

---

## 15.0 INTERACTIONS OF THE FOREGOING

### 15.1 INTRODUCTION

The significant effects of the proposed development and the measures proposed to mitigate these effects have been outlined in this EIAR. However, in any development with the potential for environmental effect there is also the potential for interaction between effects of the different environmental aspects.

The result of these interactions may either exacerbate the magnitude of the effect or may in fact ameliorate it. As part of the requirements of an EIAR, the interaction of the effects on the surrounding environment needs to be addressed.

Table 15-1 overleaf outlines the different environmental aspects which have potential to interact as a result of the proposed development. These have been considered by the specialists when preparing this EIAR.

It is noted that as the Drehid WMF is currently operational and the facility is operated to Best Available Techniques (BAT), many of the interactions between environmental aspects presented in Table 15-1 do not have a significant effect as control measures are already in place to protect the environment.

While there is potential for the environmental aspects to interact and result in a cumulative effect, as described in the individual chapters of the EIAR, these assessments have noted that potential cumulative effect do not result in significant environmental effects.

*Table 15-1 Interaction between Environmental Aspects*

Interaction Matrix	Biodiversity	Soils, and Geology and Hydrogeology	Water	Landscape and Visual	Land Use	Traffic	Air Quality & Climate	Noise and Vibration	Cultural Heritage	Population and Human Health
Biodiversity		√	√	√		√	√	√		
Soils, and Geology and Hydrogeology			√		√				√	√
Water										√
Landscape and Visual						√		√	√	√
Land										
Traffic							√	√		√
Air Quality										√
Noise and Vibration										√
Cultural Heritage										
Population and Human Health										

## 15.2 DISCUSSION OF INTERACTIONS

In addition to Table 15-1, the following section summarises the primary interrelationships of aspects of the environment with the potential for significant effects as a result of the proposed project. As described in Chapter 2 (Description of the Proposed Project), there is potential for the proposed project to be a source of hazard or interact with other sources of hazard that could result in a major accident and/or disaster during its construction and operation. All identified potential hazards and source of hazards associated with the proposed project have been considered through the technical assessments of this EIAR (Chapter 5 to 16), and therefore any interactions are covered by the below summary.

### *15.2.1 Population and Human Health*

Population and Human Health will interact with other environmental aspects including landscape and visual impacts, air quality and climate, noise impacts and traffic impacts, associated with the proposed project.

#### **Interactions of Population and Human Health and Landscape and Visual Impacts**

There is a potential for interactions between these landscape and visual impacts and the residential amenity of those living, working or travelling in the area as well as tourism. There will be no significant negative effects on the landscape and visual setting of the surrounding sensitive receptors, and views towards the proposed development are frequently screened. Interactions will not be significant.

#### **Interactions of Population and Human Health, Air Quality and Climate, Land, Soils and Geology and Hydrology and Hydrogeology**

This interaction is primarily associated with the disturbance of ground within the proposed project site (which may result in suspended solids in watercourses and dust emissions) and the potential contamination of groundwater from landfill leachate (with associated contamination of water supplies). Suspended solids and other contaminants, unmitigated, may enter nearby watercourses and groundwater. Suspended solids could be transported off site by vehicles. Dust emissions, unmitigated, may impact on air quality. These potential impacts, along with detailed mitigation measures are discussed in detail within Chapters 7 (Land, Soils and Geology), 8 (Hydrology and Hydrogeology) and 12 (Air Quality and Climate) of the EIAR to reduce the potential direct and indirect impact on Population and Human Health from the proposed development. With mitigation, these works will have no significant interactions with Population and Human Health (specifically relating to residential amenity and human health).

#### **Interactions of Population and Human Health and Noise Impacts**

Noise and vibration impacts have been considered in Chapter 10 of the EIAR and it has been found that there are no significant negative effects anticipated for any sensitive receptor. Any potential noise effects will have the potential to negatively interact with residential amenity and human health.

#### **Interactions of Population and Human Health and Traffic Impacts with Noise and Air Quality**

Public perception of the construction phase will likely be influenced primarily from the impact of traffic movement. Any increase in traffic volumes has the potential to create noise and dust nuisance, thereby having the potential to interact with residential amenity and human health

for those living in the area. When mitigation measures are allowed for, this is not anticipated to be significant.

### *15.2.1.1 Landscape and Visual Impact*

#### **Interactions of Landscape and Visual and Population and Human Health**

As noted above, the landscape and visual impact of the proposed development may be considered to be one of the environmental impacts for any large scale development, which would have interactions with residential amenity and tourism. Taking into account all of the evidence, the proposed development will not result in a significant level of landscape and visual impact on the wider region. The proposal to provide the community benefit scheme will have a positive impact on residential amenity, tourism and health in the area. These potential Impacts are discussed in Chapter 5 of the EIAR (Population and Human Health), which finds there will be no significant negative impact on tourism as a result of the proposed project.

#### **Interactions of Landscape and Visual and Cultural Heritage with Tourism**

Negative landscape and visual impact on Cultural Heritage resources can arise with respect to archaeological features and their setting in the landscape. This would therefore create an interaction between these two topics. There is also a potential interaction with tourism associated with the setting of archaeological features, There will be no significant negative impacts on archaeology attractions (and associated tourism) in the region as discussed in Chapter 11 (Landscape and Visual Impacts) and Chapter 13 (Cultural Heritage).

#### **Interactions of Landscape and Visual and Noise and Vibration**

The use of landscape screening berms and the planting of vegetation thereon has the potential to reduce the effects of noise produced on the site of the proposed development, thereby reducing the significance.

### *15.2.1.2 Biodiversity*

#### **Interactions of Biodiversity, Lands, Soils and Geology and Hydrology and Hydrogeology**

Exposing soils during the construction phase has the potential, if not properly managed, to cause sedimentation of nearby watercourses. Excavation and removal of soils for the construction of permanent features such as buildings, hardstands and the landfill may potentially lead to habitat loss. The proposed on-site surface water management plan will ensure that there is no negative interaction between Lands, Soil and Geology, Hydrology and Hydrogeology and Biodiversity by controlling the runoff of water from the site (at greenfield run off rates) and via controlled and carefully designed surface water attenuation ponds and integrated constructed wetlands.

#### **Interactions of Biodiversity, Noise and Vibration and Traffic and Transport**

There is potential for interaction between biodiversity, noise and vibration and traffic and transport for the proposed development. However, as noted above, noise and vibration impacts are predicted to be within the relevant limits. Detailed baseline surveys of the biodiversity in the area of the proposed project have been undertaken and, as a result of the incorporation of the findings of the surveys into the project design and site layout plan, construction works will be carried out to avoid areas of highest importance for biodiversity on site. Traffic using the site will be restricted to the use of the designated internal access roads. Potential direct and indirect

effects on Natura 2000 sites have also been considered in the AA Screening Report and NIS that accompany this application and mitigation measures proposed, where appropriate.

### **Interactions of Biodiversity, Air Quality and Climate**

There is potential for interaction between biodiversity, and Air Quality and Climate during the construction and decommissioning phases of the proposed project. There is a potential for localised dust to be a nuisance for biodiversity in any given area. Any such impact would be localised and short-term, with mitigation described in Chapter 12 (Air Quality and Climate) to be used to minimise this.

#### **15.2.1.3 Traffic and Transportation**

### **Interactions of Traffic and Transport and Air Quality and Climate and Human Health**

There will be no significant interaction between Traffic and Transport and Air Quality and Climate for the proposed development, with the exception of exhaust emissions and dust from construction vehicles. This is addressed in Chapter 12 (Air Quality & Climate) of this EIA. This may also interact with Human Health due to reduced air quality.

### **Interactions of Traffic and Transport and Noise and Vibration**

There will be an interaction between Traffic and Transport and Noise and Vibration for the proposed development, as construction vehicles will result in increased noise and vibration along transport routes as they travel to and from the site. This is addressed in the Chapter 10 (Noise and Vibration).

#### **15.2.1.4 Cultural Heritage**

### **Interactions of Cultural Heritage and Lands, Soils and Geology**

The construction works (ground disturbance) associated with the proposed project will be monitored by a suitably qualified archaeologist working under licence. The potential impacts to Cultural Heritage are discussed in detail in Chapter 13 (Cultural Heritage), which finds there will be no significant negative impacts.

#### **15.2.1.5 Land, Soils and Geology**

### **Interactions of Land, Soils and Geology and Hydrology and Hydrogeology**

As materials are transported and moved around the site, there is a potential for silt runoff to negatively affect water quality. There is also a potential for leachate from the proposed landfill to contaminate groundwater. This is discussed in Chapter 8 (Hydrology and Hydrogeology) and mitigation measures are set out therein.

### **Interactions of Land, Soils and Geology and Land Use**

As peat is excavated from the site to construct the proposed development, the land use for the site of the proposed development will change from peatland to commercial waste infrastructure, with processing facilities.

### *15.2.2 Note on Risk of Major Accidents and Disasters*

It is not anticipated that the proposed development will be particularly susceptible to major accidents and natural disasters as it has been designed in such a manner to mitigate such risks. It is also considered that the proposed development does not have a significant effect resulting in the risk of major accidents and disasters. Any potential risks that the proposed development may pose to the environment as assessed within each of the environmental impact assessments within this EIAR. Threats to groundwater and surface water contamination are addressed in Chapter 8 (Hydrology & Hydrogeology), where the proposed infrastructure has been designed using proven and widely accepted construction methods and details. There will be a fire hydrant system set up through the site which can be used in the unlikely event of a fire to extinguish the flames. There will be no hazardous waste accepted at the proposed development, and it is not associated with or adjacent to a site that is governed by the Control of Major Accident Hazards Involving Dangerous Substances Regulations. The risk to humans or biota associated with major accidents or disasters at the proposed development is therefore not significant. Any risks associated with the movement of vehicles to and from the site (i.e. accidents and/or spillage) are mitigated through the use of specific haul routes, emergency response plans and a company system of enforcement with haulage companies. It is the responsibility of the waste permit holder to deal with/rectify any incident, although Bord na Mona would oversee any clean-up to ensure that the situation is addressed appropriately to prevent or minimise any potential environmental impact. This may also include ensuring that the appropriate statutory bodies such as the emergency services, County Council, EPA, IFI etc. are duly notified of the incident.

The proposed development has limited susceptibility to natural disasters. The Flood Risk Assessment (Appendix 8-2 accounts for climate change and associated flood events and found that the subject site is appropriately located in Flood Zone C in accordance with the Planning System and Flood Risk Management Guidelines. It is predicted that the proposed works will not adversely impact flood risk elsewhere in the catchment. The proposed fire hydrant system can be used to prevent the spread to fires at the site. There is a potential for a climate change associated increase in frequency and intensity of storm events during the life of the proposed development. This may require the brief limitation or pausing of works on the site to protect operatives from injury and to prevent damage or harm to buildings and the environment. Climate change and extreme weather do not pose a significant risk of a major accident or disaster at the proposed development.

### *15.2.3 Conclusion*

All environmental factors are interrelated to some extent. There are a number of interactions discussed above. Having studied the interaction of potential effects during the construction, operational and decommissioning phases it has been determined that no amplification effect is anticipated. The proposed project will have some positive effects on a national, regional and local level, particularly in terms of providing necessary infrastructure to deal with the future waste in Ireland.