

## **44**            *IN-COMBINATION IMPACTS*

### **44.1**            *INTRODUCTION*

44.1.1            The purpose of this chapter is to illustrate the impacts (positive or negative) on individual receptors, resulting from the combination of more than one impact. It is based on the individual topic assessments and professional judgement as to whether the identified receptors suffer from in-combination impacts, and whether these impacts are considered not significant or significant.

### **44.2**            *ASSESSMENT METHODOLOGY*

44.2.1            In-combination impacts have been considered throughout the EIA process and in the preparation of the individual impact chapters so that it can take into account the broader picture of how the Project (both AMEP and the Compensation Site) may affect the various environmental media.

44.2.2            All environmental topics are interlinked to a degree such that interrelationships exist on numerous levels. A summary matrix has been developed to identify key interactions that exist with respect to the Project. A “✓” symbol has been used to indicate that an interaction exists.

Table 44.1 Impacts Interaction and Interrelationship Matrix

	Geology, Hydrogeology and Ground Conditions	Hydrodynamic and Sedimentary Regime	Water and Sediment Quality	Aquatic Ecology	Terrestrial Ecology and Birds / Ecology and Nature Conservation	Commercial Fisheries	Drainage and Flood Risk	Commercial and Recreational Navigation	Traffic and Transport	Noise and Vibration	Air Quality	Marine and Terrestrial Archaeology / Historic Environment	Light	Landscape and Visual	Socio-Economics	Aviation	Waste	Health	
Geology, Hydrogeology and Ground Conditions	✓																		
Hydrodynamic and Sedimentary Regime		✓																	
Water and Sediment Quality			✓																
Aquatic Ecology				✓															
Terrestrial Ecology and Birds / Ecology and Nature Conservation					✓														
Commercial Fisheries						✓													
Drainage and Flood Risk							✓												
Commercial and Recreational Navigation								✓											
Traffic and Transport									✓										
Noise and Vibration										✓									
Air Quality											✓								
Marine and Terrestrial Archaeology / Historic Environment												✓							
Light													✓						
Landscape and Visual														✓					
Socio-Economics															✓				
Aviation																✓			
Waste																	✓		
Health																		✓	

## 44.3 IMPACTS

44.3.1 The consideration of in-combination impacts has been addressed during the preparation of the EIA in each of the individual topic chapters. A very diverse range of interactions has been considered as part of this EIA. The key in-combination impacts are discussed further in *Table 44.12*.

**Table 44.2 Key In-combination Impacts**

<b>Key Interaction</b>	<b>Description</b>
Hydrodynamic and Sedimentary Regime, Water and Sediment Quality, Aquatic Ecology and Commercial Fisheries	Impacts resulting from changes to the hydrodynamic and sedimentary regime associated with the construction and operational phases have been considered in terms of its impact on water and sediment quality, aquatic ecology and commercial fisheries.
Noise and Vibration, Aquatic Ecology, Terrestrial Ecology and Birds, and Health	The potential for impacts resulting from noise or vibration during the construction and operational phases was considered, particularly when carrying out the assessment of potential impacts on ecological and human receptors and defining the relevant mitigation measures.
Air Quality, Terrestrial Ecology and Birds, Aquatic Ecology, and Health	Impacts on human and ecological receptors may occur as a result of emissions of dust, changes in traffic levels and exhaust emissions. The potential for impacts was considered when carrying out the assessment of potential impacts and defining the relevant mitigation measures.
Noise and Vibration and Marine and Terrestrial Archaeology	The potential for vibration impacts on features of architectural, archaeological or cultural importance has been considered and appropriate measures have been defined where necessary.
Traffic and Transport, Commercial and Recreational Navigation, Health and Socio-Economics	Traffic and transport, and commercial and recreational navigation impacts have the potential to impact on health and socio-economics. Interactions between these topics was considered to ensure that both direct and indirect impacts were considered and appropriate mitigation measures put in place where necessary.
Light, Terrestrial Ecology and Birds and Aviation	The impacts from light have been considered in the assessment of the impacts terrestrial ecology and birds, as well as on aviation.