PERMIT PART B
PERMIT CONDITIONS - ENVIRONMENTAL No. 7725

Issued under the *Environmental Management and Pollution Control Act 1994*

Applicant: **MICROBIAL ACTIVITY PTY LTD**
ACN 125 739 255
699 RICHMOND RD
CAMBRIDGE TAS 7170

Activity: **The operation of composting site (ACTIVITY TYPE: Other Waste Depots)**
BRIGHTSIDES, 47 PLENTY VALLEY RD
SALMON PONDS TAS 7140

The above activity has been assessed as a level 2 activity under the *Environmental Management and Pollution Control Act 1994* under delegation from the Board of Environment Protection Authority.

Acting under Section 25(5)(a)(i) of the EMPCA, the Board of the Environment Protection Authority has required that this Permit Part B be included in any Permit granted under the *Land Use Planning and Approvals Act 1993* with respect to the above activity.

Municipality: **DERWENT VALLEY**
Permit Application Reference: **162/09**
DEPHA file reference: **111311**

Date conditions approved: 27 NOV 2009

Signed: Warren Jones

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY

DEFINITIONS

Unless the contrary appears, words and expressions used in this Permit Part B have the meaning given to them in **Schedule 1** of this Permit and in the EMPCA. If there is any inconsistency between a definition in the EMPCA and a definition in this Permit Part B, the EMPCA prevails to the extent of the inconsistency.

ENVIRONMENTAL CONDITIONS

The person responsible for the activity must comply with the conditions contained in **Schedule 2** of this Permit Part B.

INFORMATION

Attention is drawn to **Schedule 3**, which contains important additional information.

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY

27 NOV 2009

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Schedule 1: Definitions

In this Permit Part B:-

Aboriginal Relic has the meaning described in section 2(3) of the *Aboriginal Relics Act 1975*

Activity means any environmentally relevant activity (as defined in Section 3 of EMPCA) to which this document relates, and includes more than one such activity

Authorized Officer means an authorized officer under section 20 of EMPCA

Best Practice Environmental Management or **'BPEM'** has the meaning described in Section 4 of EMPCA

Classification And Management Of Contaminated Soil For Disposal means the document *Information Bulletin No. 105 Classification and Management of Contaminated Soil for Disposal* published by the Department of Tourism, Arts and the Environment in August 2006, and includes any subsequent versions of this document.

Construction means activities associated with the construction phase of the activity, including but not limited to, activities associated with the clearance of vegetation, site works to create a level site, rock breaking, installation of fences and other infrastructure whether on land or in water.

Director means the Director, Environment Protection Authority holding office under Section 18 of EMPCA and includes a person authorised in writing by the Director to exercise a power or function on the Director's behalf

DRP means a Decommissioning and Rehabilitation Plan

EMP means the Microbial Activity Pty Ltd Development Proposal and Environmental Management Plan prepared by Dr Alice Palmer dated 2009 and includes supplementary information presented in DPEMP Supplement - Compost production Brightsides, Plenty Valley Road, prepared by Dr Alice Palmer dated 12 October 2009, and includes any amendment to or substitution of these documents, including an EMP Operations, approved in writing by the Director.

EMPCA means the *Environmental Management and Pollution Control Act 1994*

Environmental Harm and **Material Environmental Harm** and **Serious Environmental Harm** each have the meanings ascribed to them in Section 5 of EMPCA

Environmental Nuisance and **Pollutant** each have the meanings ascribed to them in Section 3 of EMPCA

Environmentally Hazardous Material means any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils and chemicals.

Leachate means any liquid that is either released by or has percolated through waste.

Person Responsible is any person who is or was responsible for the environmentally relevant activity to which this document relates and includes the officers, employees, contractors, joint venture partners and agents of that person, and includes a body corporate

Planning Authority means the Council(s) for the municipal area(s) in which The Land is situated

Recycling means a set of processes (including biological) for converting recovered materials that would otherwise be disposed of as wastes, into useful materials and/or products

The Land means the land on which the activity to which this document relates may be carried out, and includes: buildings and other structures permanently fixed to the land, any part of the land covered with water, and any water covering the land. The Land falls within the area defined by:

1 Property ID 5829416, Title References 126321/2 and 126320/1.

2 Plan shown at Attachment 1.

Waste has the meaning ascribed to it in Section 3 of EMPCA

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Schedule 2: Conditions

Maximum Quantities

Q1 Regulatory limits

1 The activity must not exceed the following limits:

1.1 50,000 tonnes/year of waste received (excluding materials for recycling) (Annual permit and inspection fees are derived from this figure.)

General

G1 Compliance with EMP and BPEM

The Land must be developed and used, and the activity on The Land must be carried out and monitored, in accordance with the environmental management measures set down in the Environmental Management Plan ('EMP'), and in accordance with best practice environmental management, unless otherwise specified in these conditions or contrary to EMPCA.

G2 Access to and awareness of conditions and associated documents

A copy of these conditions and any associated documents referred to in these conditions must always be held in a location that is known and accessible to the person responsible for the activity. The person responsible for the activity must take all reasonable steps to ensure that all persons who are responsible for undertaking work on The Land, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

G3 Incident response

If an incident causing or threatening environmental nuisance, serious environmental harm or material environmental harm from pollution occurs in the course of the activity, then the person responsible for the activity must immediately take all reasonable and practicable action to minimise any adverse environmental effects from the incident.

G4 No changes without approval

1 The following changes, if they may cause or increase the emission of a pollutant that is not authorised by these conditions or otherwise result in material environmental harm, must only take place in relation to the activity if a new permit has been issued by the relevant planning authority (where the authority determines that a permit is required) or, if no such permit is required, the prior written approval of the Director:

1.1 a change to a process used in the course of carrying out the activity; or

1.2 the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or

1.3 a change in the nature of materials used in the course of carrying out the activity.

G5 Change of responsibility

1 If the person who is or was responsible for the activity will cease or ceases to be responsible for the activity, then, as soon as reasonably practicable, but no later than 30 days after that cessation, that person must:

1.1 notify the Director in writing of that fact;

1.2 provide the Director with full particulars in writing of any person succeeding him or her as the person responsible; and

1.3 notify any such person of the requirements of any relevant permit, environment protection notice or other environmental management obligations.

G6 Change of ownership

If the person responsible for the activity is not the owner of The Land upon which the activity is carried out and the owner of The Land changes or is to change, then, as soon as reasonably practicable but no later than 30 days after becoming aware of the change, the person responsible must notify the Director in writing of the change of ownership.

G7 Commitments

The activity must be carried out in accordance with the commitments contained in Attachment 2 unless otherwise specified in these conditions or unless otherwise approved in writing by the Director.

G8 Complaints register

1 A public complaints register must be maintained and made available for inspection by an Authorized Officer upon request. The public complaints register must, as a minimum, record the following detail in relation to each complaint received in which it is alleged that environmental harm (including an environmental nuisance) has been caused by the activity:

1.1 the time at which the complaint was received;

1.2 contact details for the complainant;

1.3 the subject-matter of the complaint;

1.4 any investigations undertaken with regard to the complaint; and

1.5 the manner in which the complaint was resolved, including any mitigation measures implemented.

2 Complaint records must be maintained for a period of at least 3 years.

G9 Raw materials

1 Unless otherwise approved by the Director, only the following raw materials may be brought onto The Land for composting:

1.1 secondary clarifier sludge from Norske Skog Boyer;

1.2 grape marc;

1.3 pine bark; and

1.4 greenwaste.

2 All raw materials must be placed in windrows and turned on the day of delivery.

<u>Atmospheric</u>

A1 Covering of vehicles

Vehicles carrying loads containing material which may blow or spill must be equipped with effective control measures to prevent the escape of the materials from the vehicles when they leave The Land or travel on public roads. Effective control measures may include tarpaulins and load dampening.

A2 Control of dust emissions

Dust emissions from roads, disturbed areas, storage heaps, and machinery on The Land must be controlled to the extent necessary to prevent environmental nuisance.

A3 Control of dust emissions during construction

1 Construction activities must be managed using such measures as are necessary to prevent dust emissions causing environmental nuisance. Such measures may include but are not limited to:

1.1 using a dust suppression method such as watering dust generating surfaces; and

1.2 ceasing construction activities in windy weather when dust may be blown in the direction of residences.

A4 Odorous gases

Odorous gases arising from the activity must be managed so that they do not cause environmental nuisance beyond the boundary of The Land.

Decommissioning And Rehabilitation

DC1 Notification of cessation

Within 14 days of becoming aware of any event or decision which is likely to give rise to the permanent cessation of the activity, the person responsible for the activity must notify the Director in writing. The notice must specify the date upon which the activity is expected to cease or has ceased.

DC2 DRP requirements

Unless otherwise approved in writing by the Director, a draft Decommissioning and Rehabilitation Plan (DRP) for the activity must be submitted for approval to the Director within 30 days of the Director being notified of the likely cessation of operations. The DRP must be prepared in accordance with guidelines provided by the Director.

DC3 Rehabilitation following cessation

1 Unless otherwise approved in writing by the Director, The Land must be rehabilitated upon permanent cessation of the activity. Without limitation rehabilitation works must include:

1.1 stabilisation of all land surfaces that may be subject to erosion;

1.2 removal or mitigation of all environmental hazards, including land contamination, that has the potential to cause environmental harm; and

1.3 decommissioning of any equipment that has not been sold.

2 Where a Decommissioning and Rehabilitation Plan (DRP) has been approved by the Director, rehabilitation must be carried out in accordance with that plan.

DC4 Suspension of activity

1 During temporary suspension of the activity:

1.1 The Land must be managed and monitored by the person responsible for the activity to ensure that emissions from The Land do not cause serious environmental harm, material environmental harm or environmental nuisance; and

1.2 If required by the Director, the person responsible must prepare and implement a Care and Maintenance Plan to the satisfaction of the Director.

2 Unless otherwise approved in writing by the Director, if the activity on The Land has substantially ceased for 2 years or more, rehabilitation of The Land must be carried out in accordance with the requirements of these conditions as if the activity has permanently ceased.

Hazardous Substances

H1 Storage and handling of hazardous materials

1 Unless otherwise approved in writing by the Director, all environmentally hazardous materials, including all chemicals, fuels, and oils, held on The Land in volumes exceeding 250 litres must be stored and handled in accordance with the following:

1.1 Any storage facility must be contained within a spill collection bund with a net capacity of whichever is the greater of the following:

1.1.1 at least 110% of the combined volume of any interconnected vessels within that bund; or

1.1.2 at least 110% of the volume of the largest storage vessel; or

1.1.3 at least 25% of the total volume of all vessels stored in that spill collection bund; or

1.1.4 the capacity of the largest tank plus the output of any firewater system over a twenty minute period.

1.2 All activities that involve a significant risk of spillages, including the loading and unloading of bulk materials, must take place in a bunded containment area or on a transport vehicle loading apron.

1.3 Bunded containment areas and transport vehicle loading aprons must:

1.3.1 be made of materials that are impervious to any environmentally hazardous material stored within the bund;

1.3.2 be graded or drained to a sump to allow recovery of liquids;

1.3.3 be chemically resistant to the chemicals stored or transferred;

1.3.4 be designed and managed such that any leakage or spillage is contained within the bunded area (including where such leakage emanates vertically higher than the bund wall);

1.3.5 be designed and managed such that the transfer of materials is adequately controlled by valves, pumps and meters and other equipment wherever practical. The equipment must be adequately protected (for example, with bollards) and contained in an area designed to permit recovery of any released chemicals;

1.3.6 be designed such that chemicals which may react dangerously if they come into contact have measures in place to prevent mixing; and

1.3.7 be managed such that the capacity of the bund is maintained at all times (for example, by regular inspections and removal of obstructions).

H2 Hazardous materials (< 250 litres)

Unless otherwise approved in writing by the Director, each environmentally hazardous material, including chemicals, fuels and oils, held on The Land in volumes of less than 250 litres must, as far as practical and to the satisfaction of the Director, be located within bunded areas or spill trays which are designed to contain at least 110% of the volume of the largest container.

H3 Inventory of hazardous materials

An inventory must be kept of all environmentally hazardous materials stored and handled on The Land. The inventory must specify the location of storage facilities and the maximum quantities of each environmentally hazardous material likely to be kept in storage and must include material safety data sheets for those environmentally hazardous materials.

Miscellaneous

Monitoring

M1 Dealing with samples obtained for monitoring

1 Any sample or measurement required to be obtained under these conditions must be subject to the following:

1.1 samples must be tested in a laboratory accredited by the National Association of Testing Authorities (NATA), or a laboratory approved in writing by the Director, for the specified test;

1.2 measurements must be made and samples must be collected and analysed in accordance with relevant Australian Standards, NATA approved methods, the *American Public Health Association Standard Methods for the Analysis of Water and Waste Water*, *Noise Measurement Procedures Manual* or other standard(s) approved by the Director;

1.3 details relating to the collection and analysis of the sample must be retained for at least three years after the date of measurement and must be made available on request to an Authorized Officer; and

1.4 the sample must be taken and transported by a person with appropriate training and experience.

M2 Groundwater bores

1 All groundwater bores must have an installation and development record, which includes, but is not limited to, the following:

1.1 a description of the materials used for construction;

1.2 initial field measurements of the groundwater for conductivity, total dissolved solids, pH and temperature;

1.3 details of slot screens installed, and the depth to which they were installed;

1.4 depth of gravel packing;

1.5 depth of the bentonite cap;

1.6 details of bore development during pumping (removal of drilling contamination);

1.7 results of pump tests;

1.8 aquifer levels; and

1.9 a detailed geological log.

2 The following details must be recorded when sampling groundwater bores:

2.1 standing water level;

2.2 bore volume (purging should be 3 times the bore volume);

2.3 time of purging;

2.4 sampling time and number; and

2.5 field water quality parameters (including conductivity, total dissolved solids, pH and water temperature).

3 Bore and piezometer placement must be carried out in consultation with and under supervision of a suitably qualified person.

M3 Signage of monitoring points

With the exception of open water sampling, all monitoring points must be clearly marked to indicate the location and name of the monitoring point.

M4 Monitoring of all compost raw materials

1 As described on page 23 of the DPEMP:

1.1 Sludge, green waste and pine bark must be sampled and analysed quarterly for hydrocarbons, heavy metals and/or pesticide residues.

1.2 Grape marc must be tested annually for pesticide residues.

M5 Monitoring of sludge prior to delivery

Sludge must be tested weekly for hydrogen sulphide according to the process described on pages 19 and 20 of the DPEMP. Sludge which is too anaerobic (level 4 in table on page 20 of DPEMP) may not be received for composting.

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M6 Monitoring of leachate dam

1 The levels of hydrogen sulphide and dissolved oxygen in the leachate dam must be measured weekly. If hydrogen sulphide is present or levels of dissolved oxygen are below 6 ppm then the leachate dam must be aerated until satisfactory levels of hydrogen sulphide and dissolved oxygen are achieved.

2 Parameters relating to the water balance for The Land must be recorded as described in commitment 17 and provided as part of the Annual Monitoring Report provided to verify the water balance predictions presented in the DPEMP supplement.

M7 Monitoring of boreholes

Three bore holes must be installed as described in DPEMP supplement section 4.3. These must be sampled quarterly for nutrients, metals, pH and conductivity to demonstrate that no contamination of groundwater is occurring as a consequence of the composting operation.

M8 Monitoring reporting and record keeping

1 Unless otherwise specified by the Director, an Annual Monitoring Report, must be submitted to the Director within 21 days of completion of laboratory analyses of samples collected for the previous year. As a minimum, the Annual Monitoring Report must include the following information:

1.1 the laboratories at which sample analyses were carried out;

1.2 contact details for a person responsible for managing monitoring programs;

1.3 for each sampling location or site test location;

1.3.1 a location name which allows the location to be clearly identifiable;

1.3.2 the date and time at which each sample was taken or site test conducted;

1.3.3 the indicators for which analyses or tests were carried out and the units in which the results are reported; and

1.3.4 the results for all sample analyses and site tests.

2 A record of all monitoring reports submitted to the Director must be maintained and copies of all laboratory analysis reports kept for a minimum period of three years and referenced to the relevant Annual Monitoring Reports.

Noise Control

N1 Noise control

Noise emissions from the activity must be controlled to the extent necessary to prevent environmental nuisance, including restricting operating hours where human sleep disturbance may be caused by the noise from the activity or transport movements resulting from the activity.

Operations

OP1 Containment and management of leachate

1 A leachate collection system must be designed and constructed to collect all runoff, including leachate from the compost windrows, from the area identified in Attachment 1 as 'proposed windrow site'.

2 The leachate dam must be operated so that it can contain all runoff reasonably expected to result from a 1 in 25 year, 24 hour storm event.

3 The leachate collection system must prevent the leachate from escaping from The Land into groundwater.

4 Leachate may not be used for any purpose other than irrigation of compost windrows unless a Reuse Plan has been approved in writing by the Director.

Schedule 3: Information

Legal Obligations

LO1 Notification of incidents under s.32 of EMPCA

1 A person responsible for an activity that is not a level 2 activity or a level 3 activity must notify the relevant Council, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as the result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause an environmental nuisance.

2 A person responsible for an activity that is a level 2 activity or a level 3 activity must notify the Director, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as a result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause an environmental nuisance.

3 A person responsible for an environmentally relevant activity must notify the Director, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as a result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause serious or material environmental harm.

4 The Director can be notified by telephoning 1800 005 171 (a 24-hour emergency telephone number).

5 Any notification referred to in subsection (1), (2) or (3) must include details of the incident, its nature, the circumstances in which it occurred and any action that has been taken to deal with it.

6 This notification can be faxed to the Director on 62 333 800, or delivered by hand.

7 Any notification given by a person in compliance with this section is not admissible in evidence against the person in proceedings for an offence or for the imposition of a penalty (other than proceedings in respect of the making of a false or misleading statement).

8 For the purposes of subsections (1), (2) and (3):

8.1 a person is not required to notify the Council or the Director of such an incident if the person has reasonable grounds for believing that the incident has already come to the notice of the Council or Director or any officer engaged in the administration or enforcement of this Act; but

8.2 a person is required to notify the Council or the Director of such an incident despite the fact that to do so might incriminate the person or make the person liable to a penalty.

9 Any notification given by a person in compliance with this section is not admissible in evidence against the person in proceedings for an offence or for the imposition of a penalty (other than proceedings in respect of the making of a false or misleading statement).

LO2 EMPCA

The activity must be conducted in accordance with the requirements of the Environmental Management and Pollution Control Act 1994 and Regulations thereunder, and in accordance with the principles of Best Practice Environmental Management. The requirements of this permit must not be construed as an exemption from any of those requirements or principles.

LO3 Storage and handling of Dangerous Goods

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1 The storage, handling and transport of dangerous goods must comply, as a minimum standard, with the requirements contained in the relevant State Acts and Regulations, and any subsequent amendments, including:

1.1 *Dangerous Goods Act 1998*;

1.2 *Dangerous Goods Regulations 1998*;

1.3 *Dangerous Goods (Road and Rail Transport) Regulations 1998;*

1.4 *Workplace Health and Safety Act 1995*; and

1.5 *Workplace Health and Safety Regulations 1998*

LO4 Aboriginal relics requirements

1 The *Aboriginal Relics Act 1975*, provides legislative protection to Aboriginal heritage sites in Tasmania regardless of site type, condition, size or land tenure. Section 14(1) of the Act states that; Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director:

1.1 destroy, damage, deface, conceal or otherwise interfere with a relic;

1.2 make a copy or replica of a carving or engraving that is a relic by rubbing, tracing, casting or other means that involve direct contact with the carving or engraving;

1.3 remove a relic from the place where it is found or abandoned;

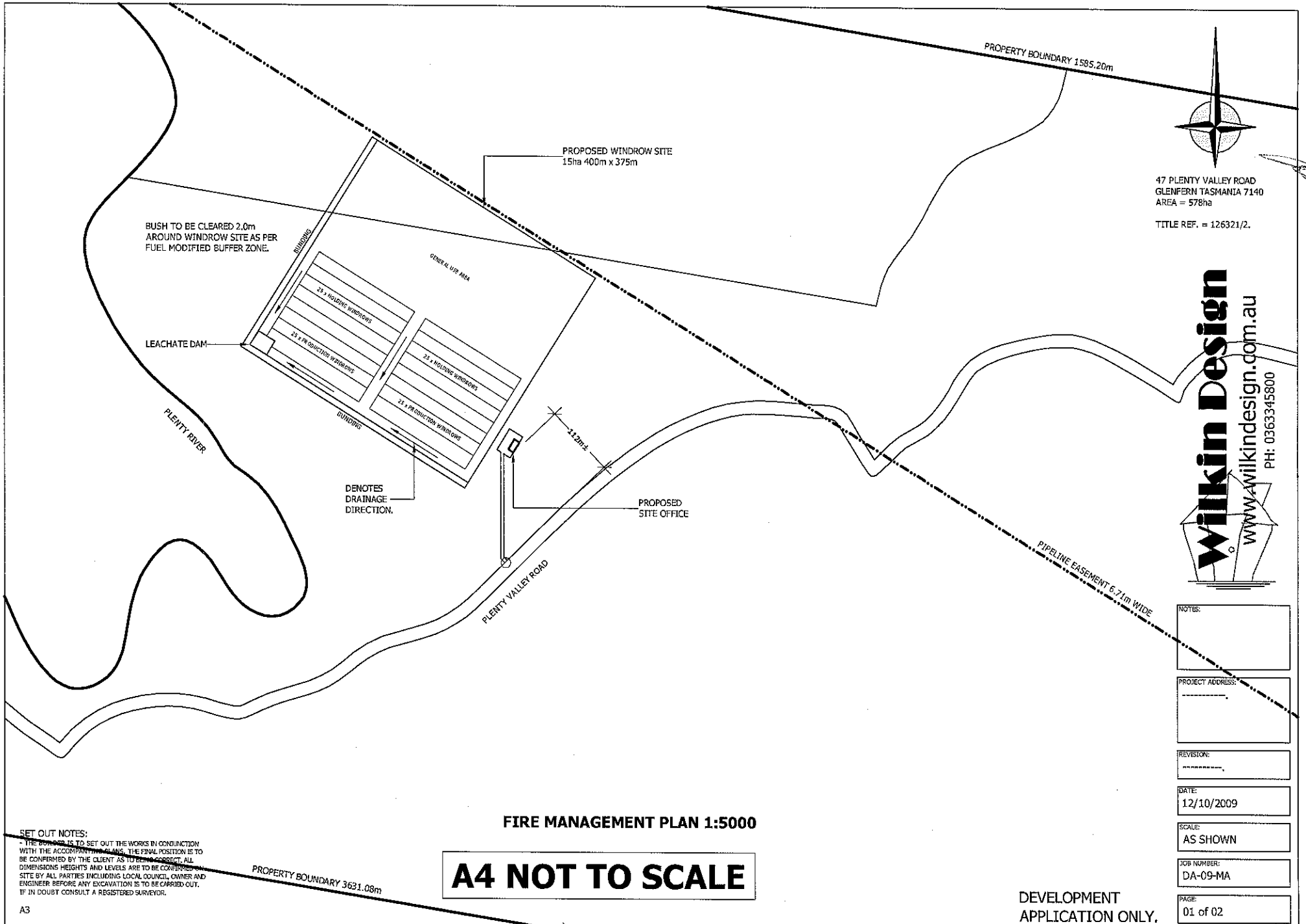
1.4 sell or offer or expose for sale, exchange, or otherwise dispose of a relic or any other object that so nearly resembles a relic as to be likely to deceive or be capable of being mistaken for a relic;

1.5 take a relic, or permit a relic to be taken, out of this State; or

1.6 cause an excavation to be made or any other work to be carried out on Crown land for the purpose of searching for a relic.

2 If a relic is suspected and/or identified during works then works must cease immediately and the Tasmanian Aboriginal Land and Sea Council and the Aboriginal Heritage Office be contacted for advice before work can continue. In the event that damage to an Aboriginal heritage site is unavoidable a permit under section 14 of the *Aboriginal Relics Act 1975* must be applied for. The Minister may refuse an application for a permit, where the characteristics of the relics are considered to warrant their preservation.

3 Anyone finding an Aboriginal relic is required under section 10 of the Act to report that finding as soon as practicable to the Director of National Parks and Wildlife or an authorised officer under the Aboriginal Relics Act 1975. It is sufficient to report the finding of a relic to the Aboriginal Heritage Office to fulfil the requirements of section 10 of the Act.



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Wilkin Design
www.wilkindesign.com.au
PH: 0363345800

FIRE MANAGEMENT PLAN 1:5000

A4 NOT TO SCALE

SET OUT NOTES:
- THE BUILDER IS TO SET OUT THE WORKS IN CONJUNCTION WITH THE ACCOMPANYING PLANS. THE FINAL POSITION IS TO BE CONFIRMED BY THE CLIENT AS TO BEING CORRECT. ALL DIMENSIONS HEIGHTS AND LEVELS ARE TO BE CONFIRMED ON SITE BY ALL PARTIES INCLUDING LOCAL COUNCIL, OWNER AND ENGINEER BEFORE ANY EXCAVATION IS TO BE CARRIED OUT. IF IN DOUBT CONSULT A REGISTERED SURVEYOR.

A3

DEVELOPMENT
APPLICATION ONLY.

NOTES:

PROJECT ADDRESS:
---------.

REVISION:
---------.

DATE:
12/10/2009

SCALE:
AS SHOWN

JOB NUMBER:
DA-09-MA

PAGE:
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1. Weekly testing will be conducted on-site to monitor the composting process and ensure compliance with the AS 4454.
2. Raw ingredients will be tested bi-monthly for pesticide residues and/or pollutants.
3. Construct a leachate dam within the composting site lined with a membrane liner of permeability for water of less than 10^{-14} ms^{-1}.
4. Construct a compact base and fine gravel access road and a sealed surface at least 12 metres back from Plenty Valley Road.
5. Provide two pumps to ensure adequate aeration in the leachate dam.
6. Three bore holes will be installed for the purpose of monitoring leaching to groundwater. One will be located near the windrows, one near the dam and a control bore hole outside of the composting site. All bore holes will be monitored bi-monthly.
7. Provide two windrow turners and a front end loader to guarantee regular compost turning.
8. Maintain a minimum buffer distance of 50m between the compost windrows and the contact fault.
9. MA will dispose of laboratory chemical waste monthly.
10. Install a dual purposed septic tank system in a $10m^2$ area to accommodate one 10m long x 1.2m wide x 0.6m deep trench connected to a minimum 3000L dual purposed septic tank.
11. Overflow from the two water tanks will be diverted via drains to the leachate dam and used in the windrows.
12. Remove vegetation to the east and west of the proposed entrance site to provide sight distance.
13. Provide sight benching on the opposite side of the entrance on Plenty Valley Rd.
14. No compost raw ingredients will be placed in stockpiles, all ingredients will be placed directly into the windrows and turned and watered immediately. Compost will be sold from the compost windrows and will not be stockpiled.
15. The ground beneath the compost holding and production area (as shown in DPEMP Supplement, attachment 2) will be compacted. The top soil will be removed as per Appendix K (Soil permeability calculations) of the DPEMP and compacted ground will be achieved with a single or twin drum roller. Gravel will also be placed on top of the clay.
16. Bunding will be constructed by placing mounds (0.8 m high and 0.5 m wide) with a clay core to provide impermeability (10^{-9} ms^{-1}) at appropriate points around the composting site to divert leachate in to the leachate dam (Appendix 2). Other material to produce the bunding will be top soil removed from the composting site.
17. The leachate dam will be monitored weekly. Microbial Activity will test for hydrogen sulphide and levels of dissolved oxygen. If hydrogen sulphide is present or levels of dissolved oxygen are below 6 ppm then the leachate dam will be aerated. An aspirator will be used to prevent algal blooms.

    Microbial Activity will also maintain a water balance spreadsheet for the composting site. Microbial Activity will:

    - measure daily rainfall using an onsite rainfall gauge;
    - calculate daily evaporation based on data from the Moogara and Bushy Park weather stations;
    - prepare a calibration weir to measure the amount of site runoff; and
    - measure the depth of the leachate dam.

ENVIRONMENTAL ASSESSMENT REPORT

Aerobic Windrow Composting Facility

Brightsides, Plenty Valley Road

Microbial Activity Pty Ltd

Report and recommendations of the
Environment Division
Department of Primary Industries, Parks, Water and Environment

to the Board of the Environment Protection Authority
26 November 2009

epa TASMANIA
ENVIRONMENT PROTECTION AUTHORITY

Environmental Assessment Report	
Proponent	Microbial Activity Pty Ltd
Proposal	Aerobic Windrow Composting Facility
Location	Brightsides, 47 Plenty Valley Road, Glenfern
NELMS no.	7725
DA number	162/09
File	11 13 11
Document	G:\EEO_Enviro_Ops\EAS_Assessments\EAS_Projects\Microbial Activity\Assessment Report
Class of Assessment	2B

Assessment process milestones	
19 October 2008	Notice of Intent submitted
28 November 2008	DPEMP Guidelines issued
20 August 2009	Permit application submitted to Council
25 August 2009	Application received by Board
29 August 2009	Start of public consultation period
25 September 2009	End of public consultation period
12 October 2009	Supplementary information submitted to Board

Acronyms	
Board	Board of the Environment Protection Authority
DPEMP	Development Proposal and Environmental Management Plan
DPIPWE	Department of Primary Industries, Parks, Water and Environment
EIA	Environmental impact assessment
EMPC Act	*Environmental Management and Pollution Control Act 1994*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
LUPA Act	*Land Use Planning and Approvals Act 1993*
SD	Sustainable development

Report summary

This report contains an environmental assessment and recommendations to the Director, Environment Protection Authority in relation to Microbial Activity's proposed aerobic windrow composting facility.

The proposal is for the establishment of an aerobic windrow composting facility on a site of approximately 15 hectares within the *Brightsides* property at 47 Plenty Valley Road, Glenfern. It is intended to produce up to 50,000 tonnes of compost per annum which can be used as an alternative to synthetic fertilisers in agricultural industries. The main raw material for the compost is secondary clarifier sludge from Norske Skog's Boyer Mill. Smaller quantities of other materials such as pine bark and green waste will also be utilised, but the proposal does not involve composting of fish or meat waste.

This report has been prepared by the Environment Division of the Department of Primary Industries, Parks, Water and Environment based on information provided by the proponent in the Development Proposal and Environmental Management Plan (DPEMP) and DPEMP Supplement. The advice of relevant Government Agencies and the public has also been sought and considered as part of this assessment.

On 5 October 2009, the Board/Director requested that the applicant submit supplementary information to address public, government agency (including DPIPWE) and Council comments on the DPEMP. The DPEMP supplementary information was submitted by the applicant on 12 October 2009.

Background to the proposal and details of the assessment process are presented in Section 1 of this report. Section 2 describes the context of this assessment. Details of the proposal are contained in Section 3. Section 4 reviews the need for the proposal and considers the project, site and design alternatives. Section 5 summarises the public and Agency consultation process and the key issues raised in that process. The detailed evaluation of key issues is contained in Section 6. Section 7 identifies other environmental issues and the report conclusions are contained in Section 8.

Appendix 1 contains a tabular evaluation of other environmental issues referred to in Section 7. Appendix 2 contains a summary of issues raised in the consultation process. Appendix 3 contains recommended environmental permit conditions for the proposal. Attachment 2 to the recommended permit conditions contains the consolidated table of commitments from the DPEMP and DPEMP supplement.

Recommendations

It is recommended that the Director, Environment Protection Authority under delegation from the Board of the Environment Protection Authority:

1. Consider the Division's evaluation of environmental issues associated with the proposal in Section 6 and Section 7 of this report
2. Note that the evaluation has concluded that the proposal is capable of being managed in an environmentally acceptable manner such that it is unlikely that the RMPS and EMPCS objectives would be compromised, provided that the recommendations made in this report are satisfactorily implemented. These recommendations include the implementation of the commitments made by the proponent in the DPEMP and DPEMP Supplement.
3. Approve the proposal subject to the conditions attached to this report.
4. In accordance with s.25(5)(a)(i) of the EMPC Act, notify Derwent Valley Council that the conditions and restrictions detailed in Appendix 3 (recommended permit conditions) must be contained in a permit granted by the planning authority under the LUPA Act in respect of the proposal, if a permit is to be granted.
5. In accordance with s.25(5)(a)(ii) of the EMPC Act, provide Council with a copy of this report to outline the reasons for the conditions and restrictions.

Report approval

Prepared by:

N.A. Sawyer.

Nicholas Sawyer
Senior Environmental Officer
Date: 27/11/09

Reviewed by:

Section Head, Assessments Section
Date: 27/11/2009

Regulatory Officer, Waste Section
Date: 27/11/09.

Recommendations accepted:

Warren Jones
Director, Environment Protection Authority
Under delegation from the Board of the Environment Protection Authority
Date: 27 NOV 2009

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1 Approvals process

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPA Act) in relation to the proposal was submitted to Derwent Valley Council on 20 August 2009.

The proposal is defined as a 'level 2 activity' under Schedule 2 Subsection (3)(d) of the *Environmental Management and Pollution Control Act 1994* (EMPC Act), being works for the production of compost ... with a production capacity of 100 tonnes per year or more. Section 25(1) of the EMPC Act required Council to refer the application to the Board of the Environment Protection Authority (the Board) for assessment under the Act. The application was received by the Board on 25 August 2009.

The assessment has been undertaken by the Director, Environment Protection Authority under delegation from the Board.

The Director required that additional information to support the proposal be provided in the form of a Development Proposal and Environmental Management Plan (DPEMP) prepared in accordance with guidelines jointly issued by the Board and Derwent Valley Council. The final guidelines were issued to the proponent on 28 November 2008.

Several drafts of the DPEMP were submitted to the Department for comment prior to its formal submission. A final DPEMP was submitted to Council with the permit application. The DPEMP was released for public inspection for a 28-day period commencing on 29 August 2009. Advertisements were placed in *The Mercury* and on the EPA web site. The DPEMP was also referred at this time to relevant government agencies for comment. One public submission was received.

On 5 October 2009, the Director requested that the proponent prepare a DPEMP Supplement to address public, government agency (including DPIPWE) and Council comments on the DPEMP. The DPEMP Supplement was submitted by the proponent on 12 October 2009.

2 SD objectives and EIA principles

The proposal must be considered by the Director in the context of the sustainable development objectives of the Resource Management and Planning System of Tasmania (RMPS), and in the context of the objectives of the Environmental Management and Pollution Control System (EMPCS) established by the EMPC Act. The functions of the Board are to administer and enforce the provisions of the Act, and in particular to use its best endeavours to protect the environment of Tasmania, and to further the RMPS and EMPCS objectives.

The Director must undertake the assessment of the proposal in accordance with the Environmental Impact Assessment Principles defined in Section 74 of the EMPC Act.

3 The proposal

The proposal is for the establishment of an aerobic windrow composting facility on a site of approximately 15 hectares within the *Brightsides* property at 47 Plenty Valley Road, Glenfern. It is intended to produce up to 50,000 tonnes of compost per annum which can be used as an alternative to synthetic fertilisers in agricultural industries. The main raw material for the compost is secondary clarifier sludge from Norske Skog's Boyer Mill. Smaller quantities of other materials such as pine bark and green waste will also be utilised, but the proposal does not involve composting of fish or meat waste.

The main characteristics of the proposal are summarised in Table 1. A detailed description of the proposal is provided in Section 2 of the DPEMP.

Table 1: Summary of key proposal characteristics

Characteristic	Description/quantities
Activity description	aerobic windrow composting facility using the Lubke system of composting
Location	within the *Brightsides* property at 47 Plenty Valley Road, Glenfern
Land zoning	General rural
Land tenure	Private
Site overview	The site is located in a slight bowl with a natural slope downhill to the leachate dam. The slope is 10 to 15% sloping from north-east to south-west towards the Plenty River Valley. Elevation is between 116 and 145 metres.
Surrounding area overview	At its closest point, the site is approximately 130 m from the Plenty River. The closest house is 1.2 km from the centre of the windrows. Three other houses are within 2.6 km and the Salmon Ponds (café etc) is 2.3 km away.
Major equipment	• Two tractor drawn windrow turners • Front end loader & tractor • Back hoe • Tractor
Other infrastructure	• 100 compost windrows (each 100 m long, 3 m wide and 2 m high) located on ground which has been compacted to reduce permeability. • Two-bay machinery shed including site office, laboratory and production facility for aerobic compost extract (ACE). • 2 ML leachate dam.
Inputs	The main inputs to the composting process are: • Secondary clarifier sludge (from Norske Skog's Boyer Mill); • Pine bark (also from Boyer); • Green waste (from Barwick Landscape Supplies, Granton); and • Grape marc (pips and skins – remnants of the wine making process). All will be delivered daily to the site by truck except the grape marc which is only available seasonally and will be delivered less frequently.
Water	The Southern Water pipeline from Lake Fenton passes through the *Brightsides* property which has a 64 ML water licence, of which up to 10 kL is available to Microbial Activity.
Energy	The facility will be connected to mains electricity to power pumps and provide lighting etc in the machinery shed. Diesel fuel will be stored on site.
Other raw materials	None.

Characteristic	Description/quantities
Wastes	
• Liquid	• Rainfall in excess of a 1 in 25 year, 24 hour storm event may cause overflow from the leachate dam. • In some circumstances it will be necessary to lower the water level in the leachate dam by irrigation of pasture and crops on *Brightsides*. • Apart from the two circumstances described above, no discharge is anticipated (the composting process is a net user of water – in most conditions the nutrient rich contents of the leachate dam will be used to irrigate the compost windrows). • Grey and black water from the machinery shed/office. • Small quantities of chemicals used for laboratory testing.
• Atmospheric	• Carbon dioxide, odours and dust from compost windrows. • Exhaust emissions from tractor etc.
• Solid	None.
• Noise	From the tractor etc.
Operating hours	7am to 6pm Monday to Friday 7am to 6pm Saturday if required. No operations on public holidays.
Project timetable	Estimated one month for completion of all construction work. Operation to commence immediately.
Other key characteristics	• It is not intended to compost fish or meat waste. • The Lubke system of composting involves a twelve week process during which the windrows are subject to regular monitoring to maintain them in an aerobic condition throughout. They are subject to frequent turning using a mechanical turner drawn behind a tractor. • The site has already been cleared under an approved Forest Practices Plan.

Figure 1: Location (from the LIST)

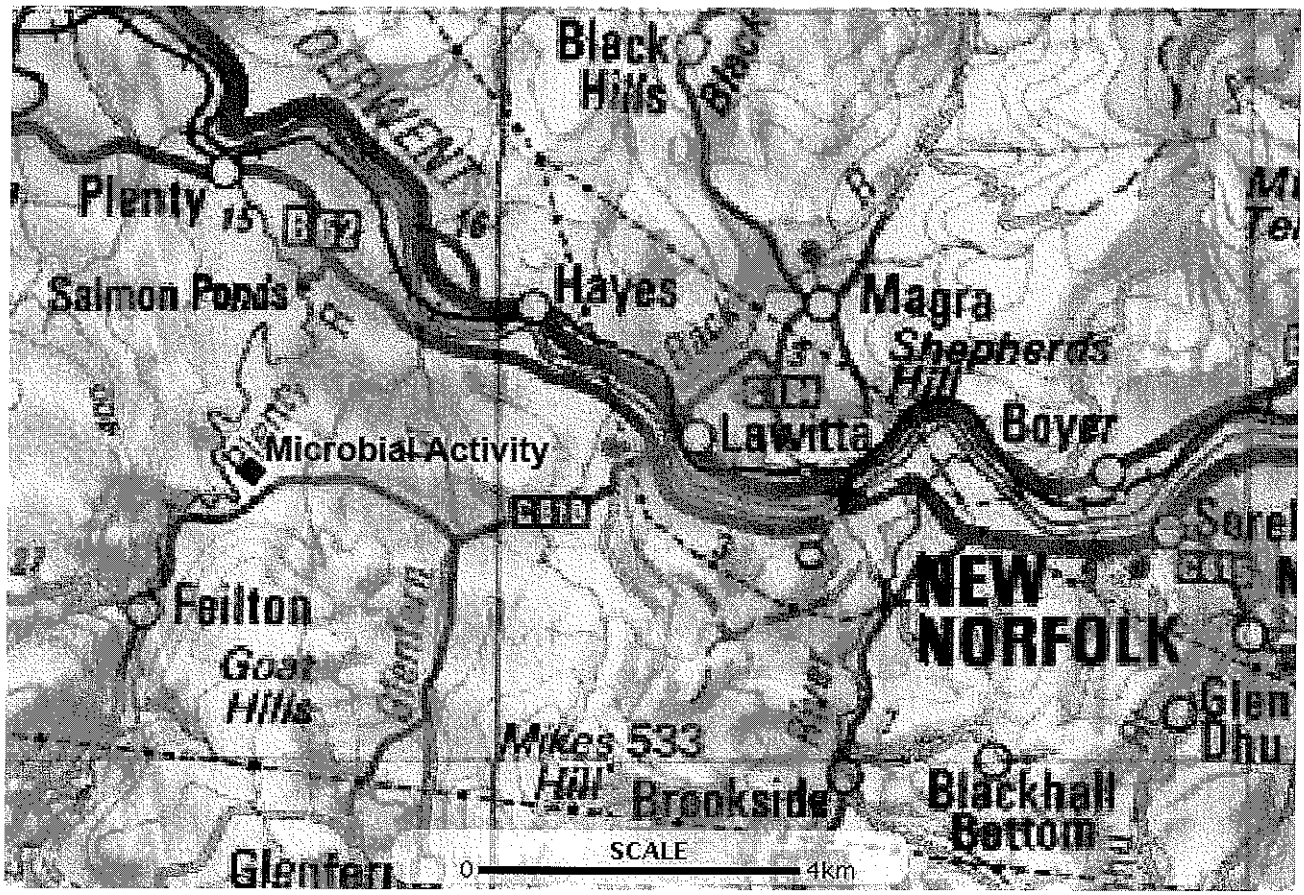
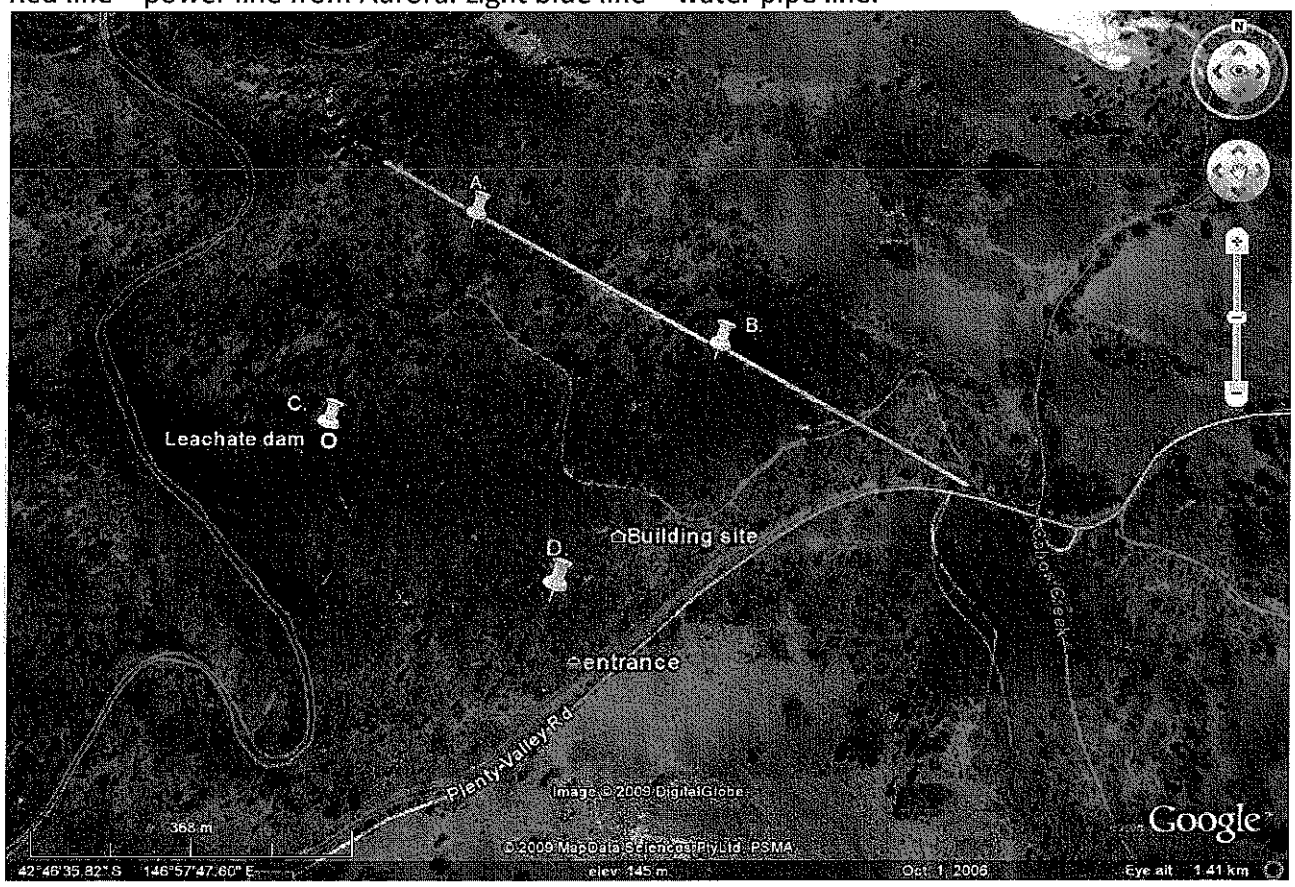


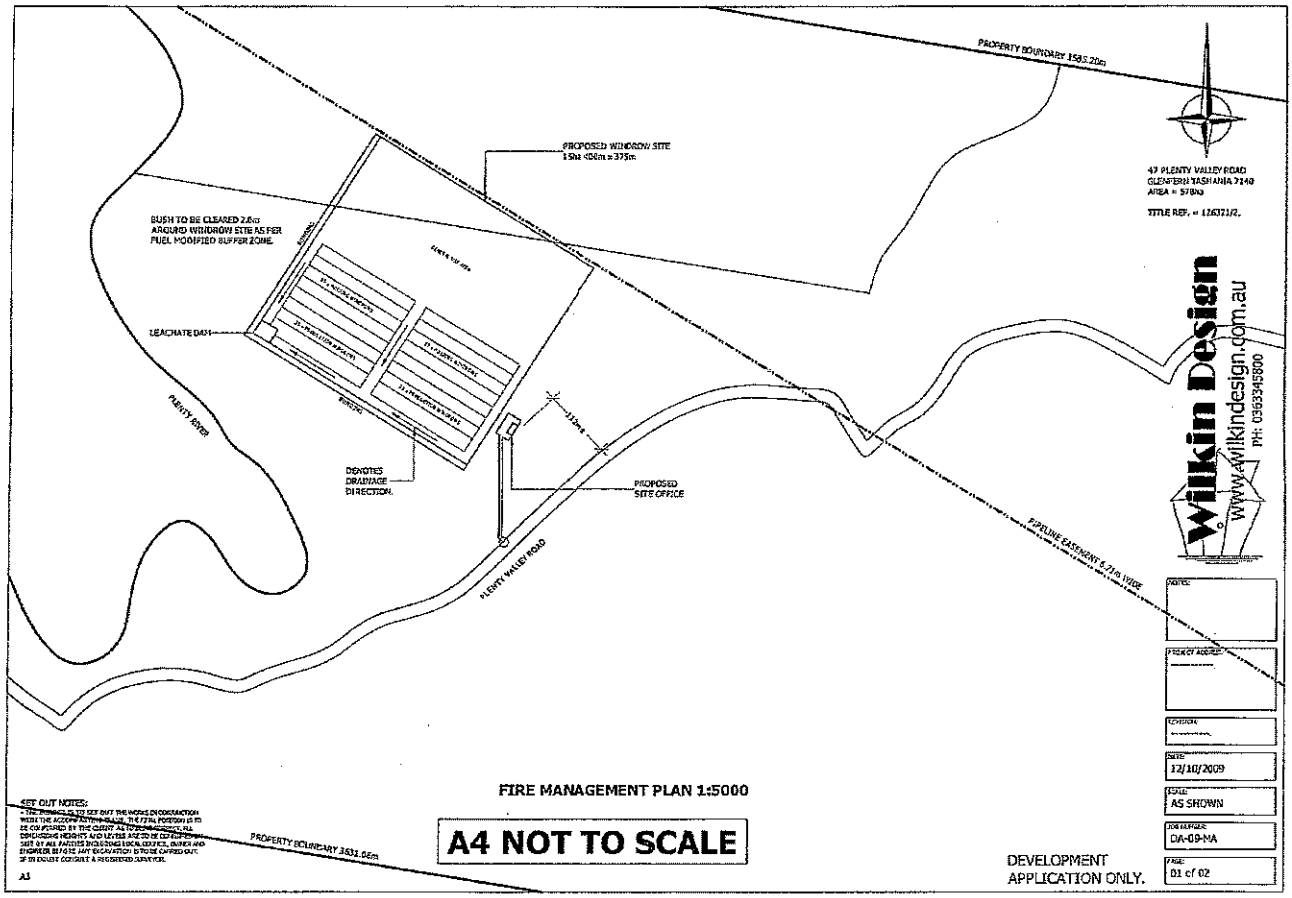
Figure 2: Proposed location (Figure 5c of the DPEMP)

Red line = power line from Aurora. Light blue line = water pipe line.



Note: Site has already been cleared – aerial photo predates clearing.

Figure 3: Site plan (from DPEMP Supplement).



4 Need for proposal and alternatives

Project purpose

According to the DPEMP, the aim of this proposal is to convert waste ingredients, currently disposed of at landfill sites across Southern Tasmania, to high quality organic compost for sustainable agriculture and forestry.

Project alternatives and rationale

None are considered.

Site alternatives and rationale

The DPEMP lists eight alternative sites consistent with minimising the transport distance to Boyer and Granton and the reasons for their rejection.

Design alternatives and rationale

According to the DPEMP, aerobic windrow composting is the cheapest and most reliable method of composting. Daily and weekly testing of the compost ensures aerobic conditions, pathogen destruction, no odour, no dust and quality compost production. Unlike passive composting, a regular supply of oxygen ensures that no nitrites, phosphites, sulphites, or alcohols are produced. Furthermore, aerobic composting methods decompose organic materials faster and more efficiently than passive composting and studies suggest that passive composting systems emit a large amount of greenhouse gases. Furthermore, some other composting techniques consume large amounts of energy during production.

Consequences of the project not proceeding

Some of the inputs, particularly Norske Skog's Secondary clarifier sludge will continue to be disposed of in landfill and an opportunity to replace some synthetic fertiliser with a natural product will be lost.

5 Public and agency consultation

A summary of the public representation and government agency/body submissions is contained in Appendix 2 of this report. The proponent's response to those issues is contained in the DPEMP Supplement.

One representation was received from two members of the public. It mostly related to compliance with the planning scheme. The only environmental issue raised was a suggestion that the proponent should put up a financial guarantee that the composting operation will not produce smelly or toxic gases or catch fire in hot weather.

The DPEMP was referred to a number of government agencies/bodies with an interest in the proposal. Responses were received from the following:

- Aboriginal Heritage Tasmania;
- Department of Health and Human Services (Population Health).

The following Divisions/Areas of the Department of Primary Industries, Parks, Water and Environment also provided submissions on the DPEMP:

- Development and Conservation Assessment Branch of Resource Management and Conservation Division ; and
- Air, water and waste specialists, Environment Division.

The DPEMP Supplement prepared by the proponent provides a response to each of the relevant environmental issues raised by the public and government agencies/bodies.

According to the DPEMP, the proponent has also undertaken its own consultation with neighbouring properties in relation to potential odour and noise emissions.

6 Evaluation of key issues

The key environmental issues relevant to the proposal that were identified for detailed evaluation in this report were:

- Contamination of surface and groundwater.
- Air emissions.

These issues are discussed individually in the following Sections. The table of commitments from the DPEMP is included in Appendix 3 of this report.

6.1 Contamination of surface and groundwater

Description

Liquid waste issues are described in section 4.2 of the DPEMP and substantially amended by information in the supplement which included a detailed water balance.

Runoff from the site and compost windrows will occur in wet conditions. The site is located on a natural slope and impermeable bunding will ensure that all runoff is captured by a leachate dam. The composting operation is a net user of water so, for most of the year, the contents of the leachate dam will be used for irrigation of the compost windrows (water in the leachate dam will be high in nutrients and the operators will not want these to be lost from the composting process). Water levels in the leachate dam will be managed so that there is always capacity available for runoff from a 1 in 25 year, 24 hour storm event. If this requires the water level in the dam to be lowered, the water will be used to irrigate pasture and crops on the *Brightsides* property.

Runoff from the compost windrows is potentially high in nutrients and hence has potential to contaminate ground and/or surface water. The Plenty River is less than 150 metres downhill from the leachate dam.

Management measures

The area under and between the windrows will be prepared by stripping the topsoil and compacting the underlying clay to provide a hydraulic conductivity of 10^{-9} metres per second. The bunding to divert runoff into the leachate dam will be constructed with a similarly impermeable clay core. The leachate dam will be lined with a flexible membrane liner with a permeability to water of less than 10^{-14} metres per second.

Bore holes will be installed to demonstrate that no leaching to groundwater is occurring; one near the windrows, one near the dam and a control bore hole outside of the composting site. These will be monitored bi-monthly.

A detailed water balance was supplied as part of the DPEMP supplement. The leachate dam will be empty at the end of April in anticipation of winter conditions and the proponent will manage the water level so that there is always capacity available for runoff from a 1 in 25 year, 24 hour storm event.

Submissions

The Department of Health and Human Services noted that the Salmon Ponds fish hatchery is located only a few kilometres downstream on the Plenty River and that overflow from the leachate dam could adversely impact on the hatchery.

Evaluation

The impermeability of the ground beneath and between the windrows, the bunds and dam should ensure that all runoff is diverted into the lined leachate dam and that no contamination of groundwater occurs. The only identified geological fault in the vicinity is upslope from the windrows. Regular monitoring of the boreholes will confirm the effectiveness of these measures.

The proposed management measures for the dam will ensure that spillage only occurs when rainfall more severe that a 1 in 25 year, 24 hour storm event occurs. This approach is supported by the Environment Division water specialist.

The proposed measures are considered adequate to protect both ground and surface water. However, a satisfactory environmental outcome is also dependent on active management of the water level in the leachate dam so this will need to be demonstrated. If it is necessary to lower the level of the leachate dam by irrigation on the *Brightsides* property, it will be necessary to demonstrate that this is undertaken in a manner which will not result in runoff of nutrient rich water.

Recommendations

It is recommended that relevant management commitments outlined in the DPEMP and summarised above are included in the permit.

The following site-specific conditions are recommended for inclusion in the permit:

OP1 Containment and management of leachate
M7 Monitoring of boreholes

6.2 Air emissions

Description

The site is over one kilometre from the nearest residence (this was a major reason for its selection) but composting operations can generate significant odours and dust so it was necessary for the proponent to demonstrate that nearby residences would not be adversely affected.

According to the DPEMP, the Lubke process involves regular monitoring of the windrows to enable the optimum condition for the composting process to be maintained at all times. This regular maintenance includes turning and control of moisture content. According to the DPEMP, the greatest odour is generated during the unloading of the sludge and its initial placement into the windrows which is estimated to take about one hour.

Anaerobic conditions in the leachate dam also have the potential to generate odours.

Management measures

The proposed ingredients are secondary clarifier sludge (from Norske Skog's Boyer Mill), pine bark, green waste and grape marc. None of these are likely to generate particularly odorous emissions unless they become anaerobic:

- The proponent has undertaken to test the H_2S level of the sludge prior to delivery. It will be rejected if it is found to be too anaerobic (rejected sludge remains the responsibility of Norske Skog) .
- The proponent has committed to deliver all raw materials directly to windrows which will be turned as soon as possible on the day of delivery, so anaerobic conditions should not occur at any stage of the composting process.

The proponent has also committed to monitoring H_2S and dissolved O_2 levels in the leachate dam which will be aerated if necessary to maintain aerobic conditions.

Submissions

The one representation from members of the public expressed concern about the potential for the operation to produce smelly or toxic gases. The representors do not live in one of the residences closest to the proposed operation.

Evaluation

The proposed raw materials (unless the sludge becomes anaerobic) are not inherently particularly odorous, in contrast meat or fish waste. The proposal does not involve composting meat or fish waste. The actions described above under management measures should ensure that the sludge never becomes anaerobic.

Proper management of the Lubke composting process requires regular adjustment of conditions within the windrows. This should ensure that the windrows are aerobic at all times so significant odour emissions are unlikely, while the control of moisture content should minimise dust emissions. The distance between the site and the nearest residences is greater that one kilometre so adverse effects seem unlikely.

The leachate dam will not be a significant source of odour provided it is maintained in an aerobic condition as described above.

The DPEMP includes an evaluation of meteorological conditions and terrain analysis which shows that odour will not cause nuisance at any of the nearest residences, even in the worst case scenario. This is confirmed by the advice of the Environment Division air specialist.

Dust (whether from construction activities, the windrows or bare ground on the site) is not expected to cause nuisance to adjoining landowners. The standard permit condition regarding dust will provide adequate safeguards.

Recommendations

It is recommended that relevant management commitments outlined in the DPEMP and summarised above are included in the permit.

The following site-specific conditions are recommended for inclusion in the permit:

G9 Raw materials
M5 Monitoring of sludge prior to delivery
M6 Monitoring of leachate dam

The following standard (generic) conditions are recommended for inclusion in the permit:

Dust
A3 Covering of vehicles
A4 Vehicular dust emissions
A5 Control of dust emissions
A7 Control of dust emissions during construction
A16 Odorous gases

7 Other environmental issues

In addition to the key issues, the following environmental issues are considered relevant to the proposal and have also been evaluated.

1. Noise
2. Flora and Fauna
3. Aboriginal Heritage
4. Fire
5. Inorganic chemical content of secondary clarifier sludge from Norske Skog's Boyer Mill
6. Hydrocarbon content of secondary clarifier sludge from Norske Skog's Boyer Mill

Details of this evaluation, along with recommended permit conditions, are contained in Appendix 1.

8 Conclusions

The Environment Division is of the view that:

(i) the RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal; and

(ii) the assessment of the proposal has been undertaken in accordance with the Environmental Impact Assessment Principles; and

(iii) the recommendations set out in this report accord with the Board's responsibilities in relation to these objectives and principles.

This assessment has been based upon the information provided by the proponent in the DPEMP and DPEMP Supplement.

This assessment has incorporated specialist advice provided by Divisions of DPIPWE in relation to a number of key issues.

It is concluded that the proposal is capable of being managed in an environmentally acceptable manner such that it is unlikely that the RMPS and EMPCS objectives would be compromised, provided that the recommendations made in this report are satisfactorily implemented, including the commitments made by the proponent in the DPEMP and DPEMP Supplement.

9 References

Microbial Activity Pty Ltd (2009) Development Proposal and Environmental Management Plan and DPEMP Supplement.

10 Summary of appendices

Appendix 1 Assessment of other environmental issues

Appendix 2 Summary of issues raised by public and agency submissions

Appendix 3 Proposed permit conditions, includes DPEMP Commitments at Attachment 2

Appendix 1 Assessment of other environmental issues

Issue 1
Noise
Description of potential impacts
Disturbance of near neighbours. The tractor drawing the compost turner will be operating for extended periods and loading/unloading operations will be conducted intermittently.
Management measures proposed in DPEMP
Working hours are restricted to 7am to 6pm Monday to Friday and 7am to 6pm Saturday, if required, with no operations on public holidays.
Public and agency comment
The Environment Division noise specialist had no concerns with the proposal.
Evaluation
The site is located in a rural area where noise from the normal operation of agricultural machinery is common throughout daylight hours. There is no reason to consider that the Microbial Activity operation will add significantly to this. The nearest residence is over 1 km away.
Recommendation
Permit condition N1 Noise control.

Issue 2
Flora and fauna habitat
Description of potential impacts
Vegetation on the site has been cleared in accordance with a Forest Practices Plan.
Management measures proposed in DPEMP
None.
Public and agency comment
RM&C had no concerns with the proposal.
Evaluation
There are no issues since site has already been cleared.
Recommendation
No permit conditions required.

Issue 3
Aboriginal Heritage
Description of potential impacts
According to the DPEMP, the site has no known Aboriginal heritage values.
Management measures proposed in DPEMP
None
Public and agency comment
Aboriginal Heritage Tasmania indicated that they do not require an Aboriginal heritage assessment.

Evaluation
It is unlikely that any Aboriginal heritage will be discovered on the site but, if it is, it should be treated appropriately.
Recommendation
Any relics discovered should be managed in accordance with the *Aboriginal Relics Act 1975* (refer Information Schedule **LO4**).

Issue 4
Fire
Description of potential impacts
Damage to composting operation and risk of fire spreading to adjoining properties.
Management measures proposed in DPEMP
A approved fire management plan was provided in conjunction with the DPEMP supplement.
Public and agency comment
Fire was a concern raised in public comment.
Evaluation
The risk of spontaneous combustion in the compost windrows is considered to be low since they are subject to regular monitoring to maintain optimum conditions for composting, including moisture content.
Recommendation
Compliance with provisions of fire management plan.

Issue 5
Inorganic chemical content of secondary clarifier sludge from Norske Skog's Boyer Mill
Description of potential impacts
Excessive metal levels in the sludge will result in corresponding levels in the resulting compost which will render it unsaleable.
Management measures proposed in DPEMP
A nutrient analysis of the Norske Skog sludge is provided in table 2a of the DPEMP. This shows that metal levels are below the thresholds listed in table 4.1 (Contaminant Acceptance Concentration Thresholds for Biosolids) in *Tasmanian Biosolids Reuse Guidelines*, DPIWE, 1999. Ongoing monitoring bi-monthly is proposed.
Public and agency comment
None.
Evaluation
Metal levels are currently well within acceptable limits and there is no particular reason to expect this to change. If metal levels did rise beyond the thresholds listed in table 4.1 , this would render the compost unsaleable. This is potentially a greater concern for Microbial Activity than the environmental regulator. However, the sludge and unsaleable compost would require disposal in landfill.
Recommendation
Compliance with commitment to ongoing monitoring. The following site-specific condition is recommended for inclusion in the permit:

M4	Monitoring of all compost raw materials

Issue 6

Hydrocarbon content of secondary clarifier sludge from Norske Skog's Boyer Mill

Discussion

According to the March 2009 draft of the DPEMP, the $C_{10} - C_{36}$ hydrocarbon content of the sludge was so high that it met the criteria for contaminated soil level 3 as defined in *Information Bulletin 105, Classification and Management of Contaminated Soil for Disposal*, August 2006, Department of Tourism, Arts, and Environment, Environment Division.

When this was explained to the proponents at a meeting with Environment Division staff, it led to an investigation by the proponent and Norske Skog of the analytical methods used to determine the hydrocarbon content. It was eventually determined, to the satisfaction of Environment Division specialists and Analytical Services Tasmania, that the apparently high hydrocarbon levels were an artefact of the analytical technique. Analysis using a less aggressive solvent which does not extract naturally occurring "hydrocarbons" from the wood fibre indicated much lower hydrocarbon levels which are not of concern.

Since this issue has been satisfactorily resolved it is no longer of concern but is mentioned because it was the major reason for the substantial time lag between the March 2009 draft DPEMP and lodgement of the development application in August 2009.

Appendix 2 Summary of issues raised by public and agency submissions

One representation was received from two members of the public. It mostly related to compliance with the planning scheme, which is a matter for Derwent Valley Council. The only part that related to environmental issues was a suggestion that the proponent should put up a financial guarantee that the composting operation will not produce smelly or toxic gases or catch fire in hot weather.

The Department of Health and Human Services suggested that further consideration should be given to the effect of leachate on the Salmon Ponds, in the event of an escape from the leachate dam, and queried whether a 1 in 25 year storm event was an adequate design parameter for the leachate dam.

No other significant comment was received from government agencies.

Appendix 3 Proposed permit conditions