

## 12. Assessment methodology

### Overview

The AEE process used relevant previous environmental assessment information, particularly from the scheme assessment (Phase 1). The environmental assessment undertaken for Phase 2 has involved a wide range of engineering and environmental specialists working together on the design and assessment of the Project.

### 12.1 Introduction

The purpose of this chapter is to outline how the AEE was undertaken for the Project and how previous environmental assessment work has been used. The structure for the remainder of Part G is also set out.

### 12.2 Purpose of the assessment

The primary purpose of the assessment is to meet the statutory requirements under the RMA which requires an assessment of the environmental effects of the proposed activity.

In addition to the requirements under the RMA, it is also part of the NZTA's environmental policy and its operating principles under section 96(1)(a) of the LTMA to:

*“exhibit a sense of social and environmental responsibility, which includes -*

*(i) avoiding, to the extent reasonable in the circumstances, adverse effects on the environment; and...*”

The requirements of the RMA and the LTMA formed the basis for the effects' assessment undertaken for the Project.

### 12.3 Previous environmental assessments

There have been a number of environmental assessments undertaken for previous iterations of the Project, principally:

- an environmental impact report (EIR) in 1987 as part of the Greater Wellington Area Transportation Strategic Review (GATS);
- an AEE in support of the NoRs lodged in 1996; and
- strategic studies undertaken in the development of the WCP in 2006.

As discussed in Chapter 2, the assessments undertaken for the GATS review and the WCP both considered the environmental impacts of options other than an inland route (i.e. a Transmission Gully route). Principally, these involved considering an upgrade to the existing SH1 route between Linden and MacKays Crossing. Both of these strategic level assessments concluded that an inland route would likely result in fewer adverse environmental impacts, as compared to upgrading the existing SH1. This was verified by the Parliamentary Commissioner for the Environment in her review of the EIR in 1990.

As such, the environmental impacts of other options have already been considered at a strategic level and do not need to be re-evaluated at this time. For this reason, the most recent environmental assessments undertaken on the Project (starting with the Phase 1 scheme assessment in 2007 - 2008) have been within the general concept of an inland State highway route (along the Main Alignment corridor) with associated links to the local road network (within the Kenepuru Link Road area and the Porirua Link Roads area).

This AEE process utilised information from previous environmental assessments where it remained relevant. Care needs to be taken, however, when reviewing historical material as many elements of the Project have changed over time. The AEE process has of course assessed the current Project as described in Part D of this report and not previous versions of it.

## 12.4 Environmental assessment undertaken during Phase 1

The NZTA uses a social and environmental management (SEM) framework to incorporate social and environmental considerations into the early phases of its projects. This framework consists of a series of procedures which starts with a preliminary screening assessment and culminates with the assessment of environmental effects process used to support the necessary statutory approvals for a project (i.e. the AEE process).

Environmental assessment work undertaken during Phase 1 consisted of:

- the social and environmental screen (SES) process leading into a preliminary social and environmental assessment (SEA) of the Project at the scheme assessment stage; and
- a statement of identified Maori interest (SIMI).

The SES process, and subsequent SEA process, involved a preliminary assessment of the Project against a checklist of potential effects commonly associated with major road projects. This checklist formed a framework for the assessment and comparison of various alignment options and sub-options (as described in Part E of this report). From this process a preferred alignment was identified along with a preliminary identification of the possible environmental impacts of this alignment. This was used to define the scope of the full AEE process documented in this report.

The key potential issues identified, and subsequently assessed in more detail through the AEE process, were:

- noise;
- air quality;

- water resources;
- resource efficiency;
- culture and heritage;
- landscape and visual;
- ecological resources;
- vibration;
- land use and transport integration;
- traffic;
- urban design;
- community cohesion (social effects);
- public health;
- access and mobility; and
- contaminated land.

The assessment of these issues is presented in Part G of this report<sup>84</sup>.

## 12.5 Assessment methodology

The AEE process has involved a wide range of individuals and groups. It was led by the planning team and involved input from 15 different engineering and environmental teams. These teams provided technical and design input into the development and assessment of the Project.

Both the design and assessment teams worked closely together to refine the design of the Project as the assessment was conducted. For most of Phase 2, all technical teams met together most fortnights and meetings between specific technical teams were held as required. This close working relationship was critical to identifying opportunities where potential adverse effects could be avoided by making changes to the design of the Project. The iterative and dynamic nature of this process means it is virtually impossible to satisfactorily document all outcomes from this process entirely in this AEE. However, where key design changes were made based on their likely environmental effects, these changes have been described either in the consideration of alternatives (Part E) or within a specific topic assessment in Part G.

The close working relationship also helped to ensure that appropriate mitigation measures were developed between different technical teams.

In addition to the integrated form of assessment, there are three other aspects of the AEE process worthy of note:

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84. Resource efficiency was assessed as part of the development of the Project but is not covered in Part G because it is not relevant to the assessment of environmental effects.

- the use of focus areas;
- the involvement of local authorities in the process; and
- the involvement of other stakeholders.

### 12.5.1 Focus areas

The Project covers a long corridor. As such, the nature of the environment and the effects associated with the Project in those environments is varied. At six locations (referred to as focus areas) a greater level of design and / or assessment was required to adequately determine likely environmental effects.

These six focus areas are:

- Te Puka Stream;
- Upper Horokiri Stream;
- SH58 Interchange;
- Waitangirua;
- Duck Creek; and
- Kenepuru Interchange.

Generally, each focus area has a greater level of complexity associated with it than for the rest of the Project and accordingly, the focus areas require a greater degree of site specific assessment and management. For each focus area a site specific environmental management plan (SSEMP) has been developed which shows how construction could be undertaken and how environmental management techniques can be effectively used to manage effects. The SSEMPs have been prepared by multi-disciplinary teams and have had input from councils (through RATAG and its advisors) as well as Ngati Toa and DOC. They are used to understand effects that might eventuate and by focussing on the complex areas and provide the confidence that effects can be managed appropriately across the entire route. Ultimately, once consent is granted and ahead of construction commencing, SSEMPs will be prepared to the entire route as needed.

Focus areas, and the associated SSEMPs for each area, will be referred to throughout the assessments described in Part G. Further information about the SSEMPs is also contained in Part H where the role of management plans in relation to the proposed mitigations and conditions is outlined.

### 12.5.2 Local authority involvement

Local authorities were involved in the AEE process in three key capacities:

- as regulatory authorities;
- as asset and infrastructure owners and / or providers; and
- as owners of land that is required for the Project (only in some cases).

PCC also had an additional role as the requiring authority / applicant for the Porirua Link Roads. The involvement of local authorities has been discussed in Part F (Consultation). In their capacity as regulatory authorities (through the RATAG) the local authorities have provided advice on district and regional planning provisions and other regulatory matters of relevance to the AEE process. As asset and infrastructure owners and / or providers they have provided feedback on the potential effects of the Project on their assets and how these effects could be mitigated, where required. Similarly, in the few instances where they are landowners, they have advised on land use and property effects.

### 12.5.3 Stakeholder involvement

In addition to the local authorities, a wide range of stakeholders were involved in the AEE process in a number of different capacities. The consultation undertaken with these stakeholders of that consultation is set out in Part F.

In general terms, stakeholders provided feedback on how they believed the Project would affect them or the interests their organisations represented. Due to the long history of the Project, the views of many stakeholders were already well known and, similarly many stakeholders had a high level of knowledge about the Project, prior to the Phase 2 consultation process.

Consultation undertaken with various stakeholders is discussed throughout the topic chapters in Part G as it is relevant.

## 12.6 Structure of the assessment

The remainder of the chapters in Part G describe the assessment undertaken in the key topic areas (as identified through the Phase 1 preliminary environmental assessment work). For convenience, each assessment topic is described in a separate chapter, although interactions between topic areas are recognised and discussed where relevant. The topic chapters, and the relevant technical reports, are shown in Table 12.1.

**Table 12.1: Environmental effects assessment topics**

AEE report chapter	Topic	Relevant technical report No.
13	Traffic and transport	4
14	Land use and property effects	-
15	Network utilities	-
16	Noise and vibration	12
17	Air quality	13
18	Contaminated land	16
19	Hydrology	14
20	Water quality	15
21	Terrestrial ecology	6, 7, 8 and 11
22	Freshwater ecology	9 and 11
23	Marine ecology	10 and 11

AEE report chapter	Topic	Relevant technical report No.
24	Tangata whenua	18
25	Landscape and visual	5
26	Archaeology and built heritage	19 and 20
27	Social effects	17

Each chapter provides a summary of the key potential effects and proposed mitigation for each topic. Further information about the assessment, including the assessment methodology used, is contained in the relevant technical report.

The basic structure for each assessment topic is:

- a description of the existing environment (in greater detail than was provided in Chapter 6);
- a description of the key effects (both positive and adverse) predicted as a result of the Project; and
- a description of what measures have been undertaken, or are proposed to be undertaken, to avoid, remedy, mitigate or offset potential adverse effects that have been identified.

Part H sets out the framework by which effects (as identified throughout Part G) will be managed. It also outlines the relationships between the recommended mitigation and proposed management plans.