

Gunns Limited

## **Bell Bay Pulp Mill**

Integrated Impact Statement

### **Volume 3**

Water Supply Pipeline from Trevallyn Dam

Effluent Pipeline from the Pulp Mill to Bass Strait and  
Ocean Outfall

Workers Accommodation Facility

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# 1. Introduction to Volume 3

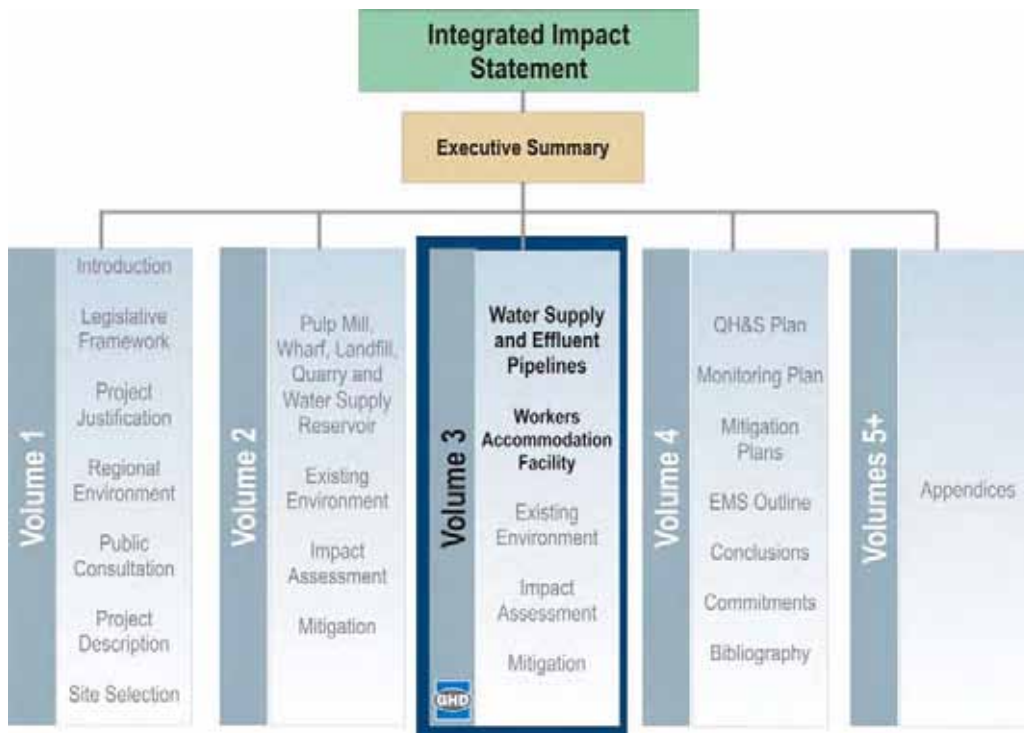
## 1.1 General

This volume (Volume 3) of the Draft Bell Bay Pulp Mill IIS considers the potential impacts of, and proposed management measures for, the construction and operation of the proposed:

- ▶ Water supply pipeline;
- ▶ Effluent pipeline and ocean outfall; and
- ▶ Workers accommodation facility.

These components of the project have been considered separately from other project components given their significant spatial differences and the linear nature of the pipeline corridors.

The Draft IIS has been structured to meet the requirements of the RPDC Final Scope Guidelines for the Integrated Impact Statement (December 2005). The position of this volume in the Draft IIS is shown below.



The potential impacts and management measures for the pulp mill, wharf facility, landfill, quarry and water supply reservoir are discussed in Volume 2 of the Draft IIS.

## **1.2 Overview of Components Addressed in Volume 3**

### **1.2.1 Water Supply Pipeline**

Gunns proposes to construct and operate an underground water supply pipeline. The pipeline is essential to the operation of the pulp mill, as water will be used to for washing the pulp during the manufacturing process. It is also necessary for energy reuse and for potable water, amongst other uses.

The required water supply for the pulp mill when operating at its full capacity of 1,100,000 ADt/yr is approximately 26 gigalitres per year. Gunns has considered a number of sources for this water (as discussed in Chapter 10, Volume 1), and determined a preferred option of extracting water from the existing Trevallyn Dam near Launceston. The water will be pumped through a 41 km long underground pipe with a diameter ranging from 813 to 1,016 millimetres.

The water supply pipeline will commence near Lake Trevallyn. The proposed alignment from the pump station to the Tamar River follows Trevallyn Road to the balance/control tank near Reatta Road, then run along Reatta Road to Hydro Tasmania's Trevallyn Power Station intake tunnel alignment. It will follow this line, across Pitt Avenue, the West Tamar Highway and Hydro Tasmania's Trevallyn Offices to the Tamar River. It will cross the Tamar River at the northern end of the Tamar Cut and, from the Tamar River to the pulp mill site, will generally follow the East Tamar Highway alignment with several sections in private land or along the Esk Water easement.

### **1.2.2 Effluent Pipeline**

An effluent pipeline is required to allow the disposal of treated liquid effluent produced during the pulping process and from biologically treated sanitary sewage.

Gunns proposes to construct and operate an underground effluent pipeline from the effluent treatment plant at the pulp mill to an ocean outfall in Bass Strait.

The effluent pipeline will be approximately 23 kilometres long, 904 millimetres in diameter and will extend from the pulp mill effluent treatment plant to an outfall, approximately 3 km off-shore of Four Mile Beach, on the northern coast of Tasmania. The estimated average final effluent load is 22.5 kL/Adt for optimum production of 1.1 million Adt/yr of pulp. This equates to an approximate daily discharge of 70.7 ML/day or 24,750 ML per annum (based on a 350 day working year).

It is proposed that the effluent pipeline will primarily follow the route of existing infrastructure, including adjacent to the Alinta gas pipeline, East Tamar Highway, rail, electricity transmission line and road corridors and for a short distances through private land.

The off-shore pipeline will extend approximately 3 kilometres into Bass Strait to a depth of approximately 25 m at the discharge point. A multi-port diffuser system will be provided to disperse effluent effectively in the water and allow it to mix and dilute (Jaakko Pöyry, 2005).

The onshore component of the pipeline will be constructed using an open cut trenching method, followed by towing out prefabricated concrete coated steel pipeline string sections.

The offshore component will be constructed using an open trench through the wave zone and ballasting.

### **1.2.3 Workers Accommodation Facility**

Jaakko Pöyry estimate that approximately 2,900 workers will be employed at the peak period of construction. This number will fluctuate depending on the construction activities occurring throughout the construction phase.

If required to assist in accommodating construction workers, Gunns propose to establish a temporary workers accommodation facility for 800 personnel at George Town.

The accommodation facility will be established at the southern approaches to the town off the East Tamar Highway.

The 800 residents will be housed in clustered layouts with ensuite accommodation, complete with site-contained services and amenities, and most emergency and operational services.

The workers accommodation facility will be dismantled after the pulp mill has been constructed.

### **1.2.4 Project Detail and Impact Assessment**

This Draft IIS has been prepared based on the design information that was available at the time of writing. As is typical for major projects, the impact assessment process commences early in the project life so as to ensure that:

- ▶ social and environmental considerations are taken into account by government decision-makers before deciding whether or not to approve the project; and
- ▶ the outcomes of the assessment and approval process form part of the project development and design.

As a consequence, in some instances the assessment presented in this Draft IIS is based on preliminary design knowledge and the feasibility engineering undertaken by Jaakko Pöyry, GHD Pty Ltd, Pitt and Sherry Pty Ltd, Atteris Pty Ltd and Hargrave Pipeline Group.

The Draft IIS, provided the RPDC is satisfied that it complies with the Scope Guidelines, will contain sufficient information to allow the public and decision-makers to make an informed assessment of the project. It will also assist decision-makers in deciding whether or not to approve the project and, if so, what conditions should be imposed on those approvals. However, detailed engineering design will not occur until approvals have been granted.

Additional technical investigations will be undertaken either prior to or early in the detailed design phase, which may influence aspects of the design of various components. These investigations may include geotechnical studies (ocean outfall, wharf, pulp mill and landfill sites), bathymetric investigations (ocean outfall) and detailed topographical survey (pipeline alignments). Both the additional investigations and detailed design may result in some modifications to the project design from that described in Volume 1 and assessed in the Draft IIS. These studies and any associated design alterations will however be undertaken in accordance with any conditions of approval or the commitments given by Gunns in this Draft IIS, and to the satisfaction of relevant government agencies and Departments. Again, this is typical for such major projects, and such changes will need to be assessed in conjunction with the relevant approval agencies prior to any such works being undertaken.

# Water Supply Pipeline from Trevallyn Dam