6 of Chapter 3.0
	The intended end users of the land holding should be clarified by the Applicant and what, if any, controls either through design or commitments to protect key features of the design shall be provided.	There are three types of holdings that occur within the proposed Mine Development site, and they are:

		<p>1. Land holdings that have been used for the extraction of mineral, either by underground or open-cast methods.</p> <p>Were the lands to be sold, the Applicant could be conditioned to impose a burden on the ex-mining lands that would restrict any future use of the lands and eliminate any geotechnical alterations, with prior consent of the authorities.</p> <p>Any future development of the site would be regulated and under the control of the local authority. Any development foreseen could be conditioned by means of the planning process to respect important design features of the restoration.</p> <p>2. Land holdings that are being used by the processing plant.</p> <p>The lands that are being used to accommodate infrastructure associated with the mining or processing of mineral will be rehabilitated to the satisfaction of the EPA and other authorities.</p> <p>Once the site is removed from the EPA licence the company may consider the sale of the site.</p> <p>Any future development of the site would be regulated and under the control of the local authority. Any development foreseen could be conditioned by means of the planning process to respect important design features of the restoration.</p> <p>3. Lands owned by the company, but which have never been subject to mining or industrial activity.</p> <p>These lands may be sold following cessation of mining.</p> <p>Any future development of such lands would be regulated and under the control of the local authority.</p>
	<p>Present the interaction between the road closure, tunnel installation/commissioning and the movement of 1.8mt of soil to the existing mine site. Provide details of the number of vehicles movements involved operational days and hours and the scale of activity proposed for the mine construction phase.</p>	<p>There will be no interaction between the road closure, tunnel installation/commissioning and the movement of 1.8 Mt of soil to the existing site.</p> <p>The road diversion, tunnel construction and reinstatement of the R179 are all part of the construction phase of the development.</p> <p>The movement of the 1.8 Mt of overburden and interburden to the existing mine site is part of the operational phase of the development.</p> <p>No public road haulage is proposed to move the 1.8 Mt overburden and interburden</p>

		between the two sites. This material will be moved by trucks moving between the mine sites using the proposed Cut-and-Cover Tunnel. There will be a total of ca. 120,000 truck movements (based on 30 tonne trucks), operating 6 days a week (Monday to Saturday) between 08:00 to 20:00 to move this material within the site.
	Provide detail in relation to the creation of new boundaries existing hedging to be retained, security fencing, berms, and access routes for maintenance and for emergency escape.	Landscape Management Plan, Appendix 13.3 of Chapter 13.0 and Figure 3.9 of Chapter 3.0.
	Provide detail on the deepening/development of the proposed mine and the extension of the open pit in the phasing figures.	Appendix 3.6 of Chapter 3.0, as a series of cross-sections.
	Define a period of aftercare in terms of active and passive monitoring for the site. In addition, the applicant shall outline details of the proposed response in the event of a result outside of any trigger values on the site.	Appendix 3.3 of Chapter 3.0
	Provide details of ongoing ecological monitoring and reporting during all restoration and aftercare shall be submitted.	Section 6.8.6 of Chapter 6.0
	Consider that cumulative impacts of each element of the proposed development as direct impacts. In addition, off-site projects should also be considered.	The interactions and impacts between the elements have been assessed as part of the impact assessment process. The elements are considered as receptors to each other, where relevant. In addition, Sections x.10 of all relevant chapter present the cumulative effects consideration.
Biodiversity (Item 5)	Present the details of baseline surveys that have been undertaken, the methodologies used, and the findings of such surveys. In particular the baseline surveys should have regard to ground nesting birds, otter, amphibians, and reptiles.	Section 6.4 of Chapter 6.0
	Provide details on the presence of invasive species within the site, their extent and methods to control and eradicate them.	Section 6.4.5 of Chapter 6.0 and Section 6.7.4.2 of Chapter 6.0
	Provide a methodology for the protection of badger setts for all phases of the proposed development including; site construction, mine preparation, mine operation and mine restoration.	Section 6.7.4.2 of Chapter 6.0
	Include an ecological review and assessment of the proposed lighting strategy.	Sections 6.6.1, 6.6.2, 6.6.3 and 6.6.4
	Include a Habitat Management Plan for the various phases of the development and the associated habitats impacted.	Appendix 6.7 of Chapter 6.0
	Provide a tree management and protection plan and incorporate the findings of this into the assessment on biodiversity.	Appendix 6.4 of Chapter 6.0
Land, Soils and Geology (Item 6)	Provide details on the ground underlying the proposed sports fields in relation to the ground composition at this location.	Section 7.4.5 of Chapter 7.0
	Consider the potential impact of an increase in personnel, plant and temporary buildings/compound, stockpiles etc. during the proposed development.	Sections 7.6.2 & 7.6.4 of Chapter 7.0.
	Consider the risks of subsidence events/sinkholes during or caused by construction	The mining activities do not overlap with the mine construction activities.

	and mining activities and the cumulative impacts.	
	Include discussion on the 6 m and 12 m pillar heights in relation to the subsidence event in 2018	This remains in Chapter 7.0 under Section 7.4.10.1
	Consider the relation between the hydrogeology of the Drummond Underground Mine and the proposed development	Throughout Chapter 8.0 and in Section 8.10.2 of Chapter 8.0 and in Section 7.10.2 of Chapter 7.0
	Consider how the proposed mine development and its large scale and long-term works will impact ground stability locally	Section 7.6.2, 7.6.4 and 7.6.6 of Chapter 7.0
Hydrology (Item 7)	Isolating the Drummond Underground Working from the proposed Knocknacran West Mine is referred to however the significance/importance of this issue of isolation being required and/or the reference distance between the two should be assessed and submitted. The relevant chapter of the EIAR shall be revised and updated accordingly.	Section 8.6.4.5 of Chapter 8.0
	Provide detail on the Corduff Stream for the following: size, form, streamflows, etc. and how it interacts with the shallow geology/hydrogeology within and beyond the site boundary. Provide detail regarding the conceptual understanding of the potential impacts on the watercourse and the protection measures that may be required during the excavation and restoration	Section 8.4.4. of Chapter 8.0, Appendix XX of Chapter 8.0, Sections 8.6.4.2.1 and 8.6.6.2 of Chapter 6.0.
	Provide proposals to monitor surface water quality/flows in Corduff Stream during and after operation of the mine.	Sections 8.8.4 and 8.8.6 of Chapter 8.0
	Provide drawings (plans and cross sections) showing the relationships between the existing underground mine workings, the proposed open cast excavation, known faults, location of boreholes and wells and the local geology	Figures 7.13 and 7.14 of Chapter 7.0
	Provide details on the Kingscourt Sandstone and its associated locally important aquifer, specifically in relation to the assessment the proposed works may have upon it	Section 8.6.4.1.1 of Chapter 8.0
	Doleritic sands and gravels underlie the till along the eastern portion of the proposed open cast mine. Discuss the lateral extent of these deposits (within or off-site) and the relevance/significance of any groundwater they may contain, or the impact the proposed development may have on them	Section 8.6.4.1.2 of Chapter 8.0
	Provide details on the local domestic well information, their construction, depth and use	Section 8.4.5.2 of Chapter 8.0
	Provide data from onsite wells and include in the EIAR	Section 8.4.5.9 of Chapter 8.0
	Groundwater data taken across the period when water was being pumped into the Drumgoosat mine. The relevance and potential significance of this is not discussed further. It is not clear whether excavation into the adjacent Kingscourt sandstone or associated faults could impact local groundwater levels. Equally, it is not clear what potential impact removing the Lower Gypsum and/or excavating into the Namurian Sandstone could have. Provide details to address this	Drawdown levels are based on average groundwater levels reported over the past 10 years of monitoring, this includes times when water was pumped both from and into the Drumgoosat workings. Section 8.6.4.1.1 of Chapter 8.0 The Lower Gypsum does not directly lie on the Namurian Sandstone, there is a Lower

		Mudstone Unit and Conglomerate Unit within the Kingscourt Gypsum Formation which lies beneath the Lower Gypsum Unit. The proposed mine is designed to extract the Lower Gypsum Unit, not the basal sediments which include the Namurian Sandstone.
	Clarify how the predicted water quality for the water in the sump has been calculated/estimated	Section 8.4.7 of Chapter 8.0
	It is indicated that mining works could continue until 2032/33 in Drummond and the current open cast mine, so water will continue to be discharged from one or both of these sites while water is pumped from the Knocknacran West mine Consider how the water balance could change over time as mine operations change/cease	Sections 8.4.8, 8.6.2.1, 8.6.4.3 and 8.6.6.4 of Chapter 8.0
	An assessment of the water balance within the mine site as it currently operates is required to provide an understanding of how this is likely to progress in relation to this proposed development	Sections 8.4.8 of Chapter 8.0
	Clarification is required on what, if any impact the proposed change to discharge rates to the receiving waters will have It is unclear if adequate consideration has been given to the river as a drinking source by mammals and birds	N/A, there is no proposal to change discharge rates
	Provide detail on the measures to handle unexpected events such as significantly increased flows associated with new inflows into Drummond (similar to 2018) or the West open cast or increased sulphate concentrations in mine water	Section 8.6.4.1 of Chapter 8.0
	Provide detail on the impact the restoration changes could have on potential post restoration groundwater levels upgradient of the mine	Section 8.6.6.1 of Chapter 8.0
Climate (Item 8)	Provide detail of the amount/type of fuel used onsite during both construction and operation stages	Sections 9.6.1, 9.6.2 and 9.6.4 of Chapter 9.0
	Provide detail of the amount of fuel used for road haulage construction and operation stages	Sections 9.6.1, 9.6.2 and 9.6.4 of Chapter 9.0
	Provide detail of how Carbon emissions from soil and overburden stripping on the mine sites are calculated	Section 9.6.4 of Chapter 9.0
	Provide detail on the amount of electricity used	Sections 9.6.1, 9.6.2, 9.6.3 and 9.6.4 of Chapter 9.0
	Provide details of what emission factors were used for fuels and electricity.	Section 9.6 of Chapter 9.0
	Provide a review of the impacts arising having regard to greenhouse gas emissions at regional and county level/context	Section 9.6.7 of Chapter 9.0
Air Quality (Item 9)	Present the combined construction elements, the mine preparation, and the continuous operation within the existing mine as a clear and detailed assessment, including mitigation measures, relevant ELVS, and monitoring/reporting proposed	Chapter 10.0 and Appendices 10.1 and 10.2
	Consider real time monitoring data for baseline PM ₁₀ 1 hour	Section 10.4.5 of Chapter 10.0
	Update the NO ₂ baseline	Section 10.4.5 of Chapter 10.0

	Present whether the vehicles used in the soil and overburden movement on site are screened out of the air chapter, and if so, applicant should outline the rationale for this conclusion	Dust and particulate emissions relating to the movement of on-Site vehicles/ plant are included and assessed in the air quality chapter as part of the assessment of dust emissions. Section 10.6.4.1 of Chapter 10.0 and Appendix 10.2
	In relation to the mineral dust assessment, this should be reviewed in light of the 2016 dust risk assessment guidance. Clearly specify the impact for each phase the area of exposed ground, and utilise the methodology presented for magnitude of impact	The 2016 mineral dust risk assessment guidance has been used to produce the assessment in the EIAR.
	In relation to the dust impact during construction, clarity regarding the inclusion of the soil and over/interburden stripping is needed The direct impacts from all aspects of the proposed development should be assessed, rather than individual aspects	Soil and over/interburden stripping is not part of the construction phase of the mine. It's assessed in the operational phase of the mine, Section 10.6.4 of Chapter 10.0
Noise & Vibration (Item 10)	Include detail on the assessment of the movement of soils over/interburden materials and operational traffic assessment from a noise impact perspective	The assessment of the movement of soils over/interburden materials are included in the noise modelling of all phases considered in the noise assessment. Haul trucks, which were modelled in every operational phase, represent the movement of soils over/interburden materials. Section 11.6.3 of Chapter 11.0
	Include a night-time impact assessment for the mine for road haulage	Section 11.6.3 of Chapter 11.0
	Consider the potential for receptors to be 'Low Noise' as per NG4, and if so, details regarding the impact of this within the chapter should be considered and submitted.	Section 11.3.6 of Chapter 11.0
	Consideration large-scale movement of soils, over /interburden and the potential for vibration impacts Present what limits will be applied in this instance and details of the monitoring and reporting carried out in respect of non-gypsum blasting, i.e. blasting within the interburden layer	Section 12.6.4 of Chapter 12.0 The overburden / interburden material at the Knocknacran West occur as soft, principally semi-consolidated sediments that are removed by excavator without any blasting being necessary. This is in line with the current practice in the Knocknacran Open-Cast Mine. As no blasting will occur in overburden and interburden during its removal, no vibration limits are warranted.
	Consider the impact of under lining mining tunnels in relation to vibration transmission, and to the impacts of vibration impacting the stability of these tunnels. Specifically, consider: How has the stability of the under-lining mining tunnels been assessed? What mitigation measures will be implemented in this regard What is the risk of instability arising in the mining tunnels due to vibration- provide an assessment of this	Section 12.6.4 of Chapter 12.0 Section 12.7.4.1 of Chapter 12.0
	Regarding vibration from blasting, what is the basis for set back selection criteria of 100 m	Section 12.7.4.1 of Chapter 12.0
	Include a cross section detailing the proposed close proximity blast location and indicating the points of interest such as the depth to blast, the known intervening	Figure 12.7 of Chapter 12.0

	geology to the site boundary, road, wells, dwelling and Drumgoosat School and the 100 m set back	
Landscape and Visual (Item 11)	Regarding the LVIA chapter, provide detail on the boundary planting to be 6m high within 5 years. Is this mitigation needed to achieve the residual impact? if so, what mitigation measures are needed to ensure this occurs.	This is embedded mitigation, Section 13.7.4. It's inherent in the design and assessment prior to consideration of the residual.
Traffic (Item 12)	Specify the hours of haulage assessed	Section 14.3.4.2 of Chapter 14.0
	Include a Road Safety Assessment, if required, within the Chapter	Sections 14.6.1, 14.6.2, 14.6.3 and 14.6.4 of Chapter 14.0
	Consider all construction related activities, including site clearance, and the demolition of dwellings within the project, site fencing/security and staff on the soil and over burden movement in the construction phase	Interburden and overburden movement (stripping campaigns) is not part of the construction phase. Sections 14.6.1 and 14.6.2 of Chapter 14.0
Material Assets (Item 13)	Provide detail on the direct and indirect use of fuels to supply the onsite plant and equipment is not present.	Sections 16.6.1, 16.6.2, 16.6.3, 16.6.4 and 16.6.6 of Chapter 16.0
Major Accidents (Item 14)	Present detail on the continued risk, if any, posed to lands beyond the scope of this open cast mine, where subsurface mine shafts may be flooded post restoration of the proposed site	Section 17.7.3.3 of Chapter 17.0
Mitigation (Item 15)²	The mitigation chapter should present clearly all mitigation and commitments from the EIAR, including, but not limited to, monitoring, ELVs, and reporting	Chapter 19.0
Heritage (Item 17)	Consider the effects of "solastalgia" a term coined by Dr Glen Abrecht in Chapter 5.0, Population and Human Health	Sections 5.6.1.5 and 5.6.2.5 of Chapter 5.0
	Provide a photographic record of the interior and exterior and a written description of structure of the farmhouse to be demolished	Appendix 15.2 of Chapter 15.0
	Clarify how many structures will be demolished to facilitate this development	3 unoccupied structures in various states of disrepair and 1 currently occupied residence (residents to be relocated in advance of development, new planning permission for a home has been secured)
	Supply maps of the townlands together with their full Irish names and analysis of the nomenclature	Section 15.4.13 of Chapter 15.0
	Consider the language of the territories and spatial order – identify the fieldnames for the fields that are subject of this application	Section 15.4.13 of Chapter 15.0
	Provide a map of the field locations	Section 15.4.13 of Chapter 15.0

² Item 16 is included in Table 2.3 under IFI's submission during Reg. Ref. 22/34

	Provide the length of hedgerows to be removed and total area of habitat to be lost Provide a detailed appraisal for all hedges present on the site including species list and other qualitative data on the values of the hedgerow	Sections 6.6.2 and 6.6.4 of Chapter 6.0 Appendix 6.3 of Chapter 6.0
	Provide details of what area of woodland is to be removed	Sections 6.6.2 and 6.6.4 of Chapter 6.0
	Quantify how much of each habitat type will be removed	Sections 6.6.2 and 6.6.4 of Chapter 6.0
	Provide mitigation measures for the protection of barn owls	Sections 6.7.2.2 and 6.7.4.2 of Chapter 6.0
	Provide mitigation measures for bat species	Sections 6.7.2.2 and 6.7.4.2 of Chapter 6.0
	Submit an Environmental Management Plan and Habitat Management Plan	Appendices 6.10 and 6.7 of Chapter 6.0
	Submit a site plan showing areas of the site regulated by the existing EPA licence, the areas outside of the scope of the EPA licence and the area where it is proposed to apply for a new or review licence from the EPA All foul, wastewater and storm water discharge points shall be clearly marked on this plan	Appendix 3.10 of Chapter 3.0
Environment Section (Water) (Item 18)	Present a full lifecycle assessment detailing the nature and volumes of wastewaters generated at different stages of the proposed development (e.g. from construction works, initial stripping of the site, through to mining and aftercare operations)	Sections 8.4.8, 8.6.2.1, 8.6.4.3 and 8.6.6.4 of Chapter 8.0
	Assess the existing settlement ponds and their capacity to adequately treat the wastewater at each stage of the development	Section 8.4.7 of Chapter 8.0
	Include a full assimilative capacity assessment for each stage of the development on the receiving waters	Sections 8.4.8, 8.6.2.1, 8.6.4.3 and 8.6.6.4 of Chapter 8.0
	Provide a detailed emergency/contingency plan detailing plans in place for additional storage and treatment of surface waters in event of an incident which results in the generation of increased volume of waters requiring treatment	Section 8.6.4.1 of Chapter 8.0
	Provide a preventative maintenance plan programme for all elements of the wastewater treatment system(s) to include as a minimum all pumps, sumps, ponds and any other elements requiring maintenance	Section 8.7.4.1 of Chapter 8.0 and Section 16.7.4.1 of Chapter 16.0
	Provide a Construction and Demolition Plan and By-Products Management Plan for the proposed development works – has been superseded by Resource Waste Management Plan (RWMP)	Appendix 3.5 of Chapter 3.0.
Environment Section (Waste) (Item 19)	Regarding the use of overburden for restoration purposes, provide further information regarding the requirements to utilise EPA Article 27 by-product notification in the use of overburden and interburden material for restoration phases of the development	The restoration plan, as presented, seeks to use overburden and interburden from within the site to restore the site, this is exempted from EPA Article 27 as it is within Article 2; class 1.c and 2.d of the European Waste Framework Directive. Class 1.c states the following are excluded: <i>Uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of</i>

		<p><i>construction in its natural state on the site from which it was excavated.</i></p> <p>Class 2.d states the following are excluded:</p> <p><i>Waste resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries covered by Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries (2).</i></p>
	Supply details of an appropriately permitted facility that will accept the waste during the construction/demolition phase	<p>Categorised waste will be sent to McElvaney's Waste and Recycling, Scotch Corner Recycling Centre, Annyalla, Castleblaney, Co. Monaghan, A57 P267 during the construction/demolition phase of the proposed development, or another suitably licenced operator.</p> <p>Asbestos recovered during the demolition works for the proposed Development will be removed by a licenced waste specialist (Enva). They will be responsible for collection, transport and properly disposal of the waste.</p>
	Provide an Asbestos Survey and Removal Plan for the proposed demolition development works	Appendix B of Appendix 3.5 of Chapter 3.0.
	Regarding the retention of the demolition waste arising from the former GAA facility, which was used for backfilling fissures and crown holes, provide a declaration of suitability for infilling from an appropriately qualified Environmental Consultant	Appendix 3.1 of Chapter 3.0
	Provide a plan for the removal and appropriate disposal of Construction and Demolition waste from crown holes and fissures during the extraction of overburden and interburden	Appendices 3.0 & 3.5 of Chapter 3.0
	Provide information regarding timescales and phases of the project In particular, outline phases prior to the possible granting and implementation of an IE license	Figure 2.4 of Chapter 2.0

Roads and Traffic (Item 20)	<p>Provide the following drawings:</p> <ul style="list-style-type: none"> Road diversion - Layout - road diversion geometrical design info Road diversion - Layout of Site Clearance Road diversion - Layout Fencing Road diversion- Vehicle Restraint System Road diversion - Road Drainage Road diversion - Culvert Road diversion - Earthworks Road diversion - Pavement Road diversion - Line Marking Signage Road diversion - Landscaping Road diversion - Existing Services <p>Provide the following reports and details:</p> <ul style="list-style-type: none"> Road Diversion Report - (i) A geotechnical report outlining the current ground conditions, the load-bearing capacity and confirmation that the proposed road diversion has been designed taking account of a detailed Site Investigation report. Road diversion- Drainage Design Report Road diversion - Road Design Report to TII Standards Road diversion - Vehicle Restraint Design report Road diversion - Structural design report for cut and cover tunnel Road diversion - Structural Engineer Report Cut and Cover Tunnel to TII standards Road diversion - Geotechnical Report - ground conditions Road diversion - Indemnity Insurance Reports for design engineers Road diversion - method statement, construction, diversion, traffic management, H&S plan, programme, timescales, and stages Submit a Road Safety Audit Stage 1 and RSA Stage 2 to focus on tunnel vehicle restraint and fencing for the proposed tunnel location Submit a final Road fencing and Vehicle restraint system drawings 	<p>Drawing Set Series 04 and part of the Roads report in Appendix 3.4 (for Preliminary Design Report) of Chapter 3.0.</p>
	<p>Submit comprehensive proposals, including design reports, drawings, and other appropriate design details that demonstrate how the applicant proposes incorporating a permanent solution to the mine workings that go under the public roads as part of their open cast works</p>	<p>Section 7.6.5.8 of Chapter 7.0 and Appendix 7.18 of Chapter 7.0</p>
	<p>Provide a drainage layout for all impermeable surfaces proposed, including parking, internal roads and buildings on the Community Sports Complex site</p> <p>Submit a comprehensive surface water drainage design to accompany the drainage layout drawing for the Community Sports Complex site</p> <p>The Surface Water Drainage Design shall specifically address the Surface Water Drainage Policies SDP 1 to SDP 5 of the Monaghan County Development Plan</p>	<p>Appendix 3.4 of Chapter 3.0</p>
	<p>Consider all construction related activities, including site clearance, and the demolition of dwellings within the project, site fencing/security and staff on the soil</p>	<p>Interburden and overburden movement (stripping campaigns) is not part of the</p>

	and over burden movement in the construction phase	construction phase. Sections 14.6.1 and 14.6.2 of Chapter 14.0
	Provide a detailed structural report with drawings outlining how the applicant proposes ensuring the tunnel's structural integrity for its design life of 120 years. The report shall include the proposed maintenance and inspection regime during the operational phase of the mine and the phase between the end of the mine operations and the design life of the tunnel. Furthermore, the applicant shall detail their proposal for the structure when it exceeds its design life of 120 years. All reports shall explicitly identify that the applicant is responsible for the structure for its design lifespan of 120 years and that they are responsible for its removal and replacement thereafter	Appendix 3.5 of Chapter 3.0
Environmental Health Officer (Item 21)³	Drumgoosat National School is located to the north of the proposed development. Submit a detailed noise impact assessment that clearly demonstrates that the proposed activities (including the removal of overburden and interburden and during mineral extraction) will not result in a breach of indoor ambient noise levels (Table 1) recommended by the Department of Education and Skills SDG 02-0503 "Acoustic Performance in New Primary and Post Primary School Buildings" either directly or due to cumulative interactions with other sources	Section 11.6.3 of Chapter 11.0
Community Sports Complex (Item 23)	Provide details of the gross floor area in m ² for the Sport Complex building, plant room and spectator stand (floor areas shall be provided for each separate element over both floors for Sport Complex building where relevant)	Section 16.6.3 of Chapter 16.0 and Section 14.6.3.7 of Chapter 14.0
	Having regard to the floor area detailed above, demonstrate that the parking provision on site complies with the provisions of Section 15.28 and Policy CP1 of the Monaghan County Development Plan 2019-2025. The car parking requirement for sport facilities is 1 space per 50sq.m NFA (this includes circulation area but excludes toilets, staff areas and stores)	Section 14.6.3.7 of Chapter 14.0
	Applicant shall ensure that electrical vehicle charging points area provided on site in accordance with the requirements of Policy EVP2 and EVP3 of the Monaghan County Development Plan 2019-2025. One EV charging point is required for every ten car parking spaces, these shall be clearly demarcated on the site layout plan	Section 14.6.3.7 of Chapter 14.0
	Provide details of landscaping proposed for the berm adjacent to the junior pitch and running track, details of species, height, number and location of all proposed planting	Appendix 6.8 of Chapter 6.0.

³ Item 22 is provided in Table 2.3 under DCCA submission

	to be provided	
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APPENDIX 2.5
Community information event flyer September 2021



MAGHERACLOONE COMMUNITY CENTRE



Dear Resident,

We would like to invite you to attend our upcoming community information event in the Nuremore Hotel & Country Club, in Carrickmacross.

The event will be hosted by Gyproc, The Magheraclone Community Centre and The Magheraclone Mitchells GFC. This event will allow members of the Magheraclone community the opportunity to view potential plans for the area as well as engage with representatives from each entity responsible. These proposals include new sports and community facilities as well as future mining plans.

EVENT DETAILS

Dates: 21st & 22nd September

Location: Nuremore Hotel & Country Club,
in Carrickmacross – Main function Room

Directions: Dundalk Entrance

Parking: Parking available directly in front of the main function room



COVID-19 MANAGEMENT

In order to ensure that the event is managed as safely as possible and in line with government guidelines we would ask that:

- » All attendees wear facemasks at all times when in the venue
- » Follow social distancing guidelines
- » Use hand sanitation stations



HOW TO BOOK

In order to manage the number of attendees as efficiently and safely as possible we ask that you contact **01 539 8650** to arrange a suitable date and time. Slots will be held at 30 minute intervals in order to ensure appropriate social distancing in the venue.

21ST SEPTEMBER **TUESDAY** **14:00 – 21:00**

22ND SEPTEMBER **WEDNESDAY** **14:00 – 21:00**

We thank you in advance and look forward to seeing you.



APPENDIX 2.6

Issues for EIAR raised during Community Engagement – Table 1

Table 1: Issues for EIAR raised during Community Engagement

Topic	Concern Raised	Response in EIAR
Mine Operational Phasing	Rationale for progressing development from north to south direction	Section 3.5.6
Population and Human Health	Safety and amenity value of the proposed lake	Section 5.6.6.5 of Chapter 5.0
	Security of employment	Sections 5.6.1.2, 5.6.2.2, 5.6.3.2, 5.6.4.2 and 5.6.6.2 of Chapter 5.0
Land, Soils and Geology	Safety of mining in areas of previous underground workings	Section 7.6.5.3 of Chapter 7.0
	Assess stability of L4900	Sections 7.6.5.1, 7.6.5.2 and 7.6.7 of Chapter 7.0
Water	Rewatering of mine workings	Section 8.6.6.1 of Chapter 8.0
Air Quality	Dust impacts at Drumgoosat National School	Section 10.6 of Chapter 10.0
	Dust impacts on local community	Section 10.6 of Chapter 10.0
Noise	Specify plant and equipment with noise generating potential	Section 11.6.3 of Chapter 11.0
Vibration	Provide explanation of vibration and potential impacts	Sections 7.6.2, 7.6.4 and 7.6.6 of Chapter 7.0
Landscape & Visual	Provide thorough assessment	Chapter 13.0
	3 specific viewpoints requested <ul style="list-style-type: none"> • south of L4900 • Close to Drumgoosat Village • Close of church to west of Application Site 	Section 13.6.2.1 of Chapter 13.0
Traffic	Whether R179 will be closed as part of Proposals	No, a temporary diversion will be in place. Sections 3.3 & 3.4, and Chapter 14.0

APPENDIX 2.7
Summarised public submissions (considered relevant from Reg. Ref.
22/34) - Table 1

Table 1: Summary of Relevant Concerns raised by third parties in Reg. Ref. 22/34

Topic	Concern Raised	Comment or where the concern is addressed in the EIAR
<p>Property/Amenity</p>	<p>Impact on property and amenity</p>	<p>The applicant has included mitigation measures within the design of the proposed development to ensure that any potential impacts that the proposed development may have on properties and amenities in the area are minimal.</p> <p>The EIAR presents and assesses the significance of the environmental impacts from the proposed development for various environmental considerations such as landscape, noise, dust, etc. The findings of the EIAR show that the potential effects will not be significant.</p> <p>A number of specific design features have been incorporated to minimise the potential impact on properties outside the development area, these include the decision to incorporate a Cut-and-Cover tunnel to ensure no additional traffic is placed on the local road network.</p> <p>As part of the development plan, considerable effort has gone into developing an initial landscape plan to be executed in advance of any mining activity to minimise the visual impact of the development.</p> <p>The majority of the wooded area to the south of Drumgoosat village will be retained. This will ensure that no aspect of the proposed development will be visible from the village, including the school, residences and church (VP7 in Chapter 13.0 of the EIAR refers to this viewpoint).</p> <p>In terms of amenity, the development proposes significant additional sports facilities based on the site of the Magheracloone Mitchells new pitch, with two further sports fields being provided, a handball alley, a sports hall and three astroturf pitches.</p> <p>The mining development will bring the old Drumgoosat mine workings under engineering control and by excavating many of the old mining tunnels it will help to alleviate concerns about the stability of those grounds in the future.</p> <p>The development provides the potential to access the mine workings that pass under the public roadways along the R179 and LP4900, and to carryout backfilling of the mine workings that become accessible.</p> <p>The long-term restoration plans for the Application Site will return the land for amenity, agricultural, light industrial and enhanced biodiversity uses. All in all, these activities will enhance the natural and built environment in the area creating</p>

		<p>a positive impact ultimately on property and the amenities in the area.</p> <p>In addition, permission has recently been granted to allow a residential development to be built immediately adjacent to the existing Knocknacran Mine site and for an agricultural chicken farm to be built immediately adjacent to the existing Knocknacran Mine site. Planning permission is also currently being sought from MCC to restore and extend a dwelling to the west of the site, ca. 500 m from the Site.</p>
<p>Noise</p>	<p>Negative impacts relating to noise pollution</p>	<p>The developer has operated an open-cast mine very similar to that proposed at Knocknacran West at the existing Knocknacran pit since 1988. Over the time period feedback from neighbours has informed the company's operations and amendments have been made to the companies operating procedures to mitigate adverse noise impacts.</p> <p>Typically, two types of noise impact have been associated with the operation of the open-cast mine; noise associated with mobile machinery (such as excavators and haul trucks), and blast noise associated with open-cast mine blasting activities (typically once per month).</p> <p>For noise associated with mobile plant most activity takes place during larger scale overburden and interburden removal operations which occur sporadically and infrequently during the life of the open-cast mine.</p> <p>During the initial overburden and interburden stripping campaigns, equipment is operating at existing ground level where noise may be heard at nearby neighbouring properties. As the mine develops activities take place below existing ground level within the open-cast pit. Experience over more than 30 years in the area has indicated no noise complaints from "in-pit" activities.</p> <p>Most of the noise reported by neighbours relates to sounds arising from equipment operating at existing ground level, such as the artificial sounds of reversing alarms particularly early in the morning. Protocols developed over time have addressed these issues by delaying starting times until after 8 am, and ensuring operations cease by 8 pm. Where it is necessary to utilise pumps and mobile generators at existing ground level, equipment is housed in noise abating structures.</p> <p>Proposed mining extraction operations on the Knocknacran West site are not planned to take place during night time hours, with normal mining operations taking place between 8 am and 8 pm Monday to Saturday and no mining operations taking place on Sundays and Bank Holidays.</p>

		<p>Noise associated with blasting is sporadic and infrequent. There are many factors that affect how the sound from blasting travels, some of which is controllable and more which is a function of atmospheric conditions at the time of blasting.</p> <p>The controllable factors are the size of the blast, and the timing of the detonation of different parts of the blast, while factors that are outside the control of the company are the cloud cover and wind direction.</p> <p>Cloud cover causes the sound of the blast to reverberate between the ground and the cloud layer intensifying the sensation of noise, while wind direction affects the distance that the sound will travel, sound being more noticeable downwind of a blast. Where possible the company avoids blasting when weather conditions are not favourable, however the supply chain for arranging the safe delivery, loading and firing of explosive materials is complex involving many parties, meaning short term changes in weather conditions cannot always be responded to.</p> <p>Blasting is scheduled to take place normally on or about 4 pm after school hours, but still during working hours and before social evening activities take place.</p> <p>Chapter 11.0 of the EIAR describes the modelling and scenarios that have been considered for noise impacts during construction and ongoing mining activities. Data collected from baseline measurements and the long term mine monitoring program have been used to inform the modelling.</p> <p>For ongoing mining activities, a robust approach has been applied to all modelling; the predicted noise levels assume a receptor height of 4 m above local ground level, (representative of a first-floor bedroom window). This is a robust approach, which minimises the attenuation due to ground absorption. Predicted levels at the height of a person standing at ground level, (e.g., effective receptor height of 1.5 - 1.8 m) will be lower. Conservative equipment 'on-times' have been applied in all predictions for all fixed and mobile plant throughout the working day. All equipment and plant have been modelled in simultaneous operation. The resultant predictions may be considered conservative and actual noise levels are likely to be lower.</p> <p>Predicted noise levels at all noise sensitive receptors were found to be below the daytime and evening target levels during this conservatively-predicted scenario for proposed operations at the mine. Noise effects associated with proposed mining operations during the daytime period, and evening period have been evaluated as being of 'neutral' or 'slight' significance and are therefore 'not significant'.</p>
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<p>Dust</p>	<p>Dust pollution</p>	<p>Saint-Gobain Mining (Ireland) Ltd. (SGMI) maintain strict protocols with respect to the management of dust during its mining operations.</p> <p>A substantial monitoring program has been in place for many years, and a review of the results suggest how a mine operating at Knocknacran West in the future will behave.</p> <p>Chapter 10.0 of the EIAR deals with Air quality and addresses the topic of dust. The key points of the EIAR chapter are summarised below:</p> <p>For quarrying/mining related activities, the most likely emission to the air environment is dust, which arises predominantly from the excavation, processing and transporting of materials. These sources are generally dispersed sources rather than specific point sources. Guidance from the Institute of Air Quality Management (IAQM) states that it is commonly accepted that the greatest impacts from particulates will occur within 100 m of the source, with the potential for travel up to 400 m. It has been found that deposited dust does not generally travel beyond 400 m.</p> <p>The EIAR has considered a study area that extends to 500 m from the boundary of the mine excavation.</p> <p>Dust generation rates depend on the site activity, particle size, the moisture content of the material and weather conditions. Dust emissions are dramatically reduced where rainfall has occurred due to the cohesion created between dust particles and water and the removal of suspended dust from the air. It is typical to assume no dust is generated under "wet day" conditions where rainfall greater than 0.2 mm has fallen. Information collected from the rainfall station at the mine site (Met Éireann station: Kingscourt (Drummond)) over the past 10 years shows that approximately 59.3% of days are naturally "wet" resulting in no dust generation.</p> <p>Four locations have been routinely used for air quality monitoring during the operational life of the existing Knocknacran open-cast mine. It is proposed that when Knocknacran West Mine is operational, a similar level of monitoring will be carried out.</p> <p>The impact of dust is usually monitored by measuring rates of dust deposition. There are no Irish statutory standards relating specifically to dust deposition thresholds for inert mineral dust. There are a number of methods to measure dust deposition but only German Air Quality Standards specify a method of measuring dust deposition – the Bergerhoff Method. On this basis, the EPA recommend a dust</p>
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		<p>deposition limit value of 350 mg/m²/day be adopted at site boundaries associated with extraction related activities.</p> <p>94% of all dust results measured since 2012 were below the limit value, with most of the exceedances being determined to be a result of contamination of the sample jars with organic matter such as leaves from surrounding vegetation rather than mineral dust. Positioning of an alternative set of measurement locations away from overhanging leaves but still exposed to any potential dust from mining operations was agreed with the EPA in 2021, and this has showed no exceedances in their first 6 months of measurement.</p> <p>Overall monitoring results from the last 10 years of air quality monitoring suggests that deposited dust from the existing mining activities is deposited within the site or very close to the site, rather than being carried far off-site. The same limited impacts from deposited dust would be similarly expected to be the case for the proposed open-cast mine at Knocknacran West.</p> <p>The proposed development has been designed in such a way as to minimise the potential dust travelling offsite. Notably, the design incorporates screen berms (with planting) and seeks to preserve much of the woodland area which offers natural dense screening between the mine site and the village. The design has also sought to restore the western side of the Knocknacran site early in the restoration phase given the proximal location to receptors such as the Community Sports Complex.</p>
<p>Water</p>	<p>Water quality</p>	<p>SGMI’s mining operations do not utilise water as part of the mining process. Mine operations do require water to be moved. Mine operation requires that water must be moved from operating areas in the underground mine and from the open-cast area, because extraction activities occur below the natural watertable. The water moved from operating areas is naturally occurring and has not had any chemicals added or been involved in any industrial process. It is released to the nearby River Bursk via an EPA controlled discharge licence.</p> <p>The proposed development does not seek any change to the current limits that it operates to, with respect to water discharges to the River Bursk. The proposed development is the same type of development that has taken place in the existing Knocknacran Open-Cast Mine since 1988, and which has been licenced by the EPA since 2002.</p> <p>Because of the natural geology at the site (the Gypsum Kingscourt Formation has inherently elevated sulphate levels), the groundwater that is encountered and</p>

		<p>moved during mining operations has naturally occurring high concentrations of sulphate. To ensure that the elevated sulphate in the mine water does not compromise the water quality of the surface waters it is discharged to, SGMI monitors the receiving water of the River Bursk and controls the quantity of water it discharges to ensure compliance with the EPA licence sulphate limits.</p> <p>Between 2019 and 2021 SGMI sought a review of the limits imposed on it in relation to its discharge of water to the River Bursk. In making its request to the EPA to review the limits in place, the company assessed the ecological impact of the discharge to the River Bursk involving the following:</p> <ol style="list-style-type: none"> 1. An assessment of available peer-reviewed scientific research into the effects of sulphate, calcium and conductivity on aquatic habitats and organisms. 2. Biological assessments at locations on the River Bursk and on the River Glyde in 2020. This has determined that it is moderately polluted (Q3) upstream of the mine discharge, no change immediately downstream of it (Q3), and relatively unpolluted (Q4-5) further downstream. 3. Fish survey assessment (by electrofishing) in 2019 on locations upstream and downstream of the discharge including in the main channel of the Glyde. The conclusion was that there was no evidence that the mine discharge was influencing the fish community or the habitat quality in the river, and that the data was broadly similar to the data already held by IFI (Inland Fisheries Ireland) from their survey in 2010. In particular, it was noted that there was no salmonid spawning or nursery habitat detected in the lower reaches of the River Bursk downstream of the discharge. The electrofishing survey carried out in 2019 identified brown trout, European eel, brook lamprey, stone loach, perch, and three-spined stickleback upstream of the mine water discharge. At the mine water discharge point itself, European eel, roach and perch were recorded; whilst 70 m downstream at Compliance Point CP-1, brown trout and perch were recorded. At D4-SW5 in the River Bursk (1.7 km downstream of the discharge point) perch and pike were recorded. 4. An assessment of the effects of the parameters of concern in the raw mine water, which is not treated before discharge, indicated an absence of significant acute toxicity to freshwater fish or crustaceans and minor impact on freshwater algae and marine bacterium. <p>SGMI also examined a range of international information sources and toxicity studies and provided commentary on the submission from IFI and their concerns in</p>
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		<p>relation to sulphate.</p> <p>In summary, SGMI’s mining operations have released naturally occurring sulphate rich water to the River Bursk for over thirty years. The waters released have been subject to controls and monitoring in line with the relevant authority’s requirements and best practice knowledge. The receiving waters have been subject to detailed biological and chemical study over many years. The result of all of this work is the conclusion that mining operations have had no adverse effect on the River Bursk or on any downstream activities.</p> <p>The conclusion that has been reached by the EPA in their inspector’s report on the most recent licence review reads as:</p> <p>“I have examined all the information on water (including Emissions to Surface Waters, Storm Water, Emissions to Ground/groundwater) provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Determination. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects on water.</p> <p>As the Proposed Development does not foresee any increased volumes of water or change in the chemical makeup of the water, there is no reason to believe that continuing mining operations by the opening of Knocknacran West Open-Cast Mine to replace the existing Knocknacran Open-Cast Mine will cause any adverse effect on surface watercourses.</p>
<p>Biodiversity</p>	<p>Impact on wildlife</p>	<p>Chapter 6.0 of the EIAR presents a summary of ecological and biodiversity features which are, or have the potential to be, ecological constraints to the Proposed Development. It evaluates the importance of the ecological resources present and defines the degree of significance of potential impacts resulting from the Proposed Development. The chapter also identifies appropriate mitigation measures and defines residual impacts.</p> <p>A desktop review was conducted of available published and unpublished information, including a review of data available on the National Parks and Wildlife Services (NPWS) and National Biodiversity Data Centre web-based databases, in order to identify key habitats and species that may be present, in particular those protected by legislation. The search included a radius of 5 km around the Site boundary. The National Biodiversity Data Centre was reviewed for relevant data,</p>

		<p>specifically i) existing species records for the 10 km square in which the Site is located, and ii) an indication of the relative importance of the wider landscape in which the Site is located. Bat Conservation Ireland (BCI) conducted a search of available bat records within 10 km of the study area.</p> <p>Walkover surveys of the Site were conducted to record the habitats and flora in the area within and adjacent to the development Site, and to detect the potential presence of protected species, and any suitable habitat for those species.</p> <p>The species which were considered likely to occur within the Site, on the basis of the presence of suitable habitat and/or the occurrence of recent records in the vicinity were identified.</p> <p>Roosting bat potential has been recorded within a number of buildings on site; with buildings confirmed to be used by roosting bats (soprano pipistrelle), whilst some potential roosting habitat may be available from mature trees. The mitigation strategy includes building enhancement at retained structures (e.g., Shirley House), the provision of a bespoke roost in the north of the site and the provision of bat boxes. The restoration on the Knocknacran Site will also increase the habitat available for foraging/commuting bats in the wider area.</p> <p>For badgers, the Site supports suitable foraging habitat, and badger dung was recorded within the north of the Site, one main sett and an outlier sett were observed during fieldwork in 2022. Accordingly, mitigation measures are set out in order to safeguard badgers. In the short-term, relocation of the badger will be accommodated within the northern site area which will remain untouched during operations. Replacement habitats will be provided under the restoration plan for the mine, including provision of hedgerows, wildflower grassland, scrub, and a waterbody/lake. This planting will have regard to restoring connectivity across the Site and with the wider landscape.</p> <p>The restoration of the existing Knocknacran Open-Cast Mine (to the south of the R179) will include the provision of habitats similar to those which will be lost on the Knocknacran West site during operations.</p> <p>For the Irish Hare, the Site exhibits some suitable foraging and commuting habitat. However, it is considered that residual losses of habitat compared with the availability of similar habitat nearby will result in non-significant effects.</p> <p>For breeding birds, the hedgerows (and associated trees), and woodland (and to a lesser extent, the grassland) are likely to support a number of common and widespread bird species. Any vegetation clearance (or demolition of buildings with</p>
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		<p>potential to support nesting birds) will be undertaken outside of the bird nesting season. If there is a necessity for vegetation clearance within the nesting season, a suitably qualified Ecologist will carry out a series of nesting bird checks in advance of any works to ascertain breeding activity in affected areas.</p> <p>Habitat compensation measures (as set out above) will serve to ensure the maintenance of foraging, shelter, and nesting opportunities within the Site in the long-term. In the short-term, nest boxes will be provided on suitable retained trees at the periphery of the Site, in order to ensure replacement nesting opportunities are immediately available.</p> <p>A number of measures which follow generic best practice are proposed to mitigate the impacts of the proposed development on the ecological environment at the Site. A phased restoration plan will replace lost key habitats which will have been of importance to birds, bats and small mammals within the Site. The restoration plan is intended to fit within the planned phasing of works and the creation of habitat shall be an ongoing process during active working periods. In order to increase opportunities of roosting bats and nesting birds, a number of bat and bird boxes will be incorporated in the restoration of the Site. In addition, to increase opportunities for invertebrates within the Site, invertebrate boxes and habitat piles will be provided under the restoration plan; these will be located in sheltered areas of new and retained vegetation, such as in association with hedgerows.</p> <p>The assessment found that the hedgerows within the Site were recorded to be relatively species-poor, which limits their biodiversity value, whilst this habitat is common and widespread in the surrounds of the Site. Also taken into account, is the provision of new hedgerow planting within the restoration plan for the Site. Screening berms established on around the perimeter of the Knocknacran West Open-Cast Mine will be planted with a mix of native woodland species during the construction and operational periods to enhance linear habitat and connectivity around the site exterior.</p>
EIAR	<p>Interpretation and content of the previous EIAR. This relates to the previous EIAR being considered inadequate as it does not take full account of “defects on landscape, biodiversity, flora and fauna and human beings living in the area.”</p>	<p>This submission relates to the previous EIAR included in the previous application (Reg. Ref. 22/34) and is not directly applicable to this EIAR. However, the project presented in this EIAR remains the same. Consideration has been given in this EIAR to this general comment.</p>
Historical Mining	<p>Lack of clarity on historic mining that has occurred in the local are. This relates to a belief that there may be more mining</p>	<p>A detailed map of the location of mine workings in the area exists and was provided to the community in April 2019 following an audit by a third party</p>

	workings than previously (and publicly) mapped in the area.	<p>surveying company.</p> <p>Programs of intrusive investigations where boreholes and subsequently laser scanning devices were used to check the accuracy of mine maps and the layout of underground workings confirmed in all cases that any errors in mapping were minor and limited to very small measurements errors.</p> <p>In recent years SGMI have offered to carryout intrusive borehole and laser scanning exercises at locations where it is alleged additional underground mining tunnels exist. On each occasion where this offer was extended it was not taken up.</p>
Biodiversity, landscape and human health	<p>Lack of consideration in EIAR of landscape, biodiversity, flora and fauna in the area and the health of workers and local people/residents.</p> <p>This topic raised in submissions is very similar in content to the submission considered previously as ‘Interpretation and content of EIAR’ and relates to the previous EIAR being considered inadequate as it does not take full account of “defects on landscape, biodiversity, flora and fauna and human beings living in the area.”</p>	<p>This submission relates to the previous EIAR included in the previous application (Reg. Ref. 22/34) and is not directly applicable to this EIAR. However, the project presented in this EIAR remains the same. Consideration has been given in this EIAR to this general comment.</p>
Roads and Traffic	Road infrastructure not capable of sustaining a development of this scale — potential for disruption to traffic.	<p>There is no request to allow additional road traffic. All traffic associated with the Development will continue to use the existing access areas and egress points from the public roadway. Activity levels proposed for the Development are in line with the activity levels currently permitted; no increase in permitted activity level is being sought.</p>
Monaghan County Development Plan 2019 - 2025	<p>Development is contrary to the objectives of the Monaghan County Development Plan 2019-2025 as the development is located close to community facilities and residential properties</p>	<p>The development of extractive industries is dealt with in the Monaghan County Development plan 2019 – 2025 under Section 4.8.</p> <p>The development plan recognises that there are significant natural resources in the area that make an important contribution to the economy. The plan does recognise that such developments are impactful on the environment and recognises that while it is important that they are safeguarded for future use there must also be due care to ensure that impacts on the environment and communities are acceptable. The Plan notes that such proposed developments will include the submission of an Environmental Impact Statement (EIS), which is now known as an Environmental Impact Assessment Report (EIAR).</p> <p>ERP2 from the County Development plan, states policy as:</p> <p><i>“To promote development involving the extraction of mineral reserves and their</i></p>

		<p><i>associated processes, where the Planning Authority is satisfied that any such development will be carried out in a sustainable manner that does not adversely impact on the environment or on other land uses. Consideration in this regard shall be given to the impact of the development on the local economy.”</i></p> <p>The appropriate environmental impacts have been assessed and submitted with the Planning Application. Extractive industry developments are recognised by the Plan as “these significant natural resources make an important contribution to the economy, and it is important that they are safeguarded for future use whilst also ensuring that impacts on the environment and communities are acceptable.”</p> <p>The Proposed Development allows for the continuation of gypsum extraction at the only viable location in Ireland.</p>
Water and Geology	<p>Hydrogeological and geological issues with the development.</p> <p>This theme in submissions was given as:</p> <p><i>“Open cut excavation that will cause a change and disturbance to geological and hydrological structures (rock and water flows) this will have both upstream and downstream effects well beyond the boundaries of the proposed development and must be fully assessed. Proposals for full and proven viable mitigation measures need to be found by the developer before permission is granted.”</i></p>	<p>Consideration of the hydrogeological and geological impacts and proposed mitigation measures from the Proposed Development have been considered in detail in Chapters 7.0 and 8.0 of the EIAR.</p> <p>A key hydrogeological point is that the Knocknacran West site, is already a dewatered site. The existing and closed Drumgoosat Underground Mine is being dewatered by the Applicant at present and has been since the 1950s, when Drumgoosat was originally opened.</p> <p>The Proposed Development will continue to dewater the mine area, as is currently the case. The Proposed Development is not seeking to change the existing hydrogeological baseline. During the life of the Proposed Development, the existing scenario will continue, and the drawdown area will be maintained.</p>
Flooding	<p>Appropriate mitigation in respect of flooding raised as a concern in the context of the proposed development</p>	<p>By its nature open-cast mining creates a large pit in the ground which acts to provide an alleviation to any potential flooding. Surface water will be captured within the open-cast area and will then enter the mine’s water management system which will see it stored in lagoons on the Knocknacran site before a controlled release to the River Bursk. The presence of the open-cast will not create a flooding problem, rather it would help to attenuate surface water release in the event of an extreme rainfall event.</p>
Previous Permissions	<p>Existing open cast mine has not been constructed to original design parameters — development should not proceed until these matters have been rectified</p>	<p>The existing open-cast mine has been constructed in line with all specifications and design parameters included in the Planning Applications made. The relevant applications are described in section 1.4.1 of the EIAR.</p> <p>1984 (Planning Permission Reg. Ref. No: 83/461);</p>

		2007 (Planning Permission Reg. Ref. No:07/430); and 2017 (Planning Permission Reg. Ref. No: 17/217).
Project Splitting	Project splitting i.e mine and sports complex	<p>Project splitting relates to attempts to avoid carrying out an EIAR by splitting a development into a number of smaller developments which, on their own, would not cross the EIA threshold.</p> <p>The Community Sports Complex is a development which on its own would not require an EIAR. The mine development does require an EIAR on its own. The inclusion of the Community Sports Complex within the mine application has resulted in the Community Sports Complex being assessed in the EIAR, and where relevant, the interaction and potential impacts between the developments has been assessed. This application is a more robust application and the inclusion of the Community Sports Complex within the mine application is the opposite of project splitting.</p> <p>Legal advice was taken on this matter and the approach being taken by the Applicant goes over and above any legislative requirements for EIAR.</p>
Water	The discharge of surface water from the mine in a shorter period than 2 years will increase the risk sulphate pollution in the river Bursk	<p>This submission is raised in respect of the water being removed from the old Drumgoosat mine and its potential to cause an additional environmental impact. Since the water being discharged from the old Drumgoosat mine is included as part of the normal mine release under the IE licence authority, its release is considered and controlled as part of the holistic water management plan for the Site. This water is not additional to the authorised discharge; it is included in the authorised discharge.</p> <p>The water discharge to the river is controlled by EPA licence conditions, there is no proposal to seek an increase in the discharge limits.</p>
Climate Change	Concerns over how the mine will contribute to Climate Change and concern that this issue has not been sufficiently considered in the EIAR	<p>The EIAR has considered the potential climate impacts from the proposed development in Section 9.6.4 of Chapter 9.0 as not significant.</p> <p>In addition, the majority of the gypsum mined at the development will be used in the production of plasterboard and plaster, two very important building materials to the construction industry as it adapts to reduce the CO2 impact of the construction process, and also ensures that buildings of the future have greater energy efficiency. Plasterboard is very important in construction and light weight building methods, while plaster is a very important material in helping buildings to</p>

		meet airtightness requirements critical to energy efficient performance.
Quality of life	Impact on the enjoyment of peace and home	<p>Commercial mining has been part of the history of this area since the 1950's and open-cast mining has been present since the 1980's. Mining activity has co-existed with the community for all of that time. Since the open-cast mine at Knocknacran commenced operations, a number of private dwellings have been constructed in very close proximity to the facility and very recently, planning permission has been sought and granted for a private residence directly adjacent to the existing open-cast and underground mine site boundary.</p> <p>In recent times, the subsidence of the old mine workings (Drumgoosat Mine) has proven to be concerning and disturbing for local residents. The development of the open-cast mine seeks to bring these old workings under engineering control and in so doing remove the hazard and concerns created by the old mine workings into the future.</p> <p>Care has been taken in the design of Knocknacran West Open-Cast Mine and in preparing operational plans to preserve the amenity that people will enjoy in their own homes. Features such as the retention of the forested hill between the mine and Drumgoosat village, the incorporation of landscaping berms and planting at the outset of the development, the restriction of operating hours and the installation of a Cut-and-Cover tunnel to avoid the routing of traffic onto the road network in the area of the new working mine all act as mitigation measures to the potential adverse impact of the Development.</p> <p>The restoration of the Development will over time improve the amenity of the area.</p> <p>SGMI has a track record of engaging positively with neighbours to address issues that arise from time to time, and will continue to engage positively with their neighbours on many topics to alleviate and mitigate concerns that individuals/people will naturally have from time to time.</p>
Structural Integrity of a house ca. 700 m west of the site	Structural integrity of objectors property.	<p>Notwithstanding the substantial distance between the private residence in question and mining activities, SGMI has previously engaged with the owner of the property, where they believe that mining activity has been responsible for structural issues associated with their residence.</p> <p>SGMI has made a structural engineer available to make an assessment of the issues at the property in question. That engineering review identified a number of</p>

		<p>potential causes for the issues evident at the property and advised the homeowner on a program of further works that would enable the homeowner to identify the root cause of the issues at the property.</p> <p>The submission indicated that a number of other engineering studies have been carried out on the property.</p> <p>There has been no suggestion that mining is a potential cause of any of the issues noted at the property in any of the engineering reports that have been made available to SGMI.</p>
<p>Water supply</p>	<p>Risk to private wells</p>	<p>The location of the well is in ca. 500 m from the closest proposed mining activity.</p> <p>Chapter 8.0 of the EIA explains the local hydrogeological regime present at the Site and in its vicinity. Section xx presents a consideration of potential effects in relation to wells in the area.</p> <p>The well survey carried out in the preparation of the EIA visited the well which was found to be a hand dug well in overburden, not bedrock. The bottom of the well was measured to be about 4.4 m deep, and the water level was about 1.9 m at the time of the site visit. SGMI's data from long-term well monitoring in overburden wells shows variations related to natural seasonal cycles rather than influence from mine workings.</p> <p>There are a series of faults between the well in question and the existing Knocknacran open-cast mine area, indicating that the well in question is not directly connected to the geological block that the existing mine workings occur in. There are also a series of faults between the well and Knocknacran West area which inhibit flow between the areas. As the mine area is already being dewatered the impact is not expected to change for the Proposed Development. This drawdown area is already in place through the dewatering of Drumgoosat, Drummond and Knocknacran mines.</p> <p>The Proposed Mine development will not further drawdown groundwater that has already been drawn down since mining began in Drumgoosat in the 1950's. The drawdown area for the Knocknacran Site has therefore been well established, and there is no risk of further overburden dewatering due to the excavation of the proposed Knocknacran Open-Cast Mine.</p> <p>The mining activity proposed is a physical process where material is excavated from the ground and transported from the Site without any chemicals being used. Therefore, no risk of chemical contamination arises from mining activities.</p>

		<p>Furthermore, contamination risks to the well in question from mining activity are not practically possible as mining activity creates a hydraulic gradient away from the well rather than towards the well. This means that mining activity is in effect “downstream” from the well, in practice protecting the well from any effects of mining.</p> <p>Following the public consultation event with the community in September 2021, SGMI consultants visited the site and advised the homeowner of some practical steps they could take to alleviate issues around the drawing of sediments from the well into the pump.</p>
Screening	Request for planting between mine site and resident’s dwelling to provide screening	<p>The proposed landscape plan for the south-western margin of the development is to have a 2 - 4 m high planted berm.</p> <p>The proposed native woodland mix planting will reach ca. 6 m high within the first five growing seasons.</p>
Discharge pipeline and land	Concern that a pipeline going through third party property would be replaced with a larger pipe with resultant impacts on the land	<p>There is no plan to replace the pipeline through the third party land.</p> <p>The existing pipeline is subject to a wayleave agreement through the lands that makes provision for the operation and the maintenance of the pipeline. The redline boundary has been drawn to encompass the wayleave area around the existing pipe, although no replacement works are proposed for the pipe.</p>
Property Value	Impact of development on the value of property	<p>SGMI in the course of its activities in the area has been presented with property valuations for development land carried out by Valuers acting for parties other than SGMI. These land valuations made by recognised local property professionals indicate that land values in the area remain unaffected by the potential development. In addition, permission has recently been granted to allow a residential development to be built immediately adjacent to the existing Knocknacran Mine site and for an agricultural chicken farm to be built immediately adjacent to the existing Knocknacran Mine site. Planning permission is also currently being sought from MCC to restore and extend a dwelling to the west of the site, ca. 500 m from the Site.</p>

