

Proposed New Barge Landing Area – Roberts Bay

A proposed new permanent barge-landing site is located on the south-eastern shore of Roberts Bay (see Figure 1.5.1). The bay is relatively shallow at this location, necessitating the construction of a 103 m long jetty out into the bay. The jetty will be constructed from clean quarry rocks, and dumped directly onto the bay sediments. The final jetty traffic surface will be at least 0.5 meters at the highest high-tide level, which will require an overall jetty thickness of approximately 2 m (allowing for 0.5 m of sediment settlement). The overall jetty width will be 6 m, which would allow easy and safe offloading of the 20ft (6.1 m) and 40ft (12.2 m) long sea containers with forklift trucks. The jetty will end in a T-section, 6 m wide and 25 m long. This would allow the barges to be pushed up immediately alongside the jetty for the most efficient offload. Bollards and mooring chains will be anchored into the jetty and the on shore.

Permanent Beach lay-down Area

The land mass immediately inshore from the permanent barge landing site is relatively flat tundra, with rock outcrops on either side. A pad to be used as a lay-down area for annual temporary storage of equipment and supplies off-loaded from the barge will be constructed in this area. This-lay-down area will be at least 100 m inshore from the highest high-tide level, and will connected to the jetty via an all weather road.

3.1 Environmental Sensitivities

The following are sensitive areas of environmental concern associated with the Roberts Bay jetty landing area and along the adjoining coast line to be avoided and protected to the greatest degree possible by avoidance of human contact in these areas:

- The estuary confluence of Little Roberts meeting Roberts Bay;
- Beach front at Roberts Bay; and
- The vegetation cover along the beachfront.

3.2 Beach Offloading and Storage Areas

The following are critical activities typically conducted at the Roberts Bay jetty site where special precautions need to be taken to protect the adjoining terrestrial and aquatic environment:

- Unloading of bulk petroleum products;
- Unloading of Gas and Jet B drums;
- Unloading hazardous materials (Lubricants, mill reagents, etc.);
- Unloading of machines;

3.3 Environmental Concerns

Key environmental concerns associated with the critical activities listed in Section 3.2 are summarized as follows:

- Unexpected release of petroleum products;
- Unexpected release of hazardous materials;
- Sedimentation from disturbance of the beach front at Roberts Bay or by damage to the surrounding surface terrain or from uncontrolled runoff from the roadways;
- Unexpected fire or explosion; and

3.4 Sensitive Periods

Key sensitive time periods in relation to the activities in these areas are as follows:

- Spring runoff into Roberts Bay;
- During barge off loading in July or August

3.4 Environmental Protection Procedures

Employees conducting work in this area need to consult the Emergency Response and Contingency Plan (Document S10a) and the Hazardous Materials Management Plan (Document S10e) to ensure that procedures that relate to responding to possible accidents and/or spills and the handling of hazardous materials are understood and followed.

In addition employees carrying out work in this area need to become familiar with the following procedures as appropriate. The following table provides where management measures are to be located within this EPP covering the listed key activities:

Activities	Impacts	Management Measures (See Section 2 for details)
Loading & Unloading	<ul style="list-style-type: none">• accidental spill/leak	<ul style="list-style-type: none">• Section 2.1; Section 2.2; Section 2.15; Section 7.6
Temporary Storage	<ul style="list-style-type: none">• Leakage - damaged containers	<ul style="list-style-type: none">• Section 2.2; Section 2.4
Transportation	<ul style="list-style-type: none">• Erosion/Sedimentation• Spills	<ul style="list-style-type: none">• Section 2.2; Section 2.7; Section 2.8; Section 2.9; Section 2.19
Waste Management	<ul style="list-style-type: none">• Seepage of hazardous materials	<ul style="list-style-type: none">• Section 2.4; Section 7.6; Section 7.8

Employees should contact their supervisor if they are uncertain of the appropriate procedures to be followed to cover sensitive work to be conducted in this area. No work should be undertaken in this area until the employee fully understands the environmental risks and has knowledge of how to avoid causing environmental harm by following

appropriate procedures and how to respond in the event of an accident/incident. If uncertain ask for help before proceeding.