

CHAPTER 15

INTERACTIONS SUMMARY

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INTRODUCTION

- 15.1 All of the reasonably predictable significant impacts of the existing and 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 impact 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 needs to be addressed as part of the Environmental Impact Assessment process.
- 15.2 This Environmental Impact Assessment Report was prepared by SLR Consulting on behalf of Lagan Materials Ltd. 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 section.

The Interaction of the Foregoing

- 15.3 The interaction between the various environmental topics has been covered within each of the EIAR Sections, 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;
 - Loss of natural heritage and wildlife habitats and disturbance to flora and fauna;
 - Impacts on groundwater, soils and bedrock geology;
 - Nuisance potential and or public health effects due to noise, dust, odour or lighting emissions;
 - Impacts on local archaeology;
 - Change 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 sections of this EIAR have been placed on both axes of a matrix, these interactions are summarised in **Table 15-1** below.
- 15.6 The purpose of the effects matrix is to identify potential interactions. Actual interactions and their significance are dealt with in the relevant chapter of the EIAR with a brief overview of some of the more pertinent interactions provided in this chapter.

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

	Biodiversity	Land, Soils & Geology	Water	Air Quality	Noise & Vibration	Landscape and Visual	Traffic	Cultural Heritage	Population & Human Health
Biodiversity	Black	White	Green	Green	Green	Green	White	White	White
Land, Soils & Geology	White	Black	Green	Green	White	White	White	Green	White
Water	Green	Green	Black	White	White	White	White	White	Green
Air Quality	Green	Green	White	Black	White	White	Green	White	Green
Noise & Vibration	Green	White	White	White	Black	White	Green	White	Green
Landscape and Visual	Green	White	White	White	White	Black	White	Green	Green
Traffic	White	White	White	Green	Green	White	Black	White	Green
Cultural Heritage	White	Green	White	White	White	Green	White	Black	White
Population & Human Health	White	White	Green	Green	Green	Green	Green	White	Black

POTENTIAL INTERACTIONS

Biodiversity

- 15.7 Potential interaction associated with the proposed landscape mitigation and restoration proposals are discussed in Chapter 4 (Biodiversity), Chapter 13 (Landscape) and Figure 2.2 (Landscape Mitigation and Restoration).

Water

- 15.8 The potential impact of the recommencement of quarry activities and the aggregate processing area in relation to water and the potential interactions with other environmental topics are discussed in Chapter 4 (Biodiversity), Chapter 6 (Land, Soils and Geology) and Chapter 7 (Water).

Air Quality

- 15.9 The interaction of Climate (Chapter 9), Air Quality (Chapter 8) and Population and Human Health (Chapter 4) are discussed in the relevant chapters of the EIAR.
- 15.10 The Air Quality Chapter presented in EIAR **Chapter 8**, indicates that with the implementation of industry standard air quality mitigation measures, no residual impacts will result from the proposed development. Therefore, the interaction is considered to be acceptable.

Noise & Vibration

- 15.11 The interaction between noise / vibration and population and human health is discussed in the relevant chapters of the EIAR.
- 15.12 The Noise and Vibration assessment, presented in EIAR **Chapter 10**, indicates that with the implementation of industry standard noise mitigation measures, no residual impacts will result from the proposed development. Therefore, the interaction is considered to be acceptable.

Landscape & Visual

- 15.13 The potential interaction with Biodiversity are discussed in Chapter 4 (Biodiversity), Chapter 13 (Landscape) and Figure 2.2 (Landscape Mitigation and Restoration).

Traffic

- 15.14 Potential interactions associated with traffic movements from the existing operational quarry development with the general population and air quality are addressed in the preceding sections of this chapter.

Cultural Heritage

- 15.15 The proposed development area is an existing quarry that has previously been assessed under Planning Application Reg. No. 02/271 (see Plate 12-2, 12-3 and Fig. 12-1).
- 15.16 Potential interactions with other environmental topics (e.g. Land, Soils & Geology and Landscape & Visual) are limited as there will be no topsoil stripping required as part of the proposed development. In addition, direct changes to this landscape would be very limited as the nature of the proposal comprises, for the most part, the proposed deepening of the existing quarry void. Visual effects at a selection of viewpoint locations were assessed and judged to be not significant.

Population and Human Health

- 15.17 According to the relevant guidelines, human health should be considered in the context of the relevant environmental topics addressed by the EIAR. Also, 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 for exposure, dose or risk.

- 15.18 Human health is considered in the context of the relevant pathways, such as noise, air, soil and water in the context of acceptable doses or limits. The EIAR shows that the quarry would operate within acceptable limits for noise and dust and potential effects on soil and water would be addressed through good practice and mitigation measures to avoid accidental spillages of fuel, etc. Water would be discharged from the site in accordance with the existing discharge licence.
- 15.19 The key matters in relation to amenity are water, noise, dust, vibration, landscape and traffic. As stated above, the EIAR shows that the quarry would operate within acceptable levels for water, noise, dust and vibrations. From many locations, the changes to the landscape would not be visible or would not be significant. The restoration of the quarry would be beneficial when compared against the existing baseline. The traffic assessment shows that the existing road junctions have sufficient capacity to accommodate the quarry traffic to 2037 and beyond.