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## TABLE

# INTRODUCTION

15.1 All of the reasonably predictable significant impacts of the proposed development and the measures in place to mitigate them have been outlined in the EIAR. However, for any development with the potential for significant environmental impacts there is also the potential for interaction amongst these impacts. The result of these interactions may either exacerbate the magnitude of the impact or ameliorate it. The interaction of impacts on the surrounding environment is required to be addressed as part of the Environmental Impact Assessment process.

15.2 This Environmental Impact Assessment Report in respect of the proposed integrated inert waste management facility at Ballinclare Quarry was prepared by SLR Consulting (on behalf of Kilsaran) as an integrated document, rather than a collection of separate reports. The impacts that arise as a result of the interaction between several aspects of the development have therefore been addressed in the main body of each EIAR Chapter.

## The Interaction of the Foregoing

15.3 The interaction between the various environmental topics has been covered within each of the EIAR Chapters, 4 through to 14, where relevant. For example, the interaction of geology and groundwater has been addressed in EIAR Chapter 7.

15.4 The environmental components which might potentially be impacted by a development of this kind and at this location have been identified through the site assessment as follows:

- Effects on land use and amenity;
- Impacts on local sensitive receptors;
- Impacts on natural heritage and wildlife habitats and disturbance to flora and fauna;
- Impacts on groundwater, surface water bodies, soils and bedrock geology;
- Nuisance potential and or public health effects due to noise or dust emissions;
- Impacts on local archaeology;
- Changes in visual character;
- Impacts on material assets such as infrastructure or local utilities.

15.5 A matrix method has been used, in which the environmental components addressed in the previous Chapters of this EIAR have been placed on both axes of a matrix. Where interactions arise between two environmental components, the intersection square along a row or column of the matrix in Table 15-1 overleaf is shaded green.

15.6 The purpose of the effects matrix is to readily identify potential interactions. Actual interactions and their significance are dealt with in the relevant topic Chapter of the EIAR with a brief overview of some of the more pertinent interactions provided in this Chapter below.

**Table 15-1**
**Impact Interaction and Interrelationships Matrix**

| | Biodiversity | Land, Soils & Geology | Water | Air Quality | Noise & Vibration | Landscape & Visual | Traffic | Cultural Heritage | Material Assets | Population & Human Health | Climate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biodiversity | | | | | | | | | | | |
| Land, Soils & Geology | | | | | | | | | | | |
| Water | | | | | | | | | | | |
| Air Quality | | | | | | | | | | | |
| Noise & Vibration | | | | | | | | | | | |
| Landscape & Visual | | | | | | | | | | | |
| Traffic | | | | | | | | | | | |
| Cultural Heritage | | | | | | | | | | | |
| Material Assets | | | | | | | | | | | |
| Population & Human Health | | | | | | | | | | | |
| Climate | | | | | | | | | | | |

# POTENTIAL INTERACTIONS

## Population and Human Health

15.7 According to the draft guidelines published by the EPA, human health should be considered in the context of the relevant environmental topics addressed by the EIAR. Specifically, effects on human health should be considered in relation to relevant pathways (such as air, soil and water) and should be considered in the context of accepted standards or limits for exposure, dose or risk.

15.8 This EIAR indicates that the proposed establishment and operation of an inert landfill and C&D waste recovery facilities at Ballinclare Quarry and the long—term restoration of the application site to grassland / scrub habitat could proceed with acceptable emission limits for noise and dust emissions, while potential effects on land / soil and water could be adequately addressed through good environmental management practices and mitigation measures to avoid excessive emission, accidental spillages of fuel, etc.

15.9 The key matters in relation to amenity are noise, dust, vibration, landscape and traffic. As previously noted, this EIAR has established that the establishment and operation of the proposed integrated inert waste management facility can proceed within acceptable levels for noise, dust and traffic effects.

15.10 Potential interactions with human health are discussed in Chapter 4 (Population and Human Health), Chapter 6 (Land, Soil and Geology), Chapter 7 (Hydrology and Hydrogeology), Chapter 8 (Air Quality), Chapter 10 (Noise) and Chapter 14 (Traffic).

15.11 The landscape and visual effect of backfilling and restoring the quarry over the medium to long-term would also be positive when compared against the existing baseline situation, refer to EIAR Chapter 13 (Landscape).

## Biodiversity

15.12 The proposed inert landfill and C&D waste recovery operations will potentially impact local habitats and species by way of changes to existing ground surfaces / landforms, most notably around the proposed passive wetland treatment system, as well as the generation of noise and dust. Over the long-term the final restoration is likely to have a positive and beneficial effect on wildlife and on local biodiversity up to local (higher) value from current baseline conditions, particularly with regard to the wetland area.

15.13 Potential interactions associated with the landfilling and C&D recovery activities are discussed in Chapter 5 (Biodiversity), Chapter 6 (Land, Soil and Geology), Chapter 7 (Hydrology and Hydrogeology), Chapter 8 (Air Quality), Chapter 10 (Noise) and Chapter 13 (Landscape).

## Land, Soils and Geology

15.14 The management of soils and natural particulate materials during the landfilling and waste recovery activities has potential implications for biodiversity (loss or degradation of habitat), water quality (contamination, sediment transport, accidental spills), air quality (through dust emissions) and long-term visual amenity (though final restoration / land-use).

15.15 The potential impact of the proposed activities on land, soil and geology and the potential interactions with other environmental topics are discussed in Chapter 6 (Land Soil and Geology), Chapter 4 (Population and Human Health), Chapter 5 (Biodiversity), Chapter 7 (Hydrology and Hydrogeology), Chapter 8 (Air Quality), Chapter 12 (Cultural Heritage) and Chapter 13 (Landscape).

## Water

15.16 The proposed landfilling and waste recovery operations have potential to impact water quality and by, this also has implications for human health, soil and geology (land quality), biodiversity (habitats and species) and material assets (aquifers / wells).

15.17 The potential impact of the proposed activities on the water environment and the potential interactions with other receiving environments are discussed in Chapter 7 (Hydrology and Hydrogeology), Chapter 4 (Population and Human Health), Chapter 5 (Biodiversity), Chapter 6 (Land Soil and Geology), Chapter 9 (Climate) and Chapter 11 (Material Assets).

## Air Quality

15.18 The air quality impact assessment, presented in EIAR Chapter 8, indicates that with the implementation of industry standard air quality mitigation measures, residual impacts arising from the proposed inert waste facility at Ballinclare Quarry will be insignificant or otherwise acceptable. On this basis therefore, interactions are also considered to be acceptable.

15.19 The impact of the proposed landfilling and waste recovery activities on the atmosphere and the potential interactions with other receiving environments are discussed in Chapter 8 (Air Quality), Chapter 4 (Population and Human Health), Chapter 5 (Biodiversity), Chapter 6 (Land, Soils and Geology) and Chapter 9 (Climate).

## Noise and Vibration

15.20 The noise and vibration assessment, presented in EIAR Chapter 10, indicates that with the implementation of industry standard noise mitigation measures, the residual impacts from the proposed inert waste facility at Ballinclare Quarry are negligible or minor. On this basis therefore, interactions are also considered to be acceptable.

15.21 The interaction between noise / vibration and other receiving environments is discussed in Chapter 10 (Noise), Chapter 4 (Population and Human Health) and Chapter 5 (Biodiversity).

## Material Assets

15.21 The impact of the proposed inert waste management facility on material assets and its key interactions, on the groundwater aquifer and the local road network, are addressed in Chapter 11 (Material Assets), Chapter 7 (Water) and Chapter 14 (Traffic).

## Cultural Heritage

15.23 The impact of the proposed inert waste facility on cultural heritage and the potential interaction with other receiving environments are discussed in Chapter 12 (Cultural Heritage), Chapter 6 (Land, Soil and Geology) and Chapter 13 (Landscape).

## Landscape and Visual

15.22 The proposed landfilling and waste recovery activities at Ballinclare Quarry will impact the existing landscape and visual amenity over its operational life and following its long-term restoration to grassland / scrub habitat, with potential implications for human beings, habitats, land quality and archaeology.

15.23 The impact of the planned development on the landscape and the potential interaction with other receiving environments are discussed in Chapter 13 (Landscape), Chapter 4 (Population and Human Health), Chapter 5 (Biodiversity), Chapter 6 (Land, Soil and Geology) and Chapter 12 (Cultural Heritage).

## Traffic

15.24 Potential interactions associated with traffic movements from the proposed landfilling and C&D waste recovery activities are discussed in Chapter 14 (Traffic and Transportation), Chapter 4 (Population and Human Health), Chapter 8 (Air Quality) and Chapter 10 (Noise) and Chapter 11 (Material Assets).