Chapter 17

Interactions of the Foregoing
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INTRODUCTION

17.1 This chapter of the Environmental Impact Statement (EIS) describes the interactions between the various impacts identified in the previous chapters of the EIS, during both the construction and operational phases of the proposed development at Huntstown, North Road, Finglas, Dublin 11.

17.2 The project team assessed the potential impacts arising from the construction and operation of the proposed development. The interaction of environmental aspects was clearly identified, at an early stage in the project, to be an important factor to be considered in the full evaluation of the environmental impact associated with the proposed development.

17.3 A matrix method has been used, in which the environmental components addressed in the previous sections of this statement have been placed on both axes of a matrix, Table 17-1.

17.4 Where a potential for interaction has been identified, the following legend has been used:

- During the construction phase - ‘C’;
- During the operational phase - ‘O’;
- During both construction and operation - ‘CO’; and
- Where it is considered that there is no potential for an interaction, this is indicated by a ‘-‘.

17.5 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 EIS with a brief overview of some of the more pertinent interactions provided in this chapter.
Table 17-1 Matrix of Impact Interactions

<table>
<thead>
<tr>
<th></th>
<th>Human Beings</th>
<th>Air Quality &amp; Climate</th>
<th>Landscape &amp; Visual</th>
<th>Noise &amp; Vibration</th>
<th>Flora &amp; Fauna</th>
<th>Soils &amp; Geology</th>
<th>Hydrology</th>
<th>Hydrogeology</th>
<th>Cultural Heritage</th>
<th>Traffic &amp; Transport</th>
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Legend

<table>
<thead>
<tr>
<th>C</th>
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<th>O</th>
<th>Operational</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>Construction and Operation</td>
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<td>No interaction</td>
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</table>
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POTENTIAL INTERACTIONS

Human Beings

17.6 Construction activities such as excavation, earth moving and backfilling can generate dust, particularly in dry weather conditions. Using a screening assessment tool, the Air Quality and Climate assessment (Chapter 8) considers that at a minor to moderate construction site there is a risk that dust may cause an impact at sensitive receptors within 25m of the source of the dust generated. The nearest residential sensitive receptor to the centre of the subject site is located at a distance of over 500m. Therefore, the interaction is considered to be imperceptible.

17.7 The primary interaction between human beings and air quality during the operational phase will be as a result of the release of emissions to air associated with the combustion of biogas and emissions from vehicles travelling to and from the facility. However, on effective implementation of the proposed mitigation measures, no residual impacts are anticipated as a result of the proposed development.

17.8 Scheduled emission points operated within the proposed plant will be regulated through the EPA Licensing process. The Air Quality and Climate assessment demonstrates that the level of emissions arising from the proposed plant will not result in any air quality impact. This is in line with Irish and European assessment criteria limits, which have been set for the protection of human health.

17.9 An odour impact assessment was undertaken and is presented in Chapter 8. The predicted odour values at each residential and commercial receptor in the vicinity of the proposed plant, when all processes are operating, were assessed. The worst case odour impact is determined to be the receptor with the highest recorded ground level concentration (GLC) of odour at the 98th percentile of hourly averages for the worst case meteorological year, Dublin Airport 2004. Of all the receptors evaluated, Huntstown Power Station, is identified as the worst case receptor with a maximum predicted GLC of odour less than or equal to 0.88 OuE/m³ at the 98th percentile of hourly averages for...
the worst case meteorological year. This is just 58% of the odour impact
criterion of 1.5 OuE/m³ stated in Irish EPA Guidance AG4 (page 70).

17.10 Impacts during construction may arise from site development works,
emergence of new structures and from general construction activity and
traffic. Noise and site lighting arising from such activities also tend to draw
attention to the works and as such has the effect of increasing visual
awareness. However, the subject site is located on the edge of an urban
environment and adjoins existing industrial development which is already
illuminated at night.

17.11 When operational, the proposed development will be viewed as an extension
of the industrial development in the area, most particularly Huntstown Power
Station, which is of appreciably greater scale.

17.12 The Noise and Vibration assessment (Chapter 10) considers the impact of
the noise generated during both the construction and normal operational
phases of the proposed plant on the nearest noise sensitive locations
(NSL’s). Impacts at the nearest residential NSL’s will be barely perceptible to
the human ear and will be temporary in nature.

17.13 The operational noise assessment of fixed plant associated with the
proposed plant demonstrates that there will be an imperceptible impact at the
nearest NSL’s. While the operational noise assessment of HGV movements
associated with the site has established that the impact on the nearest
residential receptors as a result of traffic movements will be imperceptible.

17.14 During the construction and operational phases, species using habitats in
close proximity to the development site may experience an increase in
disturbance as a result of increased human activity. However, to a certain
extent the wildlife within these areas will be habituated to varying degrees of
disturbance due to existing quarrying operations, the operation of Huntstown
Power Station and other levels of human disturbance including light pollution
throughout the wider surrounding area.
INTERACTIONS OF THE FOREGOING 17

17.15 The Traffic and Transport assessment (Chapter 16) demonstrates that the impact of the operational phase of the proposed development will result in the generation of 55No. additional vehicular trips (39No. HGV and 16No. LGV) on the local road network. These are upper value assessment figures in excess of the likely daily average traffic generation. Given the context of the application area within an already established industrial area, the interaction with human beings is not considered to be significant.

Air Quality and Climate

17.16 The potential interaction between air quality and human beings is described in section 17.6 to 17.9 above.

17.17 The Air Quality and Climate assessment, presented in Chapter 8, indicates that provided industry standard dust mitigation measures are employed at the site during construction, it is highly unlikely that dust would affect vegetation based on guidance published by the National Roads Authority for a major scheme.

17.18 Emissions as a result of increased traffic movements associated with both the construction and operational phases have been assessed within Chapter 8 of this EIS. The model demonstrates that emissions will remain well within the air quality limits for the protection of human health.

Landscape and Visual

17.19 The interaction between landscape and visual and human beings is described in section 17.10-17.11 above.

17.20 The subject site is located alongside an identified nature development area (NDA) within the Green Infrastructure Plans (Sheet 15) of the Fingal Development Plan 2011 – 2017. While no part of the application area is identified as part of the NDA, protection and enhancement of ‘green infrastructure’ / ecological corridors is recommended. To this end the existing hedgerow and other planting outside of the northern boundary will not be impacted by the proposed development and will be maintained to retain a green infrastructure network. A hedgerow will be planted along the southern...
boundary of the site comprising 80% Hawthorn and 20% Field Maple. This will serve to augment the existing hedgerow network within the area and will act as an ecological corridor supporting both mammals and birds.

17.21 The plant will be lit at night by 5m high light standards fitted with cut off horizontal cowls to minimise light spill and direct light downwards. The area surrounding the subject site is already subject to artificial lighting and any additional lighting at the plant is unlikely to add significantly to the extent and overall levels of light pollution within the local area. It is considered that the majority of species within the immediate and surrounding area will be habituated to the existing levels of light and they would readily adapt to the additional lighting at the Plant.

17.22 Additional traffic movements arising as a result of both the construction and operation of the proposed plant may interact with visual amenity. However, there is an established presence of HGV’s within the area as a result of the operation of Huntstown Quarry and Power Station.

Noise and Vibration

17.23 The interaction between noise (both traffic and fixed plant) and human beings is described in section 17.12-17.14 above.

17.24 The operational noise assessment of HGV movements associated with the site has established that the impact on the nearest residential receptors as a result of traffic movements will be imperceptible.

Flora and Fauna

17.25 Construction activity, such as noise and movement created by people and machinery will generate a certain amount of disturbance to local mammals and birds. Birds and mammals in this area will already be habituated to noise as a result of operations at the quarry and power station.

17.26 Interactions between flora and fauna and emissions associated with the plant during the construction phase are outlined in section 17.7 above.
The Air Quality Assessment presented in Chapter 8 of the EIS, indicates that the predicted cumulative process emissions would not exceed the annual lower assessment threshold limits set for the protection of vegetation for \( \text{NO}_x \) and \( \text{SO}_2 \), in accordance with the Air Quality Standard Regulations 2011.

Existing drainage at the application area is predominantly through ground percolation. Whilst there is small section of open ditch flowing along part of the western boundary which lies outside the application site, this appears to remain dry, except after heavy and prolonged rainfall and no longer has a drainage function. Although any pollution incident, as a result of silt mobilisation, fuel spillages, oil leakages or other accidents, has the potential to affect water quality in the drainage system(s) and their associated habitats and species, it is considered that the environmental risk is small and would be further reduced by the implementation of mitigation measures.

All construction works near water have an associated risk of pollution as a result of fuel spillages, oil leakages and other accidents that could lead to an adverse impact on water quality and consequently the habitats and species present in any such affected watercourse. The stripping of vegetation, ground disturbance and improper storage of stripped soils near to a watercourse increases the risk of large volumes of material being washed into watercourses during periods of heavy and prolonged rainfall or flood events indirectly affecting water quality through increased turbidity levels and sedimentation as well as the potential mobilisation of a variety of substances that may be contained within the soils. Where soil stripping occurs the resulting excavated materials will be separated into topsoil and subsoil stockpiles. Temporary storage of spoil and hardcore will be carefully managed in such a way as to prevent any potential negative impact on the receiving environment. Storage of soils will not be carried out in any location where runoff can occur into watercourses.

Soils and Geology, Hydrology and Hydrogeology

Construction activities such as excavation, earth moving and backfilling can generate dust, particularly in dry weather conditions. The extent of dust generation is dependent on the nature of the material (soils, peat, sands,
gravels, silts etc.) and the location of the construction activity. In addition, the potential for dust dispersion depends on the local meteorological factors such as rainfall, wind speed and wind direction. The construction phase of this proposal is deemed for the purposes of this assessment to be of a minor to moderate scale. Using this screening assessment tool, at a minor to moderate construction site there is a risk that dust may cause an impact at sensitive receptors within 25m of the source of the dust generated. The nearest residential sensitive receptors to the centre of the subject site is located at a distance of over 500m, therefore, the impact from construction activities can be considered to be imperceptible.

17.31 The interactions between soils and geology with ecology are described section in 17.30.

17.32 During construction there will be plant and machinery required on site and as a result it is appropriate to adopt best working practices and measures to protect the local surface water. Accidental spillage of fuels or chemical reagents and the generation of suspended solids on site pose a potential contamination risk. To minimise this risk mitigation measures identified in Chapters 12, 13 and 14 will be incorporated into the Construction Environmental Management Plan (CEMP). These measures which ensure include the reduction or elimination of pollution risk.

Cultural Heritage

17.33 As specified within Chapter 15, Cultural Heritage, there is potential for previously unrecorded findings of cultural heritage value to be discovered during the construction phase of the proposed development. Potential interactions cannot therefore be quantified at this stage. All groundworks associated with the proposed development will be archaeologically monitored under licence to the Minister for the Environment, Community and Local Government.

Traffic and Transport

17.34 Potential interactions associated with increased traffic movements as a result of the construction and operation of the proposed plant with human beings,
air quality, landscape and visual and noise and vibration are addressed in the preceding sections of this chapter.