
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

A handwritten signature in black ink, consisting of a stylized, cursive script that is difficult to decipher but appears to be a personal name.

2-7 NOV 2009

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Attachments



Attachment 1: Site Plan (modified: 26/11/2009 09:18)..... 1 pages

Attachment 2: Commitments (modified: 26/11/2009 14:15)..... 1 pages

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY



27 NOV 2009

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



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.

Atmospheric**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.



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

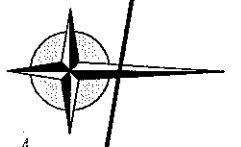
- 1 The storage, handling and transport of dangerous goods must comply, as a minimum standard, with the requirements contained in the relevant State Acts and Regulations, and any subsequent amendments, including:
 - 1.1 *Dangerous Goods Act 1998*;
 - 1.2 *Dangerous Goods Regulations 1998*;
 - 1.3 *Dangerous 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.



27 NOV 2009



47 PLENTY VALLEY ROAD
GLENERRIN TASMANIA 7140
AREA = 578ha
TITLE REF. = 126921/2.

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

NOTES:	
PROJECT ADDRESS:	
REVISIONS:	
DATE:	12/10/2009
SCALE:	AS SHOWN
JOB NUMBER:	DA-09-MA
PAGE:	01 of 02

DEVELOPMENT APPLICATION ONLY.

A4 NOT TO SCALE

FIRE MANAGEMENT PLAN 1:5000

SET OUT NOTES:

- THE WORKS TO SET OUT THE WORKS IN CONJUNCTION WITH THE RECORD DRAWING AND THE FINAL POSITION SET OUT BY THE SURVEYOR SHALL BE TO THE DIMENSIONS, HEIGHTS AND LEVELS ARE TO BE CONFIRMED BY ALL PARTIES INCLUDING LOCAL COUNCIL, OWNER AND ENGINEER BEFORE ANY EXCAVATION IS TO BE CARRIED OUT. IF IN DOUBT CONSULT A REGISTERED SURVEYOR.

PROPERTY BOUNDARY 5691.08m

PROPERTY BOUNDARY 1585.20m

PROPOSED WINDROW SITE
15ha 400m x 375m

BUSH TO BE CLEARED 2.0m AROUND WINDROW STEAS PER FUEL MODIFIED BUFFER ZONE.

LEACHATE DAM

PLENTY RIVER

PLENTY VALLEY ROAD

DENOTES DRAINAGE DIRECTION.

PROPOSED SITE OFFICE

12.2m

PARALLEL EASEMENT 6.21m WIDE

OPEN & USE AREA

BUILDING

BUILDING

23.4 WINDROW WINDROW

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23.4 WINDROW WINDROW

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.



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