

## 16 ENVIRONMENTAL INTERACTIONS

### 16.1 Introduction

The EIA Directive and its transposing Regulations requires that in addition to assessing impacts on human beings, fauna, flora, soil, water, air, climate, landscape, material assets and cultural heritage, the interaction between these factors must be taken into account as part of the environmental impact assessment process.

### 16.2 Interactions

Table 16.1 below is a matrix table indicating the significant interactions that are likely to occur between the various environmental disciplines with regard to the proposed alterations to the permitted development. Where an asterisk exists in a box in the table, this indicates that a relationship exists between the two environmental disciplines. The purpose of the table is to allow interaction between various disciplines to be recognised, although the level of interaction will vary in each case. It is assumed in presenting this table that an environmental discipline has a potential inter-relationship both during the construction and operational phases of the proposed alterations. A summary of expected interactions is given in Table 16.2.

**Table 16.1: Inter-relationship Matrix – Potential Interaction between Environmental Disciplines**

	Human Environment	Cultural Heritage	Landscape Visual &	Traffic & Transportation	Noise Vibration &	Air Quality & Climate	Soils & Geology	Coastal Processes	Water Environment	Marine Ecology	Terrestrial Ecology & Ornithology
Human Environment			*		*	*					
Cultural Heritage								*			
Landscape & Visual	*			*	*						*
Traffic & Transportation			*		*	*					
Noise & Vibration	*		*	*							*
Air Quality & Climate	*			*			*				
Soils & Geology						*			*		
Coastal Processes		*							*	*	
Water Environment							*	*		*	
Marine Ecology								*	*		*
Terrestrial Ecology & Ornithology			*		*			*	*	*	

**Table 16.2: Summary of Interactions**

	<b>Interaction With</b>	<b>Interaction</b>
<b>Human Environment</b>	Noise & Vibration	Noise and vibration generated from the construction and operational phases of the proposed alterations have the potential to impact upon local population centres; the noise assessment does not however identify any significant impacts.
	Air Quality & Climate	The construction and operational phases of the proposed alterations have the potential to generate impacts in terms of air quality upon local population centres; the air quality assessment for the proposed alterations does not however identify any significant impacts.
	Landscape & Visual	The proposed alterations have the potential to impact on the landscape and visual resources perceived by human beings; the landscape and visual assessment for the proposed alterations does not however identify any significant impacts.
<b>Cultural Heritage</b>	Coastal Processes	Coastal processes considers processes which have potential to impact upon marine archaeology. Assessment has concluded that there will be no impacts upon marine archaeology as a result of the proposed alterations.
<b>Landscape &amp; Visual</b>	Noise & Vibration	The proposed alterations have a potential interaction with landscape and visual impacts of the proposals. However no significant landscape and visual or noise impacts for the proposed alterations are predicted.
	Terrestrial Ecology & Ornithology	Vegetation is an important aspect with respect to providing wildlife corridors. Any vegetation removed as part of the proposed alterations will result in no significant impact.
	Human Environment	The proposals have the potential to impact on the landscape and visual resources perceived by human beings; however no significant impact for the proposed alterations is predicted.
	Traffic & Transportation	Traffic generation has the potential to impact upon the landscape and visual resources however traffic will not increase as a result of the proposed alterations.
<b>Traffic &amp; Transportation</b>	Noise & Vibration	Traffic generation has potential to result in Noise related impacts, however traffic will not increase as a result of the proposed alterations.
	Air Quality & Climate	Traffic generation has potential to impact on Air Quality however traffic will not increase as a result of the proposed alterations.
	Landscape & Visual	Traffic generation has the potential to impact upon the landscape and visual resources however traffic will not increase as a result of the proposed alterations.
<b>Noise &amp; Vibration</b>	Terrestrial Ecology & Ornithology	Noise from construction and operational phases of the proposed alterations has potential to impact on fauna. However, no significant noise impact is predicted.
	Landscape & Visual	The proposed alterations have a potential interaction with landscape and visual impacts of the proposals. However no significant landscape and visual or noise impacts for the proposed alterations are predicted.
	Traffic & Transportation	Traffic generation has potential to result in noise related impacts however traffic will not increase as a result of

	<b>Interaction With</b>	<b>Interaction</b>
		the proposed alterations.
	Human Environment	Noise and vibration generated from the construction and operational phases of the proposed alterations have the potential to impact upon local population centres, but no significant noise impacts are predicted.
<b>Air Quality &amp; Climate</b>	Traffic & Transportation	Traffic generation has potential to result in impacts on Air Quality however traffic will not increase as a result of the proposed alterations.
	Soils & Geology	Excavation works and exposure of soil during the construction phase can influence the microclimate in an area. The movement of soils during the construction phase may result in the spread of dust and mud onto surrounding land uses and public roads. The air quality assessment of the proposed alterations indicates that there is no significant impact associated with these matters.
	Human Environment	The construction and operational phases of the redevelopment have the potential to generate impacts in terms of air quality upon local population centres; the air quality assessment does not identify any significant impacts however.
<b>Soils &amp; Geology</b>	Air Quality	Excavation works and exposure of soil during the construction phase can influence the microclimate in an area. The movement of soils during the construction phase may result in the spread of dust and mud onto surrounding land uses and public roads. The soils & geology assessment indicates that there is no significant impact associated with these matters.
	Landscape	Any imported soils will be chemically analysed and screened against generic screening values for a commercial end use to ensure that it does not pose a risk to human health.
<b>Coastal Processes</b>	Marine Ecology	There is an inter-relationship between coastal modelling and marine ecology impacts. There has been close coordination between the designer, ecological and Coastal Modelling consultants and following assessment, no significant impacts are predicted for the proposed alterations.
	Water Environment	There is a potential inter-relationship between water quality and coastal processes. Assessments have concluded however that the proposal will have no significant impact.
	Cultural Heritage	The presence of marine archaeology may be impacted upon by coastal processes. Assessment has concluded that there will be no impacts upon marine archaeology as a result of the proposed alterations.
<b>Water Environment</b>	Marine Ecology	Marine ecology is dependent on water quality. Disruption in water chemistry or sediment levels has potential to impact on local flora and fauna. There has been close coordination between the designer, water environment and ecology consultants and following assessment, no significant impacts are predicted for the proposed alterations.

	<b>Interaction With</b>	<b>Interaction</b>
	Coastal Processes	There is a potential inter-relationship between water environment and coastal processes. Assessments have concluded however that the proposed alterations will have no significant impact.
<b>Marine Ecology</b>	Water Environment	Marine ecology is dependent on water quality. Disruption in water chemistry or sediment levels has potential to impact on local flora and fauna. There has been close coordination between the designer, water environment and ecology consultants and following assessment, no significant impacts are predicted for the proposed alterations.
	Terrestrial Ecology & Ornithology	There is an inter-relationship between Terrestrial Ecology & Ornithology and marine related ecology impacts. Following assessment, no significant impacts are predicted for the proposed alterations.
	Coastal Processes	There is an inter-relationship between coastal modelling and marine ecology impacts. Following assessment, no significant impacts are predicted for the proposed alterations.
<b>Terrestrial Ecology &amp; Ornithology</b>	Noise & Vibration	Noise from construction and operational phases of the proposed alterations has potential to impact on fauna. Following assessment, no significant impacts are predicted for the proposed alterations.
	Marine Ecology, Coastal Processes, and Water Environment	There is an inter-relationship between ecology and marine related ecology and water quality impacts. Following assessment, no significant impacts are predicted for the proposed alterations.
	Landscape & Visual	Vegetation is an important aspect with respect to providing wildlife corridors. Any vegetation removed as part of the proposed alterations will result in no significant impact.

### 16.3 Conclusion

An assessment has been completed on the interactions that are likely to occur between the various environmental disciplines with regard to the proposed alterations to the permitted development. As set out in Table 16.2 above no significant effects have been predicted for interactions between the various EIA disciplines during the construction and operational phases of the proposed alterations.