

14. INTERACTION OF THE FOREGOING

14.1 Introduction

The preceding sections of this Environmental Impact Assessment Report (EIAR) identify the potential environmental impacts that may occur in terms of Population and Human Health, Biodiversity, Land Soils and Geology, Water, Air and Climate, Noise & Vibration, Landscape & Visual, Cultural Heritage and Material Assets (including Traffic), as a result of the proposed development. All of the potential impacts of the proposed development and the measures proposed to mitigate them have been outlined in the preceding sections of this report. However, for any development with the potential for significant environmental impact there is also the potential for interaction amongst these impacts. The result of interactive impacts may either exacerbate the magnitude of an impact or ameliorate it.

A matrix is presented in Table 14-1 to identify interactions between the various aspects of the environment already discussed in this report. The matrix highlights the occurrence of potential positive or negative impacts of the proposed development. The matrix is symmetric, with each environmental component addressed in the previous sections of this report being placed on both axes of a matrix, and therefore, each potential interaction is identified twice. Interaction in the matrix does not imply a cumulative impact.

Table 14-1 Interaction Matrix

	Population, Human Health	Flora & Fauna	Soils & Geology	Hydrology & Hydrogeology	Air & Climate	Noise & Vibration	Landscape	Cultural Heritage	Material Assets
Population, Human Health	Black	Grey	Grey	Pink	Pink	Pink	Yellow	Grey	Pink
Biodiversity, Flora & Fauna	Grey	Black	Pink	Pink	Grey	Pink	Grey	Grey	Grey
Land, Soils & Geology	Grey	Pink	Black	Pink	Grey	Grey	Grey	Grey	Grey
Hydrology & Hydrogeology	Pink	Pink	Pink	Black	Grey	Grey	Grey	Grey	Grey
Air & Climate	Pink	Grey	Grey	Grey	Black	Grey	Grey	Grey	Pink
Noise & Vibration	Pink	Pink	Grey	Grey	Grey	Black	Grey	Grey	Grey
Landscape & Visual	Yellow	Grey	Grey	Grey	Grey	Grey	Black	Grey	Grey
Cultural Heritage	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Black	Grey
Material Assets	Pink	Grey	Grey	Grey	Pink	Grey	Grey	Grey	Black
Legend:	Potential Positive Effect:				Green				
	Potential Neutral Effect:				Yellow				
	Potential Negative Effect:				Pink				
	No Interacting Effect:				Grey				

The potential for interaction of effects, where it exists, has been assessed as part of the Impact Assessment process. This EIAR was edited and collated by MKO as an integrated report of findings from the impact assessment process, rather than a collection of individual assessments carried out in isolation and impacts that potentially interact have been discussed in the individual chapters of the EIAR above.

14.2 Impact Interactions

Where any potential negative effects have been identified during the assessment process, these impacts have been avoided by design or reduced by the proposed mitigation measures.

14.2.1 Population & Human health

Population & Human health and Noise & Vibration

The proposed development has the potential to create noise and some vibration during the construction phase, which could give rise to nuisance for occupants of nearby dwellings. Mitigation measures are presented in Chapter 10 to minimise the risk of any such issues. With the implementation of these mitigation measures the residual impact on Population and Human Health will be slight, negative in the short term.

The construction phase of the proposed development has the potential to create noise and some vibration, which could give rise to nuisance for occupants of nearby dwellings. Mitigation measures are presented in Chapter 10 to minimise the risk of any such issues. With the implementation of these mitigation measures the residual impact on Population and Human Health will be slight, negative in the short term. The operation phase of the proposed development will result in neutral impacts at most receptors, although traffic through Cnoc Fraoigh will result in slight to moderate negative impacts at dwellings adjacent to the avenue. As discussed in chapter 10, the implementation of mitigation measures will ensure that there will be no adverse noise impact on the local population or on human health.

Population & Human health and Air & Climate

The proposed development has the potential to create dust and other less noticeable air pollutants, which could give rise to nuisance for occupants of nearby dwellings. Mitigation measures are presented in Chapter 9 to minimise the risk of any such issues. Dust and general emissions mitigation measures will be implemented on site and as such impacts to population and human health are predicted to be imperceptible and short-term.

Population & Human health and Hydrology & Hydrogeology (Water)

Any impacts associated with any development on water has the potential to impact on human health in particular where water abstraction sources are present. The proposed development has limited potential to give rise to water pollution as a result of site activities due to the construction methodologies being used. Also, there are no water abstraction points in the vicinity of the site. Mitigation measures are presented in Chapter 8 to minimise the risk of any such issues. Residual impacts on Population and Human Health are predicted to be imperceptible.

Population & Human health and Landscape

Although the scrub and grassland that covers the site will be removed during the construction phase of the proposed development, the restricted visibility of the site ensures that the development will not significantly change the character of the local landscape. The planned landscaping, surrounding residential land use, retention of certain elements of the site and the planting of trees means that the change in landscape character will not be particularly apparent from the outside. The strategic phasing of the construction of the proposed development will also mitigate against potential visual impacts. Residual impacts on Population and Human Health are predicted to be slight.

Population & Human health and Material Assets (Traffic)

Construction phase vehicle emissions have the potential to impact human health, however, as set out in section 9.3.3.4 it is considered that the risk to human health arising from construction activities is low. Traffic emissions mitigation measures will be implemented on site and as such impacts to human health are predicted to be imperceptible and short-term.

14.2.2 Biodiversity

Biodiversity and Hydrology & Hydrogeology (Water)

Site activities have the potential to give rise to some water pollution (although this is limited), and consequential impacts on flora and fauna that rely on or use that water within the same catchment. These potential impacts have been assessed, and the relevant measures will be in place to avoid any water pollution and subsequent effect on flora and fauna. Residual impacts on Biodiversity are predicted to be slight.

Biodiversity and Noise & Vibration

Site activity during the construction of the proposed development has the potential to give rise to noise and some vibration that could disturb fauna. This will occur only during the construction phases which will be temporary. The site is located adjacent to areas of existing development so potential effects are limited. The implementation of the mitigation measures presented in this chapter will ensure that there will be no significant impacts on biodiversity as a result of noise and vibration. Residual impacts on Biodiversity are predicted to be slight, short term, and negative.

Biodiversity and Land, Soils & Geology

The disturbance of soils and potentially bedrock within the proposed development area will result in habitat loss and some disturbance of fauna in the areas surrounding the works area. Where possible, the excavated soil will be used for reinstatement and landscaping works around the site. Residual impacts on Biodiversity are predicted to be slight.

14.2.3 Land, Soils and Geology

Land, Soils & Geology and Hydrology & Hydrogeology

The movement and/or removal of soils, overburden and rock as part of the construction activity has the potential to have secondary impacts on water quality in the absence of mitigation. Mitigation measures are presented in Chapter 7. Residual impacts on Hydrology and Hydrogeology are predicted to be slight.

14.2.4 Air and Climate

Air Quality and Climate has a limited number of interactions with other parameters. The most important interaction, in the context of this proposed development, is between air quality and human beings (Population and Human Health). Interactions between air quality and traffic also have the potential to be significant.

Air & Climate and Population and Human Health

Construction phase dust emissions and emissions of other less noticeable air pollutants have the potential to impact human health, however, as set out in section 9.3.3.4 it is considered that the risk to human health arising from construction activities is low. Dust and general emissions mitigation

measures will be implemented on site and as such impacts to human health are predicted to be imperceptible and short-term.

Air & Climate and Material Assets (Traffic)

Traffic related vehicle exhaust emissions have the potential to impact air quality and produce greenhouse gasses during both the construction and operational phases of the proposed development, however as set out in sections 9.2.5 and 9.3.3 of this ELAR mitigation measures will be implemented on site and as such impacts to Air and Climate are predicted to be imperceptible, negative in the short term and imperceptible, neutral in the long term.

14.3 Mitigation and Residual Impacts

Where any potential interactive negative impacts have been identified in the above, a full suite of appropriate mitigation measures has already been included in the relevant sections (Chapters 5-13) of the ELAR. The implementation of these mitigation measures will reduce or remove the potential for these effects. Information on potential residual effects, and their significance, is also presented in each relevant chapter. Based on the implementation of the mitigation measures set out in chapter 5-13 there will be no significant residual interactive impacts.