15 Interactions and Inter-Relationships

15.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) has been prepared by WSP Ireland Consulting Ltd (WSP) for the Bison Quarries Limited (BQL) Section 37L planning application to An Bord Pleanála (ABP). The Section 37L application has been made for quarry restoration (the Proposed Project) located in the townland of Coolsickin or Quinsborough, Monasterevin, Co. Kildare, (the Site), and is located within the administrative boundary of Kildare County Council (KCC).

This chapter of the EIAR describes interactions/inter-relationships between environmental effects in the area surrounding the Proposed Project, and also an overview of potential impacts of the Proposed Project in combination with other appropriate committed development in the region of the Site. Potential cumulative effects have also been considered in the respective discipline chapters of this EIAR.

15.2 Technical Scope

The EIA Directive (Directive 2011/92/EU, as amended by Directive 2014/52/EU, together the 'EIA Directive') requires that an environmental impact assessment identifies, describes and assesses in an appropriate manner the significant effects of a project and the significant interaction and in-combination effects of the project. This requires the careful consideration of environmental factors and pathways (direct and indirect) that can magnify effects through the interaction or accumulation of effects.

Environmental factors are inter-related to some degree, and these interactions can exist on many levels. This chapter summarises the primary interactions between the environmental topics and provides a matrix to coherently display them.

The overall objective of the assessment in this chapter is to identify whether mitigation measures are required that would not otherwise have been identified in the individual study areas for these interacting effects.

The overall EIAR Project Team contributed to the compilation of this chapter.

15.3 Geographical and Temporal Scope

The assessment directly covers the physical extent of the EIA site boundary for the Site as shown in **Figure 15-1**. In the context of the EIAR, the Site boundary contains lands which form the disused quarry void to the north of the Site and agricultural lands to the south. The Section 37L (the Planning Application) boundary is shown on the drawing set which accompanies the planning application.

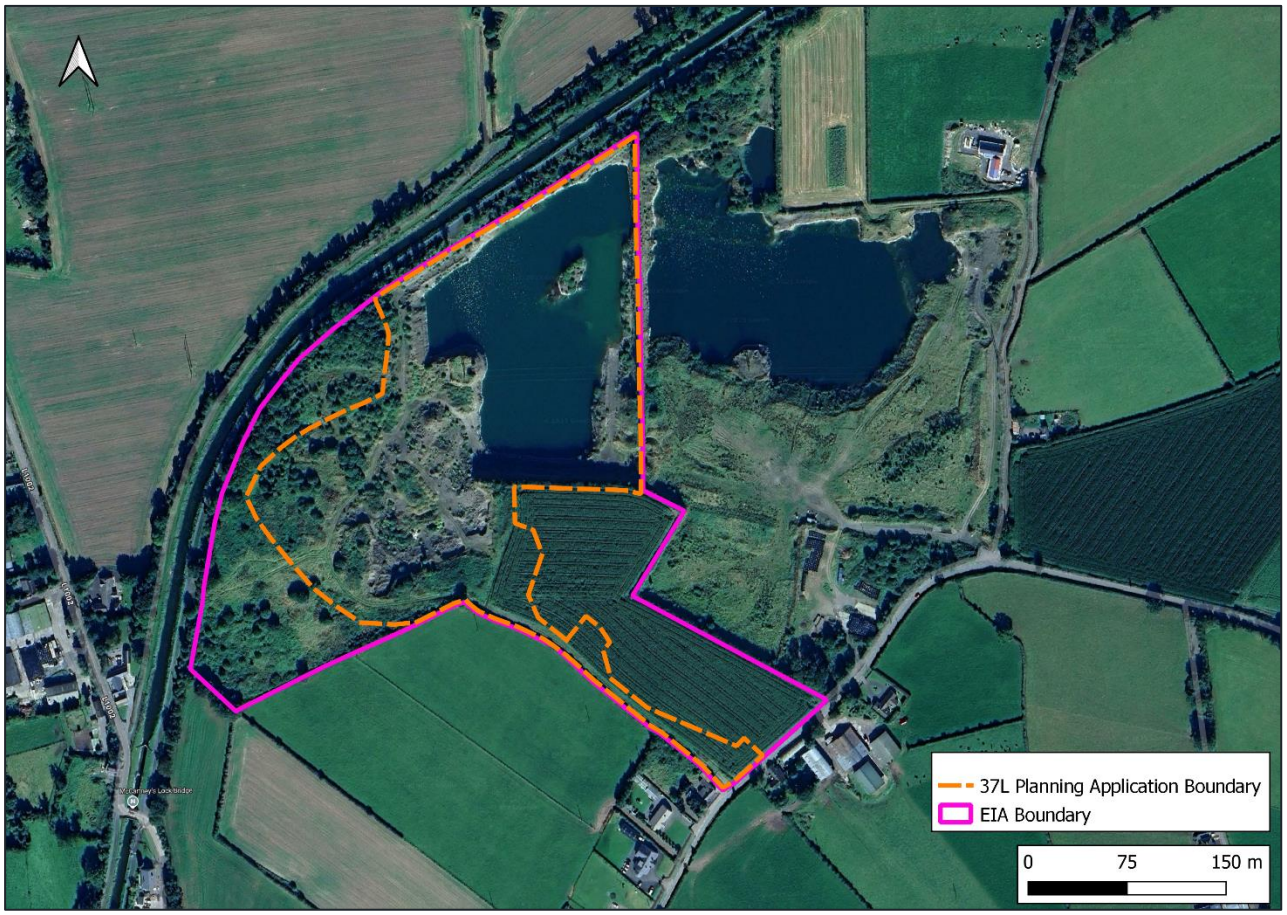

Figure 15-1 - Section 37L Application Area and the Lands the Subject of the EIAR overlain on Google Satellite Imagery.

The temporal scope of this assessment covers the construction phase (comprising enabling works and infilling works) and the restoration phase. The combined duration of these phases is predicted to 13 years. Detailed description of the Proposed Project phasing is presented in Section 2.7. of Chapter 2 (Project Description).

15.4 Project Description

The Proposed Project consists of the restoration of lands through the import of approximately 720,000 tonnes clean soil and stone as by-product (non-waste) from development sites to infill a disused historical quarry and raise ground levels to tie in with ground levels of surrounding land.

Restoration of the lands will be to agricultural grassland, an artificial waterbody, and a hedgerow habitat with the lands returned to their pre-extraction agricultural use.

The proposed duration of infilling is 10 years depending on market conditions for the anticipated acceptance of clean soil and stone, and a further 3 years for the completion of final restoration activities.

The Application Site is located in the townland of Coolsickin or Quinsborough, Co Kildare. The Application Site is accessed by a privately-owned access road connecting to a local road (L7049).

The following temporary facilities will be installed and maintained during the life of the Proposed Project:

- office and fully serviced welfare facilities;
- weighbridge and associated portacabin;
- closed-system wheel wash;
- 6 no. parking bays;
- 2 no. waste inspection bays and 1 no. bunded waste quarantine area;
- hardstanding area (vehicle movement and storage); and,
- surface water drainage infrastructure from hard standing and discharge to ground, including 2 no. interceptors and 2 no. soakaways.
- security features, including security gates and fencing.
- Power supply. It is intended that approval will be sought for a connection to the ESB Network for the office and fully serviced welfare facilities. Diesel generators will be used to power mobile lighting, if required.

The Proposed Project site entrance and private access road will be upgraded and realigned. These will be retained following to completion of the Proposed Project.

A full project description in provided in Chapter 2 of this EIAR.

15.5 Methodology

This assessment has been made with reference to the ‘Guidelines on the information to be contained in environmental impact assessment reports’, published by the EPA in May 2022 (EPA,2022 Guidelines). These guidelines were issued by the EPA to facilitate compliance with the EIA Directive.

The descriptive terminology used follows a ‘matrix approach’ to environmental assessment which is based on the characteristics of the impact (magnitude and nature) and the value (sensitivity) of the receptor. The terminology and method have been summarised in Chapter 1 (Introduction, Scope and Methodology) of this EIAR.

15.6 Interactions

For the assessment of interacting effects, a matrix has been provided in **Figure 15-1** identifying through professional judgment the specific topics within the EIAR where the effects potentially interact/inter-relate with each other.

Table 15-1 - BQL s.37L Environmental Interactions, (X = No Interaction; ✓ = Potential Interaction).

Interaction	Population & Human Health	Ecology and Biodiversity	Land, Soils & Geology	Water	Air Quality	Climate	Noise and Vibration	Cultural Heritage	Landscape & Visual	Traffic & Transport	Material Assets	Major Accidents & Disasters
Population & Human Health		X	✓	✓	✓	X	✓	X	✓	✓	✓	✓
Ecology and Biodiversity.			✓	✓	✓	X	✓	X	✓	X	X	X
Land, Soils & Geology				✓	✓	X	X	✓	✓	X	X	X
Water					X	X	X	X	X	X	X	X
Air Quality						X	X	✓	X	X	X	X
Climate							X	X	X	X	X	X
Noise and Vibration								X	X	X	X	X
Cultural Heritage									✓	X	X	X
Landscape & Visual										X	X	X
Traffic & Transport											X	X
Material Assets												X
Major Accidents & Disasters												

15.6.1 Population and Human Health

During both the construction and restoration phases of the Proposed Project effects of population and human health have the potential to interact with land and soil, water, air quality, noise, landscape and visual, traffic and transport, material assets, and major accidents and disasters.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, Chapter 5 – Land, Soil and Geology, Chapter 6 – Water, Chapter 7 – Air Quality, Chapter 9 – Noise and Vibration, Chapter 11 – Landscape and Visual, Chapter 12 – Traffic and Transport, Chapter 13 – Material Assets, and Chapter 14 – Major Accidents and Disasters.

15.6.2 Ecology and Biodiversity

During both the construction and restoration phases of the Proposed Project effects of ecology and biodiversity have the potential to interact with land and soil, water, air quality, noise, and landscape and visual.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 4 – Ecology and Biodiversity, Chapter 5 – Land, Soil and Geology, Chapter 6 – Water, Chapter 7 – Air Quality, Chapter 9 – Noise and Vibration, and Chapter 11 – Landscape and Visual.

15.6.3 Land, Soils and Geology

During both the construction and restoration phases of the Proposed Project effects of land, soils and geology have the potential to interact with population and human health, ecology and biodiversity, water, air quality, cultural heritage and landscape and visual.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, Chapter 4 – Ecology and Biodiversity, Chapter 5 – Land, Soil and Geology, Chapter 6 – Water, Chapter 7 – Air Quality, Chapter 10 – Cultural Heritage, and Chapter 11 – Landscape and Visual.

15.6.4 Water

During both the construction and restoration phases of the Proposed Project effects of water have the potential to interact with population and human health, ecology and biodiversity, and land and soil.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, Chapter 4 – Ecology and Biodiversity, Chapter 5 – Land, Soil and Geology, and Chapter 6 - Water.

15.6.5 Air Quality

During both the construction and restoration phases of the Proposed Project effects of air quality have the potential to interact with population and human health, ecology and biodiversity, land and soil, and cultural heritage.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, Chapter 4 – Ecology and Biodiversity, Chapter 5 – Land, Soil and Geology, Chapter 7 Air Quality, and Chapter 10 – Cultural Heritage.

15.6.6 Noise and Vibration

During both the construction and restoration phases of the Proposed Project effects of noise and vibration have the potential to interact with population and human health, and ecology and biodiversity.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, Chapter 4 – Ecology and Biodiversity, and Chapter 9 – Noise and Vibration.

15.6.7 Cultural Heritage

During both the construction and restoration phases of the Proposed Project effects of cultural heritage have the potential to interact with land and soil, air quality, and landscape and visual.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 5 – Land, Soil and Geology, Chapter 7 – Air Quality, Chapter 10 – Cultural Heritage, and Chapter 11 – Landscape and Visual.

15.6.8 Landscape and Visual

During both the construction and restoration phases of the Proposed Project effects of landscape and visual have the potential to interact with population and human health, ecology and biodiversity, land and soil, and cultural heritage.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, Chapter 4 – Ecology and Biodiversity, Chapter 5 – Land, Soil and Geology, Chapter 10 – Cultural Heritage, and Chapter 11 – Landscape and Visual.

15.6.9 Traffic and Transport

During both the construction and restoration phases of the Proposed Project effects of traffic and transport have the potential to interact with population and human health.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, and Chapter 12 – Traffic and Transport.

15.6.10 Material Assets

During both the construction and restoration phases of the Proposed Project effects of material assets have the potential to interact with population and human health.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, and Chapter 13 – Material Assets.

15.6.11 Major Accidents and Disasters

During both the construction and restoration phases of the Proposed Project effects of major accidents and disasters have the potential to interact with population and human health.

These interactions have been considered in the relevant chapters of this EIAR: Chapter 3 – Population and Human Health, and Chapter 14 – Major Accidents and Disasters.

15.6.12 'Do-Nothing' Scenario

If the Proposed Project does not proceed, then the above interacting or inter-relating environmental effects will not occur.

The assessment of interactions described above has assessed whether there is any potential for significant effects occurring between the different environmental topics as a result of the Proposed Project that may not have been identified within the respective individual chapters. No additional interacting effects have been identified.