

4. Impact Assessment Methodology

4.1 Introduction

This section addresses Section 7 of the Scope Guidelines in respect of the proposed water supply pipeline. It outlines the predicted key environmental, economic and social impacts of all components of the proposed water supply pipeline on a local, regional and national level (where appropriate). Impacts have been considered for commissioning, construction, operational and decommissioning phases of the project.

Relevant standards and criteria will be considered for each of the impacts.

Environmental Management Plans for each component of the project and the overall Monitoring Plan will address how the identified impacts are to be controlled and managed. Proposed monitoring programs are including in the Monitoring Plan section of Volume 4.

4.2 Cumulative Impact Effect

Singularly, impacts from a proposed project or development may have minimal or negligible impacts to environmental values in an area. However these impacts combined with similar impacts from other activities in the locality can have detrimental short and long-term impacts on local and regional environmental values. Determining cumulative impact is an important component of the environmental impact assessment (EIA) process that should be considered separately.

This Draft IIS recognises the potential of cumulative impact effects from the proposal on local and regional environmental values. During the EIA process and impact analysis, cumulative impacts on important environmental values have been considered and quantified where possible. In particular, these include air quality, noise, transport, water quality, visual and social impacts.

4.3 Assessment Methodology

Impacts may be direct or indirect, adverse or beneficial, short or long term, temporary or irreversible.

A summary of environmental costs and benefits to be borne by the community and the environment is provided for each component of the proposal describing the impact of, or on, key environmental and social elements.

The environmental costs and benefits summary is a qualitative analysis of the environmental costs and benefits that may occur as a result of the proposal. This assessment has been made based upon information provided by previous studies and the professional experience and knowledge of consultants.

A tabular summary of the environmental benefits and costs likely to be incurred as a result of the proposed augmentation is provided at the end of each section. The table outlines the likely impacts in terms of impacts and management strategies for each key element.

4.3.1 Rating System

Each element is rated in terms of the level or severity of the potential impact (the impact rating). Management strategies, where appropriate, are defined and the impact of the management rated in general terms (the management rating). Taking the management impact into account, a final combined rating for each element is provided. The key for each rating used within the assessment is defined below.

Table 4-1 Key For Each Rating Used Within the Impact Assessment

| Nature and Scale of Impact | Interpretation |
|-----------------------------------|---|
| Major positive impact | Classed as impacts that are beneficial to the physical, biological or human environment. The impact is likely to have a significant positive effect on the environment. |
| Moderate positive impact | Classed as the impacts that are beneficial to the physical, biological or human environment. The net impact will not have any short or long term negative impact on the physical, biological or human environment. |
| Minor positive impact | Classed as impacts that are beneficial to the physical, biological or human environment and the impact may be managed through normal and appropriate environmental management practices to enhance the impact. The net impact will not have any long term negative impact on the physical, biological or human environment. |
| Insignificant impact | No negative or positive impact on the physical, biological or human environment. |
| Minor negative impact | Classed as impacts which are acceptable even without normal and appropriate environmental mitigation practices. The net impact will not have any unacceptable long term impacts on the physical, biological or human environment. |
| Moderate negative impact | Classed as the impacts that are manageable through normal and appropriate environmental management practices. The net impact will not have any unacceptable long term impacts on the physical, biological or human environment. |
| Major negative impact | Classed as impacts that are likely to have a significant negative effect on the environment. Long term impacts on the physical, biological or human environment even with environmental management practices. |
| Substantial negative impact | Classed as impacts that are likely to have a substantial negative effect on the environment. This could include regional or national extinction of flora and fauna species, short and long term human health impacts or significant changes to the physical environment on a regional scale. |