

## 2. Evaluation of Alternatives

## 2.1 Introduction

A consideration of alternatives is required under the Fourth Schedule of the RMA and under various provisions of the relevant planning documents (as outlined below). In particular, there is a policy framework flowing through the statutory documents from Part 2 of the RMA to the New Zealand Coastal Policy Statement (NZCPS) and the PRP that directs the consideration of alternatives, particularly when considering reclamation and activities in the coastal environment. These matters are addressed both in this chapter and in the other relevant sections of this AEE.

In formulating the project, Northport evaluated several options and alternatives to achieve the overall objective of expanding the container port. These options and alternatives are detailed in the Issues and Options report (**Appendix 2**). The report is summarised in the following sections of this AEE.

## 2.2 Design evolution

Northport has developed the proposal that is the subject of this consent application over many years of design development and assessment of alternative options. The proposal's design progression, alternatives assessed, and the preferred design are set out in the Issues and Options report. In summary, several broad options were considered by Northport when evaluating how and where additional port capacity could be located, including:

- A location other than Northport.
- Reconfiguring existing port operations.
- Extending the port footprint either west, north, south, or east.

A summary of the evaluation process is set out in the Issues and Options report. Ultimately, an eastern expansion was chosen as the preferred option, for the reasons outlined in the report.

## 2.3 Terminal design

Any expansion and redevelopment of Northport is required to integrate with existing port operations and surrounding constraints. To that end, Northport commissioned WSP to provide initial, high-level advice on whether to undertake reclamation, or to construct a piled wharf. WSP advised that reclamation is the only practicable option, for a range of reasons outlined in the Issues and Options report.

Northport also commissioned WSP to prepare a Concept Design Report which records the user requirements, constraints, and selection criteria (and assessment against them) for several wharf designs. Based on the relevant criteria, an open piled marginal wharf with rock revetment was the chosen option, for the reasons outlined in the Issues and Options report.

Detailed design will be undertaken prior to construction. The Concept Design Report also identifies the proposed construction methodology for the indicative wharf design. A range of other wharf design options were considered and discounted, as described in the report.

## 2.4 Stormwater discharges

Two primary options were considered for the management of stormwater from the expanded port. These were:

- Use of the existing canal and pond-based system.
- Proprietary devices.

The existing canal and pond-based system is intended to continue to be used for the existing port footprint because it has demonstrable compliance with the water quality conditions in the existing discharge consent, and therefore will achieve the water quality standards in the PRP.

The expanded port footprint may also utilise the existing system for the following reasons:

- There is sufficient capacity to deal with the water from the expanded port.
- Utilisation of the existing canal and pond-based system is an efficient use of existing infrastructure.

It is possible, following detailed design, that proprietary devices may also be incorporated in the management of stormwater from the expanded port.

Both methods can achieve the water quality outcomes specified in the PRP.