Environmental Program

WEED AND PATHOGEN MANAGEMENT

BBA-ENP-1000-1400-0012

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		
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B1	7 Jan 2008	Revised following DTAE comment	IW	JD	JC
B2	18 Jan 2008	Revised following DPIW comments	YE	JD	CF

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Operational Control Tables

1. Purpose and Scope

This Environmental Program describes Weed and Pathogen Management measures 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 biodiversity values.

3. Targets

1. No spread of weeds or pathogens due to project 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.

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	Interim *Phytophthora cinnamomi* Management Guidelines. Nature Conservation Report 05/7.
Dieback Working Group (Victoria)	*Managing Phytophthera Dieback – Guidelines for Local Government* prepared by the Dieback Working Group, April 2000
DPIW	Statutory Weed Management Plans for Tasmanian Declared Weeds
NRM North	Northern Regional Weed Management Strategy
National Weeds	Weeds of National Significance strategies

Strategy Executive Committee	
DPIW	Tasmanian Washdown Guidelines for Weed and Disease Control (Machinery Vehicles and Equipment)
DEWR	Management of *Phytophthora cinnamomi* for Biodiversity Conservation in Australia Part 2 - National Best Practice Guidelines/Appendix 2

6. Key Issues

Refer to:

- CEMP Appendix G – Environmental Risk Assessment.

The importation of construction equipment and materials from other regions or states has the potential to introduce weed and disease (or pathogen) previously unknown to an area, particularly during linear pipeline construction. Hygiene controls are a key element of environmental management associated with pipeline construction.

Weeds and diseases can potentially cause significant problems within the construction zone following soil disturbance. Weed and disease establishment can also reduce agricultural productivity and natural area values. A need exists to apply effective control measures where invasive weed species and pathogens may become established or where they threaten the integrity of agricultural land and the conservation of native flora and fauna.

Linear pipeline construction has the potential to transport weeds and disease from one property to another or from infested areas to those sensitive to weed or disease introduction. Where there is a potentially high risk for the spread of weeds and pathogens within the construction zone, appropriate control measures must be implemented to minimise their spread. Particular attention will be given to the hygiene of construction materials and machinery moving throughout the construction zone to ensure that these vectors are not transferred between sites within the construction zone.

The concept of least possible disturbance is critical for weed and pathogen management.

The technical documents and the environmental risk assessment have identified the potential for the spread of weeds and pathogens, particularly related to:

- Spread of weed species and pathogens following construction activity disturbance, including during:
    - Site establishment
    - Clearing, grubbing and stripping
    - Topsoil stockpiling
    - Bulk excavation
    - Trenching
    - Import of fill during bulk earthworks
    - Design and operation of haul roads and access tracks
    - Landscaping
    - Import of quarry products

- Introduction of foreign soil and material contaminated with weeds and diseases
- Introduction of new weed species not previously recorded from the project area
- Introduction of new animal and plant diseases not previously recorded from the project area
- Export of animal and plant diseases to other areas
- Competition from weed species and displacement of native flora
- Reduction in the productivity of agricultural lands
- Transport of propagules on vehicles.

7. Operational Controls

Environmental outcomes to be achieved include:

- Construction vehicles and equipment cleaned of all soil and plant material and certified before entering or leaving the construction site
- Minimised risk of the introduction and spread of weed species and animal/plant diseases
- All soil and quarry material imported into the site to be free of weed and pathogens.

The operational controls for management of weeds and pathogens during design and construction are set out below.

Table	Title
OCO 12.1	Weed and Pathogen Management

The operational controls include requirements and responsibilities for:

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

8. Site Environmental Plans

- 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.

9. Contingency Management

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

- Spread of weeds and pathogens into sites of significant native vegetation.

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

- Obtain advice from a qualified weed or disease expert and the case may be as to the most appropriate measures to take (such as spraying with herbicides, mechanical removal etc). Measures must minimise potential impacts on threatened flora.

- Undertake action as per the advice obtained.

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-1000-1400-012A Weed and Pathogen Management.

11. Reporting

Refer to:

- CEMP Appendix K – Environmental Reporting Program