

5.4 Sustainability

5.4.1 Overview

Consideration of the principles of ecologically sustainable development (ESD) forms an important part of the project development process. Objective 6 of the Pacific Highway Upgrade Program requires that the upgrading of the route be managed “*in accordance with Ecologically Sustainable Development Principles*”.

Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation) lists four core sustainability principles. A summary of how these principles have been, and will continue to be, integrated with the project development process is provided below.

5.4.2 The Precautionary Principle

This principle requires that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

To date the project has included identification of available environmental, social and cultural information including:

- ▶ Terrestrial ecology;
- ▶ Aquatic ecology;
- ▶ Landscape and visual amenity;
- ▶ Existing noise conditions;
- ▶ Indigenous heritage;
- ▶ Non-indigenous heritage;
- ▶ Socio-economic conditions;
- ▶ Water quality; and
- ▶ Geotechnical conditions.

As a result, the project team has an understanding of the likely environmental constraints and key features of the study area, which have been considered as part of the development of the route options.

The precautionary principle will be applied to the assessment of the options and the selection of the preferred route. The potential for environmental impacts will form part of the assessment process. Once the preferred option is selected, more detailed impact assessment studies will be undertaken as needed.

5.4.3 Inter-Generational Equity

This principle requires that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

Information on environmental characteristics and the potential for impacts is being incorporated into all stages of the route development process. This will minimise the potential for significant long-term impacts that could lead to degradation of the environment.

The community involvement process will assist in identifying the community's concerns. The issues identified to date have been considered as part of the selection of the route options. Community feedback will continue to be incorporated into the project development process. Anecdotal information on local environmental and study area characteristics, received as a result of the community and stakeholder consultation process, has also been considered.

The potential social effects of the project have been identified to ensure that social aspects and impacts are also considered. A socio-economic impact assessment would be undertaken for the preferred route.

The safeguards, management mechanisms and design features developed for the preferred route would assist in minimising the potential for environmental impact and degradation.

5.4.4 Conservation of Biological Diversity and Ecological Integrity

This principle requires that the diversity of genes, species, populations and communities, as well as the ecosystems and habitats to which they belong, must be maintained and improved to ensure their survival.

Preliminary information on local ecological conditions has been collected and considered in the development of route options.

The terrestrial and aquatic ecological investigations for the preferred route will consider the potential for impact on biological resources and ecological diversity in more detail. Measures will be recommended to ensure that ecological integrity is maintained, and biological diversity conserved.

5.4.5 Improved Valuation, Pricing and Incentive Mechanisms

This principle requires that the valuation of assets and services include environmental factors.

The potential social effects of the project has identified environmental and social aspects and impacts. This principle will be further applied during the next stages of the project. The environmental consequences of the project will continue to be examined. Design features will be incorporated where there is the potential for adverse impacts. The design and construction of the project are required to conform to a high level of environmental performance.

The implementation of these measures may result in an economic cost, with the potential for an increase in the capital costs of the project. Acceptance of these costs is another means by which environmental resources are given appropriate valuation.

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