CHAPTER 14

INTERACTIONS OF THE FOREGOING

14.0 INTERACTIONS OF THE FOREGOING

14.1 INTRODUCTION

All environmental factors are interlinked to a degree such that interrelationships exist on numerous levels. Interactions within the study area can be one-way interactions, two-way interactions and multiple-phase interactions which can be influenced by the proposed development. As this EIAR has been prepared by a number of specialist consultants an important aspect of the EIA process is to ensure that interactions between the various disciplines have been taken into consideration.

As this EIAR document has been prepared by a number of specialist consultants, an important aspect of the EIA process is to ensure that interactions between the various disciplines have been taken into consideration. This chapter of the EIAR was prepared by Luke Wymer, BA, MRUP, Adv. Dip. Planning and Environmental Law, Dip. Project Management, Prof. Cert. Environmental Management, MIPI, Senior Associate Director at JSA and reviewed by Paul Turley, BA, MRUP, Dip Environmental & Planning Law, MIPI, Executive Director with John Spain Associates.

The purpose of this chapter of the EIAR is to draw attention to significant interaction and interrelationships in the existing environment. In preparing and co-ordinating this EIAR, John Spain Associates Planning and Development Consultants ensured that each of the specialist consultants liaised with each other and dealt with the likely interactions between effects predicted as a result of the proposed development, ensuring that appropriate mitigation measures were incorporated into the design process.

A specific section on interactions with other relevant factors is included in each of the environmental topic chapters of this EIAR. This approach is considered to meet with the requirements of applicable EU and Irish law. In this regard, the aspects of the environment likely to be significantly affected by the proposed development during both the construction and operational phases have been considered in detail in the relevant chapters of this EIAR, and, in addition, likely interactions between one topic and another have been discussed under each topic chapter by the relevant specialist consultant. In practice many impacts have slight or subtle interactions with other disciplines. This chapter highlights those interactions which are considered to potentially be of a significant nature. Discussions of the nature and effect of the impact is primarily undertaken within each of the relevant chapters, while this chapter identifies the most important potential interactions.

14.2 INTERACTIONS

The relevant consultants liaised with each other where necessary to review the proposed scheme and incorporate suitable mitigation measures wherever necessary. As demonstrated throughout this EIAR, most inter-relationships are neutral in impact when the mitigation measures proposed are incorporated into the design, construction or operation of the proposed development.

In addition to the above a series of standalone reports have been prepared to accompany the application and which have helped inform the above chapters of the EIAR where relevant. Waterman Moylan have prepared an Engineering Assessment Report, a Site Specific Flood Risk Assessment, a Construction and Environmental Management Plan, an Energy Statement, DMURS statement of consistency, Car Parking Rationale and Mobility Management Plan, Planning Stage Structural Report, and Public Transport Capacity Assessment Report. OCSC have prepared a Traffic Impact Assessment. AWN have prepared a Resource and Waste Management Plan and an Operational Waste Management Plan. EnviroGuide have prepared an Appropriate Assessment Screening Report and a Natura Impact Statement. These are all included as separate standalone reports with the application and have informed the relevant environmental assessments and are clearly referenced where relevant.

This section identifies the potential of unplanned but potential interactions that could occur during construction and operation of the proposed development. The following table identifies where it is predicated that interactions could occur.

Interaction	Population & Human Health	Archaeology and Cultural Heritage	Biodiversity	Landscape and Visual	Land and Soils	Water	Air Quality and Climate	Noise and Vibration	Wind	Material Assets	Transportation
Population & Human Health		✗	✗	✗	✗	✗	✗	✓	✗	✗	✓
Archaeology & Cultural Heritage	✗		✗	✗	✗	✗	✗	✗	✗	✗	✗
Biodiversity	✗	✗		✓	✓	✓	✗	✗	✗	✗	✗
Landscape and Visual	✗	✗	✓		✗	✗	✗	✗	✗	✗	✓
Land and Soils	✗	✗	✓	✗		✓	✗	✗	✗	✓	✗
Water	✗	✗	✓	✗	✓		✗	✗	✗	✗	✗
Air Quality and Climate	✗	✗	✗	✗	✗	✗		✗	✗	✗	✓
Noise and Vibration	✓	✗	✗	✗	✗	✗	✗		✗	✗	✓
Wind	✗	✗	✗	✗	✗	✗	✗	✗		✗	✗
Material Assets	✗	✗	✗	✗	✓	✗	✗	✗	✗		✗
Transportation	✓	✗	✗	✓	✗	✗	✓	✓	✗	✗	
	✓ Interaction ✗ No Interaction										

Table 14.1: Table of interactions between the environmental factors

14.2.1 POPULATION & HUMAN HEALTH

As referenced throughout the chapter, there are numerous inter-related environmental topics described in detail throughout this EIAR document which are of relevance to human health. This chapter of the EIAR has been instructed by updated guidance documents reflecting the changes within the 2014 EIA Directive. These documents

include the EU and Irish guidelines for preparation of an EIAR and carrying out an EIA. Therefore, in line with the guidance documents referred to, this chapter of the EIAR focuses primarily on the potential likely and significant impact on Population and Human Health in relation to health effects/issues and environmental hazards from the other environmental factors and interactions that potentially may occur.

Where there are identified associated and inter-related potential likely and significant impacts which are more comprehensively addressed elsewhere in this EIAR document, these are referred to. However, the relevant environmental topic chapter of this EIAR document contains a more detailed assessment in respect of the interaction of each environmental topic with population and human health.

14.2.2 ARCHAEOLOGY AND CULTURAL HERITAGE

No interactions were identified in the Archaeology and Cultural Heritage Chapter.

14.2.3 BIODIVERSITY

There are interactions between this Biodiversity Chapter and those of Water (chapter 8), Land and Soils (Chapter 7) and Landscape and Visual (chapter 6).

In terms of Land and Soils, there is overlap with the biodiversity chapter in that the potential impacts of the construction works, through excavation, construction etc., have the potential to adversely affect the receiving environment; both geological and ecological. The mitigation measures in both chapters overlap somewhat as they deal with protecting the receiving environment from the construction works e.g., protecting waterbodies from pollution and sedimentation.

Likewise with Hydrology, the Gaybrook Stream potentially links to the Malahide Estuary and so potential impacts to ecological receptors downstream of the Site are considered. Again, the potential for the Construction Phase to impact on receiving waterbodies and ecology in the vicinity of the Site is addressed via the mitigation measures proposed in these chapters.

In terms of Landscape and Visual, the proposed landscaping of the Site interacts with its biodiversity and ecology; through the changes that will occur to the existing habitats and flora at the Site. The landscaping proposals will entail losses and contributions in terms of vegetation at the Site, which in turn will affect the ecology of the Site. The Site in its current condition is not of high ecological value, and the proposed landscaping will not result in significant adverse effects in this regard.

14.2.4 LANDSCAPE AND VISUAL IMPACT

Interactions in respect of the landscape and visual aspects of the proposed development relate to the architectural design of the proposed development and the landscape proposals for the site, as summarised in the design-related mitigation measures in Section 6.6.

The landscape proposals also relate to biodiversity on the site, both existing and proposed, in that they seek to protect and conserve habitat of value, most notably along the Gaybrook stream, and to enhance biodiversity within the new planting proposals across the proposed scheme.

14.2.5 LAND AND SOILS

The most significant interactions with land, soils, geology and hydrogeology in between water and hydrology. Due to the inter-relationship between groundwater and surface water the discussed impacts are considered applicable to Chapter 8. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all surface and groundwater legislative limits and therefore the

predicted impact is short-term, negative and imperceptible with respect to the construction phase and long-term, neutral and imperceptible with respect to the operational phase.

14.2.6 WATER

The most significant interactions with surface water is between land, soils, geology and hydrogeology population and human health and air quality. Due to the inter-relationship between groundwater and surface water the discussed impacts are considered applicable to Chapter 7 (Land and Soils). The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all surface and groundwater legislative limits and therefore the predicted impact is short-term, negative and imperceptible with respect to the construction phase and long-term, neutral and imperceptible with respect to the operational phase.

14.2.7 AIR QUALITY AND CLIMATE

Air quality does not have a significant number of interactions with other topics. The most significant interactions are between population and human health and air quality. An adverse impact due to air quality in either the demolition, construction or operational phase has the potential to cause health and dust nuisance issues. The mitigation measures that will be put in place at the proposed development will ensure that the impact of the proposed development complies with all ambient air quality legislative limits and therefore the predicted impact is short-term, negative and imperceptible with respect to the construction phase and long-term, neutral and imperceptible with respect to the operational phase.

Interactions between air quality and traffic can be significant. With increased traffic movements and reduced engine efficiency, i.e. due to congestion, the emissions of vehicles increase. The impacts of the proposed development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the impact of the interactions between traffic and air quality are considered to be imperceptible.

With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and land and soils. No other significant interactions with air quality have been identified.

14.2.8 NOISE AND VIBRATION

In compiling this impact assessment, reference has been made to the project description provided by the project co-ordinators, project drawings provided by the project architects and traffic flow projections associated with the development provided by the traffic consultants. There is also an impact interaction with Human Health, which has informed Chapter 3- Population and Human Health of this EIAR.

14.2.9 MICROCLIMATE AND WIND

The interactions in respect to Microclimate and Wind occurred during the design development of the scheme, with PCOT and Arrow Architects and Mitchell + Associates Landscape Architects.

14.2.10 MATERIAL ASSETS

Interactions between Material Assets and other environmental topics are outlined throughout this EIAR document. The likely interactions between Material Assets and other environmental factors include interactions between the proposed drainage and wastewater arrangements and the water chapter of the EIAR. There is an interaction between Municipal Waste and Land and Soils in terms of the quantity of material to be removed from the site. There is also an interaction between Urban Settlements and Ownership and Access and Transportation.

14.2.11 MATERIAL ASSETS - TRANSPORTATION

Construction Stage

There is a potential interaction with human health during the Construction Phase due to noise, dust, air quality and visual impacts which are discussed in the relevant chapters of this EIAR. In addition, temporary traffic management will be required to facilitate connections to existing utilities in the existing roads.

The traffic impacts, which would also be temporary in duration are not considered to be significant due to the implementation of the mitigation measures identified in Section 13.10.1.

Operational Stage

Noise and air impacts generated by increased traffic flows have been assessed in the Air and Noise Chapters of the EIAR.

14.3 CONCLUSION

This chapter has summarised and addressed the interactions between environmental topics as discussed within the preceding chapters of the EIAR.

The purpose of this chapter of the EIAR is to draw attention to significant interaction and interrelationships in the existing environment. In preparing and co-ordinating this EIAR, John Spain Associates Planning and Development Consultants ensured that each of the specialist consultants liaised with each other and dealt with the likely interactions between effects predicted as a result of the proposed development, ensuring that appropriate mitigation measures were incorporated into the design process where relevant.