

13 INTERRELATIONSHIPS BETWEEN ENVIRONMENTAL FACTORS

13.1 INTRODUCTION

This section describes the interrelationships and interactions between the various potential impacts identified in the previous sections during both the construction and operational phases of the proposed development. While almost all environmental aspects are interrelated to some degree, only significant interrelationships are considered in this assessment.

The project team, in conjunction with the assistance of a variety of specialist environmental consultants, each one an expert in their chosen field, assessed the potential impact 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 impacts associated with the proposed development.

In the interests of clarity, significant interactions and inter-dependencies have in fact been taken into consideration, and are detailed, under each environmental topics heading. We refer the reader to the relevant sections of the EIS.

13.2 MATRIX OF INTERACTIONS

This section provides a simple matrix (see Figure 13.1) identifying environmental components and recording where potential interactions are identified. These are then expanded upon in the text with references made to the more detailed assessments outlined in the relevant sections of this EIS.

Again, for detailed descriptions and accounts, reference is made to the relevant sections of this EIS.

Interaction	Human Beings and Population	Landscape and Visual Impact	Cultural Heritage	Ecology	Soils and Geology	Water (Hydrology and Hydrogeology)	Material Assets	Air and Climate
Human Beings and Population		✓	✓				✓	✓
Landscape and Visual Impact	✓		✓					
Cultural Heritage	✓	✓			✓	✓		
Ecology						✓		
Soils and Geology			✓			✓	✓	
Water (Hydrology and Hydrogeology)			✓	✓	✓		✓	
Material Assets	✓				✓	✓		✓
Air and Climate	✓						✓	

Notes:

✓ = potential interaction

Figure 13.1 Matrix of the Main Potential Interactions

13.3 HUMAN BEINGS AND POPULATION

The potential for interactions arises with the environmental topics of landscape and visual impact, cultural heritage, material assets and air and climate.

During construction works there may be interactions between noise of construction, dust, other air emissions and increased traffic and human beings and population which may impact on nearby residents. However, the route avoids clusters of dwellings and centres of population. These issues are addressed in the aforementioned sections.

The interactions between human beings and population and landscape will arise first during construction when views will change; and will become more permanent as the project nears completion. Changed views will also create an interaction between human beings and population and cultural heritage in some locations.

13.4 LANDSCAPE

The potential for interactions arises with the environmental topics of human beings and population and cultural heritage.

The interactions between human beings and population and landscape will arise first during construction. The character and appearance of unscreened lands in the immediate proximity of the line will be considerably altered. The route selection generally avoided concentrations of rural residences and will have limited effects on the appearance and character of settlement centres and their approaches.

The interactions between landscape and cultural heritage have been described in the relevant sections and are accompanied by photomontage images.

13.5 CULTURAL HERITAGE

The potential interactions between human beings and population (with regard to tourism and amenities), landscape and cultural heritage that arise relate to the changed views.

Potential interactions between *cultural heritage* and *soils and geology*, *water* and *ecology* were identified as arising from the recommended mitigation contained within the Cultural Heritage Section.

13.6 ECOLOGY

The potential for interactions arises with the environmental topics of water (hydrology and hydrogeology) and ecology. For example the accidental pollution of watercourses could lead to secondary effects on aquatic biodiversity.

Potential interactions between *cultural heritage* and *soils and geology*, *water* and *ecology* were identified as arising from the recommended mitigation contained within the Cultural Heritage Section.

13.7 SOILS AND GEOLOGY

Soils and geology have a potential interaction with *water* as a determinant of water chemistry, river flow regimes, water storage capacity and watercourse location. It also interacts with water quality through the ability of bedrock and surface deposits to filter potential pollutants.

Potential interactions between *soils and geology* and *material assets* (waste management) occur and mitigation that relates to waste management is proposed in the soils and geology section.

Potential interactions between *cultural heritage* and *soils and geology*, *water* and *ecology* were identified as arising from the recommended mitigation contained within the Section 7 Cultural Heritage.

13.8 WATER (HYDROLOGY AND HYDROGEOLOGY)

The potential for interactions arises with the environmental topics of *soils and geology* and *ecology*.

Potential impacts on the water environment such as impacts on water quality could lead to secondary effects on ecological interests including fisheries, aquatic habitats, as well as direct effects on the underlying soils, subsoils, hydrogeology and groundwater resources.

Potential interactions between *water* and *material assets* (waste management) occur and mitigation that relates to waste management is proposed in the water section.

13.9 AIR AND CLIMATE (INCLUDING NOISE)

The potential for interactions arises with the environmental topics of human beings and population and material assets (traffic). However, the level of increased traffic along adjacent roads will be negligible relative to the existing traffic volumes and the resultant increased emissions to air will not result in significant air quality impacts on local residents.

There will be some small short term impact on nearby residential properties due to noise emissions from site traffic and other activities during construction, however noise emissions will be within the National Roads Authority Guidance on construction noise and will be short term and of a temporary nature and will not be excessively intrusive. Overall the predicted noise impact from the development will be low and is not expected to give rise to complaints from local residents.

13.10 MATERIAL ASSETS (INCLUDING TRAFFIC, WASTE MANAGEMENT AND UTILITIES)

The potential for interactions arises with the environmental topics of human beings and population and air and climate (noise and emissions). However, the level of increased traffic along adjacent roads will be negligible relative to the existing traffic volumes and the resultant increased emissions to air will not result in significant air quality impacts on local residents. There will be some small short term impact on nearby residential properties due to noise emissions from site traffic and other activities during construction, however noise emissions will be within the National Roads Authority Guidance on construction noise and will be short term and of a temporary nature and will not be excessively intrusive.

Potential interactions between *material assets* (waste management) and *water* and *soils and geology* occur and mitigation that relates to waste management is proposed in the water and soils and geology sections.