CHAPTER 15:

INTERACTIONS

15

CHAPTER CONTENTS

15.0 INTERACTIONS

15.1 INTRODUCTION

This chapter of the EIA Report addresses potential interactions and inter-relationships between the environmental factors discussed in the preceding chapters. This covers both the construction and operational phase of the Proposed Development.

This chapter has been produced following the guidance within, the EIA Directive, the *Planning and Development Act 2000* (as amended), the EPA *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* 2022.Directive 2011/92/EU, as amended by Directive 2014/52/EU, and section 171A of the Planning and Development Act, as amended, both provide that an EIA shall identify, describe and assess in an appropriate manner, in the light of each individual case, the interaction between the following factors:

a) human beings, fauna and flora population and human health;
b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
c) land, soil, water, air and climate and landscape;
d) material assets, cultural heritage and the landscape.

In accordance with the guidance, not only are the individual significant impacts required to be considered when assessing the impact of a development on the environment, but also the interactions and interrelationships between these environmental factors be identified and assessed. The interactions and interrelationships between the environmental factors have been considered under the subheadings as set out in the EIA Report.

The majority of the EIA Report chapters have already included and described assessments of potential interactions between a number of environmental factors. The quality, magnitude and duration of potential impacts are defined in accordance with the criteria provided in the EPA 2022 Guidance as outlined in Chapter 1 (Introduction). This section of the assessment presents a summary and assessment of the identified interactions.

15.2 POPULATION AND HUMAN HEALTH AND ITS INTERACTION WITH:

15.2.1 Land, Soils and Hydrogeology:

Construction Phase

The Proposed Development land use is permitted under the lands' zoning designation in the DCC Development Plan 2022 – 2028. Chapter 14 of the DCC Development Plan 2022-2028 states that '*Ideally, a mix of uses should occur both vertically through the floors of buildings as well as horizontally along the street frontage'* – this landmark office development will contribute to the vertical expansion of the city.

If contaminated material is encountered it will be required to be removed and disposed by a licenced contractor to an appropriate waste facility. Material that is exported from site, if not correctly managed or handled, could impact negatively on human beings (onsite and offsite) as well as water and soil environments. Construction of the Proposed Development will not impact on any domestic wells or any groundwater protection areas.

Taking into account the design and mitigation measures set out in Chapter 5 of this EIA Report, there is no potential for negative interaction between Population and Human Health, and Land, Soils, Geology and Hydrogeology during the construction phase. The interaction is considered to be ***neutral***, ***imperceptible***, and ***short term***.

Operational Phase

There are no potentially significant interactions identified between Human Health and Populations, and Land, Soils, Geology and Hydrogeology during the operational phase.

15.2.2 Hydrology:

Construction Phase

The construction phase of the Proposed Development has the potential to impact (without mitigation) on the water quality via unmitigated pollutants entering the Liffey Estuary. Potential pollutants include increased suspended solids, concrete washout through accidental spillage, hydrocarbons and other ecotoxic chemicals through accidental spillage and wastewater through accidental discharge. These have the potential to interact negatively on human health, if downstream watercourses are used for water supply or recreational use, although this is not the case for the Liffey Estuary.

Taking into account the design and mitigation measures set out in Chapter 6 of this EIA Report, there is no potential for negative interaction between Human Health and Populations, and Hydrology during the construction phase. The interaction is considered to be ***neutral, imperceptible*** and ***short-term***.

Operational Phase

A reduction in water quality via unmitigated pollutants entering the Liffey Estuary has the potential to lead to negative impacts on human health and populations. Hydrocarbons and petroleum products for example have the greatest risk for human health when they are in drinking water. However, it is noted that there are no recorded Recreational Waters, Bathing Waterbodies, or Surface Water Drinking RPA, located downstream in the Liffey Estuary.

The potential for unmitigated off-site flooding as a result of the increased hardstanding areas, and due to the flood risk at the site the Proposed Development has the potential to impact on human health, populations, and material assets located downstream of the site. However, adequate mitigation and sustainable urban drainage systems to attenuate stormwater is designed into the development and will mitigate this risk.

Taking into account the design and mitigation measures set out in Chapter 6 of this EIA Report, there is no potential for negative interaction between Human Health and Populations, and Hydrology during the operational phase. The interaction is considered to be ***neutral, imperceptible***, and ***long term***.

15.2.3 Biodiversity:

Construction Phase

There are no potentially significant interactions identified between Human Health and Populations, and Biodiversity during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Human Health and Populations, and Biodiversity during the operational phase.

15.2.4 Air Quality and Climate:

Construction Phase

There is a low risk of dust-related human health impacts during the construction phase of the Proposed Development. As a result, best practice mitigation measures will be put in place during the construction of the Proposed Development (as outlined in Chapter 8) to ensure that the impact of the Proposed Development complies with all ambient air quality legislative limits.

Taking into account the design and mitigation measures set out in Chapter 8 of this EIA Report, there is no potential for negative interaction between Human Health and Populations, and Air Quality and Climate during the construction phase. The interaction is considered to be ***short-term, direct, negative, imperceptible***.

Operational Phase

There are no potentially significant interactions identified between Human Health and Populations, and Air Quality and Climate during the operational phase.

15.2.5 Noise and Vibration:

Construction Phase

As detailed in Chapter 10 (Noise and Vibration), during the construction phase of the project there is the potential for short-term noise impacts on nearby noise sensitive properties due to noise emissions from site activities. The application of binding noise limits and hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact is kept to a minimum as far as practicable.

Taking into account the design and mitigation measures set out in Chapter 10 of this EIA Report, there is potential for negative interaction between Human Health and Populations, and Noise and Vibration during the construction phase. The interaction is considered to be ***negative, moderate*** to ***significant*** and ***short term impact*** at the nearest sensitive receptors.

Operational Phase

There are no potentially significant interactions identified between Population and Human Health, and Noise and Vibration during the operational phase.

15.2.6 Landscape and Visual Impacts:

Construction Phase

The physical construction stage works will have an impact on the landscape in the immediate context of the Proposed Development. The mitigation measures set out in Volume 2 (Heritage, Townscape, Landscape and Visual Impact Assessment) of this EIAR are likely to have the greatest effect in the areas closer to the site, where hoarding

would screen views of the construction activities related to the lower elements of the Proposed Development.

Taking into account the design and mitigation measures set out in Volume 2 (Heritage, Townscape, Landscape and Visual Impact Assessment) of this EIA Report, there is potential for negative interaction between Human Health and Populations, and Landscape and Visuals during the construction phase. The interaction is considered to be ***negative, slight*** to ***moderate,*** and ***short term***.

Operational Phase

The high quality design of the Proposed Development ensures that it is likely to complement and enhance the character, legibility and connectivity of the North Wall Quay area, and it is considered that the Proposed Development would add interest to North Wall Quay's regenerated waterfront.

Taking into account the design and mitigation measures set out in Volume 2 (Heritage, Townscape, Landscape and Visual Impact Assessment) of this EIA Report, there is potential for interactions between Human Health and Populations, and Landscape and Visual Impact during the operational phase. The interaction is considered to be ***permanent*** and range from ***neutral*** (the significance of ***neutral*** impacts are ***very slight*** to ***moderate***) to ***positive*** (the significance of ***positive*** impacts are ***slight*** to ***substantial***)***.***

15.2.7 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Population and Human Health, and Archaeological, Architectural and Cultural Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Population and Human Health, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.2.8 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

Construction phase impacts to human health as a result of waste are primarily associated the indirect effect of litter issues resulting in increase in vermin. Mismanagement of demolition and soil material can potentially lead to air / dust impacts. There are all also potential risks to human health associated with accidents when handling and transporting earthworks and wastes.

The Proposed Development will have an impact on material assets such as water supply, power supply and road infrastructure. The individual chapters of this EIA Report Chapters 12, 13, and 14 (Traffic and Transportation; Waste Management; and Material Assets - Utilities) have assessed the capacities of the available infrastructure to accommodate the Proposed Development and the implementation of the mitigation measure proposed in these chapters will ensure there are no residual negative impacts on the local population.

Taking into account the design and mitigation measures set out in Chapters 12, 13, and 14 (Traffic and Transportation; Waste Management; and Material Assets - Utilities) of this EIA Report, there is no potential for negative interaction between Human Health and Populations, and Material Assets during the construction phase. The interaction is considered to be ***neutral, not significant***, *and* ***short-term***.

Operational Phase

Similar risks to those described above for the construction phase associated with improper waste management during the operational phase could lead to litter and associated vermin. There is the potential risks when untrained staff and waste contractors use waste equipment or move waste receptacles improperly.

The Proposed Development will have a demand on material assets such as surface water drainage, water supply, wastewater drainage, power supply and road infrastructure. Chapters 12, 13, and 14 (Traffic and Transportation; Waste Management; and Material Assets - Utilities) have reviewed the capacities of the available infrastructure to accommodate the Proposed Development and the implementation of the mitigation measure proposed in these chapters will ensure there are no residual negative impacts on the local population.

Taking into account the design and mitigation measures set out in Chapters 12, 13, and 14 (Traffic and Transportation; Waste Management; and Material Assets - Utilities) of this EIA Report, there is no potential for negative interaction between Human Health and Populations, and Material Assets during the operational phase. The interaction is considered to be ***neutral, not significant*** *and* ***long term***.

15.3 LAND, SOILS, GEOLOGY AND HYDROGEOLOGY AND ITS INTERACTION WITH:

15.3.1 Hydrology:

Construction Phase

The construction phase of the Proposed Development has the potential for contaminated run-off from accidental leakages and discharges to ground which has the potential to result in a local impact on soil and water quality, which could then migrate to the . The proposed construction phase mitigation means that the Proposed Development will not result in significant negative impact on surface water quality in the local area.

Taking into account the design and mitigation measures set out in Chapter 5 and 6 of this EIA Report, there is a residual negative interaction between Land, Soil, Geology and Hydrogeology and Hydrology during the construction phase. The interaction is considered to be ***neutral***, ***imperceptible*** and ***short term***.

Operational Phase

The development site and its surrounding area have in their recent history generally comprised impermeable surfaces, with minimal opportunity for direct infiltration of surface water to ground.

There are therefore no potentially significant interactions identified between Land, Soils, Geology and Hydrogeology, and Hydrology during the operational phase.

15.3.2 Biodiversity:

Construction Phase

The construction phase of the Proposed Development has the potential for contaminated run-off from accidental leakages to contaminate soil and groundwater, enter the watercourse and impact on local biodiversity and European Sites downstream. Furthermore, dust emissions from exposed earthworks has the potential to settle on plants causing impacts to local ecology.

Taking into account the design and mitigation measures set out in Chapters 5 and 7 of this EIA Report, there remains a residual negative interaction between Land, Soil, and Biodiversity during the construction phase. The interaction is considered to be ***negative***, ***not significant***, and ***short term***.

Operational Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Biodiversity during the operational phase.

15.3.3 Air Quality and Climate:

Construction Phase

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between air quality and land and soils in the form of dust emissions. 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. In this assessment, the impact of the interactions between land and soils and air quality are considered to be ***long-term, imperceptible*** and ***neutral***.

Operational Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Air Quality and Climate during the operational phase.

15.3.4 Noise and Vibration:

Construction Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Noise and Vibration during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Noise and Vibration during the operational phase.

15.3.5 Landscape and Visual Impacts:

Construction Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Landscape and Visual Impacts during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Landscape and Visual Impacts during the operational phase.

15.3.6 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Archaeological, Architectural and Cultural Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Land, Soils and Hydrogeology, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.3.7 Material Assets, including Utilities, Waste Management, and Transport:

Construction Phase

During the construction phase, excavated soil, stone and clay (c. 120,000m^3) will be generated from the excavations required to facilitate site levelling, construction of new foundations, installations of site services and basement. It is estimated that all of the excavated material will need to be removed off-site. When material has to be taken off-site, it will be taken for reuse or recovery, where practical, with disposal as a last resort. Land, Soils, Geology and Hydrogeology impacts during the construction and operational phases are addressed in Chapter 5 (Land, Soils, Geology and Hydrogeology) Adherence to the mitigation measures in Chapter 5, Chapter 13 and the requirements of the RWMP (Appendix 13.1), will ensure the effect is ***long-term*****,** ***imperceptible*** and ***neutral.***

Operational Phase

There are no potentially significant interactions identified between Land, Soils, Geology and Hydrogeology, and Material Assets during the operational phase.

15.4 HYDROLOGY AND ITS INTERACTION WITH:

15.4.1 Biodiversity:

Construction Phase

In the absence of mitigation, surface water run-off during the construction phase may contain increased silt levels or otherwise become polluted from construction activities. Suspended solids in runoff water may result in an increase in suspended sediment load, resulting in increased turbidity, which may damage downstream water quality and habitats. The design measures and mitigation measures (outlined in Chapters 6 and 7) will be implemented by the construction contractor to ensure that there is no change in the overall water regime at water dependent habitats on site.

Taking into account the design and mitigation measures set out in Chapters 6 and 7 of this EIA Report, there remains a residual negative interaction between Hydrology, and Biodiversity during the construction phase. The interaction is considered to be ***negative***, ***not significant***, and ***short term***.

Operational Phase

The use of SuDS during operations (in particular a combined green/blue roof system) will mean that the development will result in neutral water impacts in the operational phase with regard to runoff rates and flooding risk. Furthermore, with the implementation of mitigation (design) measures there will be no measurable impact on the receiving water quality as a result of the development.

Taking into account the design and mitigation measures set out in Chapters 6 and 7 of this EIA Report, there remains a residual interaction between Hydrology, and Biodiversity during the operational phase. The interaction is considered to be ***neutral***, ***imperceptible*** and ***long term***.

15.4.2 Air Quality and Climate:

Construction Phase

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between air quality and hydrology in the form of dust emissions that may deposit in surface waters.

Mitigation measures implemented during the construction phase will ensure that the deposition of dust is minimised. With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and hydrology. The interaction is considered to be ***negative***, ***not significant***, and ***short term***.

Operational Phase

Climate change has the potential to increase the risk of flooding in future years due to increased rainfall. The hydrology assessment has concluded that the Proposed Development is deemed to be suitable for the site location with regard to flood risk. The development has been designed to retain stormwater volumes predicted to be experienced during extreme rainfall events. This is defined as the volume of storm water generated during a 1-in-100-year storm event, increased by 30% for the predicted effects of climate change.

Therefore it can be determined that there is no significant risk to the Proposed Development or off site as a result of increased rainfall. The interaction is considered to be ***negative***, ***not significant***, and ***long term***.

15.4.3 Noise and Vibration:

Construction Phase

There are no potentially significant interactions identified between Hydrology, and Noise and Vibration during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Hydrology, and Noise and Vibration during the operational phase.

15.4.4 Landscape and Visual Impacts:

Construction Phase

There are no potentially significant interactions identified between Hydrology, and Landscape and Visual Impacts during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Hydrology, and Landscape and Visual Impacts during the construction phase.

15.4.5 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Hydrology, and Archaeological, Architectural and Cultural Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Hydrology, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.4.6 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

In the absence of mitigation, surface water run-off during the construction phase may contain increased silt levels or otherwise become polluted from construction activities. Suspended solids in runoff water may result in an increase in suspended sediment load, resulting in increased turbidity, which may damage downstream surface water infrastructure.

Taking into account the design and mitigation measures set out in Chapter 6 (Hydrology) and Chapter 15 (Material Assets - Utilities) of this EIA Report, there remains a residual neutral interaction between Land, Soils, Geology and Hydrogeology, and Material Assets during the construction phase. The interaction is considered to be ***neutral***, ***imperceptible***, and ***short term***.

Operational Phase

The use of SuDS during operations will mean that the development will result in neutral water impacts in the operational phase with regard to runoff rates and flooding risk.

Taking into account the design and mitigation measures set out in Chapter 6 (Hydrology) and Chapter 15 (Material Assets - Utilities) of this EIA Report, there remains a residual neutral interaction between Land, Soils, Geology and Hydrogeology, and Material Assets during the construction phase. The interaction is considered to be ***neutral***, ***imperceptible***, and ***long term***.

15.5 BIODIVERSITY AND ITS INTERACTION WITH:

15.5.1 Air Quality and Climate:

Construction Phase

Dust generation can occur during extended dry weather periods as a result of construction traffic along haul routes and from construction activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability of the plant as well as other effects. Dust mitigation measures will be implemented on site as set out in Chapter 8 of the EIAR. With the implementation of these mitigation measures dust emissions will be minimised and impacts will be ***short-term, negative*** and ***imperceptible*** with respect to biodiversity.

Operational Phase

There are no potentially significant interactions identified between Air Quality and Climate, and Biodiversity during the operational phase.

15.5.2 Noise and Vibration:

Construction Phase

There is a potential risk of noise and vibration disturbance to birds during the construction phase. Mitigation measures include limiting working hours and timing the daily construction activities and keeping the most noisy activities around the midday period where bird activity is at a minimum. It is anticipated potential effects will not be significant above local geographic scale.

Taking into account the design and mitigation measures set out in Chapter 9 of this EIA Report, there is a residual negative interaction between Noise and Vibration, and Biodiversity during the construction phase. The interaction is considered to be ***negative***, ***not significant***, and ***short term***.

Operational Phase

There are no potentially significant interactions identified between Noise and Vibration, and Biodiversity during the operational phase

15.5.3 Landscape and Visual Impacts:

Construction Phase

No significant biodiversity of conservation value was noted the on site. There are no potentially significant interactions identified between Landscape and Visual Impacts, and Biodiversity during the construction phase

Operational Phase

The implementation of a high quality landscaping scheme will have a ***neutral, not significant***, and ***long term*** interaction with biodiversity.

15.5.4 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Biodiversity, and Archaeological, Architectural and Cultural Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Biodiversity, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.5.5 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

There are no potentially significant interactions identified between Biodiversity, and Material Assets during the operational phase.

Operational Phase

There are no potentially significant interactions identified between Biodiversity, and Material Assets during the operational phase.

15.6 AIR QUALITY AND CLIMATE AND ITS INTERACTION WITH:

15.6.1 Noise and Vibration:

Construction Phase

There are no potentially significant interactions identified between Air Quality and Climate, and Noise and Vibration during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Air Quality and Climate, and Noise and Vibration during the operational phase.

15.6.2 Landscape and Visual Impacts:

Construction Phase

There are no potentially significant interactions identified between Air Quality and Climate, and Landscape and Visual during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Air Quality and Climate, and Landscape and Visual during the operational phase.

15.6.3 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Archaeological, Architectural and Cultural Heritage, and Landscape and Visual Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Archaeological, Architectural and Cultural Heritage, and Landscape and Visual Heritage during the operational phase.

15.6.4 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

Waste management measures (as outlined in Appendix 13.1 Resource and Waste Management Plan) will be put in place during the construction phase to minimise the amount of waste entering landfill, which has higher associated embodied carbon emissions than other waste management such as recycling. The impact to climate as a result of embodied carbon in waste materials during the construction phase is not considered significant.

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 ***short-term, imperceptible*** and ***neutral*** during the construction phase.

Operational Phase

Waste management measures (as outlined in Appendix 13.2 Operational Waste Management Plan) will be put in place during the operational phase to minimise the amount of waste entering landfill, which has higher associated embodied carbon emissions than other waste management such as recycling. The impact to climate as a result of embodied carbon in waste materials during the operational phase is not considered significant.

During operation traffic emissions have the potential to emit GHGs, such as CO_2, which impact climate, and pollutants which impact air quality. However, the change in traffic as a result of the Proposed Development is not predicted to result in significant emissions. The interaction is considered to be ***neutral***, ***imperceptible***, and ***long term***.

15.7 NOISE AND VIBRATION AND ITS INTERACTION WITH:

15.7.1 Landscape and Visual Impacts:

Construction Phase

There are no potentially significant interactions identified between Noise and Vibration, and Landscape and Visual during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Noise and Vibration, and Landscape and Visual during the operational phase.

15.7.2 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Noise and Vibration, and Archaeological, Architectural and Cultural Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Noise and Vibration, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.7.3 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

As stated in the DMRB Noise and Vibration (UKHA 2020), Volume 11, Section 3, Part 7, in order to increase traffic noise levels by 1 dB traffic volumes would need to increase by the order of 25% it is considered that additional traffic introduced onto the local road network due to the construction phase, as outlined in the relevant sections of the Material Assets: Traffic and Transport Chapter, will not result in a significant noise impact.

The calculated change in traffic noise associated with the addition of construction related traffic is less than 1 dB (A) along the site access roads. The potential related impact is ***negative, imperceptible*** and ***short-term.***

Operational Phase

Traffic along the surrounding road network will not lead to a change in noise level that would pose any significant effect. The resultant impact is ***neutral, imperceptible,*** and ***long-term.***

15.8 LANDSCAPE AND VISUAL IMPACTS AND ITS INTERACTION WITH:

15.8.1 Archaeological, Architectural and Cultural Heritage:

Construction Phase

There are no potentially significant interactions identified between Landscape and Visual Impacts, and Archaeological, Architectural and Cultural Heritage during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Landscape and Visual Impacts, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.8.2 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

There are no potentially significant interactions identified between Landscape and Visual Impacts, and Material Assets during the construction phase.

Operational Phase

There are no potentially significant interactions identified between Landscape and Visual Impacts, and Material Assets during the operational phase.

15.9 ARCHAEOLOGICAL, ARCHITECTURAL AND CULTURAL HERITAGE AND ITS INTERACTION WITH:

15.9.1 Material Assets, including Utilities Waste Management, and Transport:

Construction Phase

There are no potentially significant interactions identified between Material Assets, and Archaeological, Architectural and Cultural Heritage during the operational phase.

Operational Phase

There are no potentially significant interactions identified between Material Assets, and Archaeological, Architectural and Cultural Heritage during the operational phase.

15.10 SUMMARY

In summary, the interactions between the environmental factors and impacts discussed in this EIAR have been assessed and the majority of interactions are neutral.

The reasoning behind the conclusion that certain interactions are considered to have a positive, neutral or negative effect is outlined in this Chapter. A summary of the potential interactions is presented in Table 15.1 below.

15.11 TABLE OF INTERACTIONS

Table 15.1 *Summary of interrelationships Between the Aspects*

	Population & Human Health		Land, Soils and Hydrogeology		Hydrology		Biodiversity		Air Quality and Climate		Noise and Vibration		Landscape and Visual Impact		Archaeological, Architectural and Cultural Heritage		Material Assets, including Transport and Waste	
	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.
Population & Human Health			o	x	o	o	x	x	--	x	--	x	--	o / +	x	x	o	o
Land, Soils and Hydrogeology					o	x	--	x	o	x	x	x	x	x	x	x	o	x
Hydrology							--	o	--	--	x	x	x	x	x	x	o	o
Biodiversity									--	x	--	x	x	o	x	x	x	x
Air Quality and Climate											x	x	x	x	x	x	o	o
Noise and Vibration													x	x	x	x	--	o
Landscape and Visual Impact															x	x	x	x
Cultural Heritage																	x	x
Material Assets, including Transport and Waste																		

Con.	Construction Phase
Op.	Operational Phase
X	No significant Interaction

+	Positive Interaction
O	Neutral Interaction
--	Negative Interaction