

Environmental Program

TRENCHING AND PIPELINE INSTALLATION

BBA-ENP-1000-1400-0009

Revision	Date	Revision Description	Prepared	Reviewed	Approved
A0	27 April 2007	Draft for BBA review	IW		
A1	9 May 2007	Draft for DTAE review	IW		
B0	31 Oct 2007	Revised after audit and issued for DTAE approval	IW	JD	JC
B2	30 Jan 2008	Revised to include CMP reference	JRD	JD	CF

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Operational Control Tables

Table OCO 1.1 Trenching and Pipeline Installation Management

1. Purpose and Scope

This Environmental Program describes the Trenching and Pipeline Installation Controls to minimise the impact of the design and construction of the Gunns pulp mill.

This Environmental Program forms part of the Bell Bay Alliance (BBA) Construction Environmental Management Plan (CEMP) and must be read in conjunction with the CEMP.

2. Objectives

1. Protect surface water quality, vegetation and soils during construction of trenches and installation of pipelines, consistent with the requirements of the Tasmanian State Policy on Water Quality Management 1994 and the DPIW Waterways & Wetlands Works Manual 2003.

3. Targets

1. Achieve the Urban Stormwater: Best Practice Environmental Management Guidelines performance objective of a median suspended solid discharge concentration of not greater than 50 mg/L at the point of drainage discharge into streams (other than the Tamar estuary).
2. Ensure that the Protected Environmental Values in receiving waterways are not compromised by construction activities.

4. Regulatory and Contractual Requirements

Refer to:

- CEMP Appendix B – Environmental Legislation Register
- CEMP Appendix C – Approvals Matrix
- CEMP Appendix D - Environmental Licences Register
- CEMP Appendix F – Environmental Commitments
- CEMP Environmental Obligations Register: GNS-OBL-1000-1400-001.

In particular, the following requirements are relevant:

- Environmental Management and Pollution Control Act 1994.
- State Policy on Water Quality Management 1994.
- Environmental Management Goals for Tasmanian Surface Waters – Tamar Estuary and North Esk Catchments December 2005.

5. Technical Documents

The following background studies, research documents and assessments have been used to identify the key environmental aspects:

Reference	Document Title
http://www.gunnspulpmill.com.au/iis/	Bell Bay Pulp Mill Draft IIS and Appendices

The following technical documents have been used to assist in identifying appropriate operational controls:

Availability	Document Title
DPIW	Waterways & Wetlands Works Manual 2003
Hobart Regional Councils	Guidelines for Soil and Water Management 1999
Hobart Regional Councils	The Soil and Water Management Code of Practice for Hobart Regional Councils 1999
Launceston City Council	The Soil and Water Management Code of Practice for Launceston City Council 2000
EPA Victoria	Environment Protection Authority Publication 275 – Construction Techniques for Sediment Pollution Control
EPA Victoria	Environment Protection Authority Publication 480 – Environmental Guidelines for Major Construction Sites
EPA NSW	Landcom – Managing Urban Stormwater, Soils and Construction Volume 1 (Blue Book)
Victoria Stormwater Committee	Victoria Stormwater Committee – Urban Stormwater: Best Practice Environmental Management Guidelines
Board of Environmental Management and Pollution Control	Environmental Management Goals for Tasmanian Surface Waters – Tamar Estuary and North Esk Catchments December 2005

6. Key Environmental Issues

Refer to:

- CEMP Appendix G – Environmental Risk Assessment

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The technical documents and the environmental risk assessment have identified the following key environmental issues:

- Protection of water quality.
- Prevention or control of erosion by surface water run off.

During construction, access to project areas, such as pipeline easements, work and camp sites is required for construction material delivery, machine access and construction personnel transportation.

Construction camps, works sites and storage facilities for construction materials will contribute to the area of disturbance during construction. Accordingly, measures will be required to address key environmental issues associated with cleared work-zones of this nature.

Trenching is an integral step in any underground pipeline construction. The resulting trench and trench spoil stockpile increase the opportunity for erosion, can intersect local water tables and present a hazard to wildlife

Pipeline construction activities usually involve the crossing of watercourses and wetland areas. Specific techniques to facilitate the crossing of those areas are required where there is potential to cause undesirable environmental impacts from associated construction activities. This requires effective planning and implementation in conjunction with monitoring to reduce adverse effects from disturbance, and consequent need for expensive rehabilitation activities to ensure that performance objectives are met (and regulator requirements are complied with).

Backfilling operations will be required following pipe laying activities. This involves sifting and preparing excavated subsoil material for backfilling and support around the pipeline where suitable, and placing specially prepared materials on top of the pipe to protect the pipe coating. Occasionally where conditions are not suitable to return excavated material (e.g. rocky soils), imported material may be utilised.

Hydrostatic testing of pipelines is required to ensure the integrity and safety of the structure prior to commissioning. The section to be tested is pressurised with a medium, typically water, allowing for detection of any leakage and therefore poor joints, possible weaknesses, and other defects.

Environmental risks include:

- Land and streambank destabilisation
- Erosion - including loss of topsoil - and sedimentation of waterways
- Disturbance to significant and environmentally sensitive sites including those of cultural and historic significance
- Weeds and pathogen introduction and transportation
- Acid sulphate soils or contaminated soil disturbance
- Soil compaction
- Landholder liaison and access issues and disruption to other land uses
- Physical damage to riparian vegetation

- Damage to aquatic flora, fauna and habitat from spilled fuel and oils, eroded bank materials and runoff
- Waste emissions
- Dust and noise emissions
- Degradation of land and water amenity values
- Temporary disruption to water supply
- Stock and wildlife entering the open trench.

7. Operational Controls

Environmental outcomes to be achieved are:

- Minimised disturbance to sensitive sites
- Minimised risk of weed and pathogen introduction and transportation
- Minimised impacts on landholders and third parties
- Separation of vegetation, soils and subsoil from construction activities and for future rehabilitation activities
- Minimised discharge of sediments to water bodies
- Minimised impacts on significant and environmentally sensitive sites including those of cultural and historic significance
- Establishment of waste management procedures
- Identification of areas where potential acid sulphate soils or contamination exists
- Minimised risk of stock or wildlife entering the trench
- Trench areas returned to pre-construction contours and land cover
- Minimised erosion and land, including stream bank, disturbance and destabilisation
- Impacts on aquatic and water dependant species limited to immediate construction area
- Stable stream banks and bed following rehabilitation and revegetation
- No loss of water resource
- Minimised disruption to landholders and third parties.

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The operational controls for trenching and pipeline installation during design and construction are set out below:

Table	Title
OCO 9.1	Trenching and Pipeline Installation

The operational controls include requirements and responsibilities for:

- Consultation
- Approval requirements
- Design of permanent works
- Design of temporary works
- Construction activities
- Commissioning and handover

8. Site Environmental Plans (SEP)

- Refer to SEP Register.

Site Environmental Plans (SEPs) detail practical environmental management measures to be implemented at specific worksites to minimise potential impacts of construction activity on the environment and community. They are designed to provide more site specific detail than is included in the Environmental Program and Operational Control tables.

The information contained in the SEPs is presented in tabular drawing format. This is to make them easy for use by all BBA site personnel, consultants and subcontractors.

The controls set out in the SEPs are drawn from the Environmental Programs and Operational Controls.

9. Contingency Management

The environmental risk assessment has identified the following circumstances that could occur outside normal operating conditions:

- Contamination of existing waterways resulting from a storm event greater than the design storm event.
- Design of temporary erosion and sediment controls are insufficient for the area exposed and a storm in excess of the design storm.

If these circumstances occur, the following contingency measures will be implemented:

- The cause of the breach will be modified or stopped.
- If required, the DTAE will be informed.
- The construction method and control measures will be reviewed and improved if necessary.

- The modified methods and controls will be monitored to ensure compliance has been achieved.

10. Evaluating Performance

The Operational Controls, together with the SEPs are used as the basis for evaluating performance.

Refer to:

- CEMP Appendix H – Construction Monitoring Plan.
- CEMP Appendix I – Internal Environmental Audit Schedule.
- CEMP Appendix J – External Environmental Audit Schedule.

Environmental Checklists are used for evaluating performance.

Refer to:

- BBA-CKL-1000-1400-009**A** *Survey Preconstruction*
- BBA-CKL-1000-1400-009**B** *Access Tracks*
- BBA-CKL-1000-1400-009**C** *Pads, Worksites and Storage Facilities*
- BBA-CKL-1000-1400-009**D** *Trenching*
- BBA-CKL-1000-1400-009**E** *Stream Crossings*
- BBA-CKL-1000-1400-009**F** *Trench Backfilling*
- BBA-CKL-1000-1400-009**G** – *Hydrostatic Testing.*

11. Reporting

Refer to:

- CEMP Appendix K – Environmental Reporting Program.

12. Attachments

Not Used.