Tasmania

Department of Tourism, Arts and Environment

ENVIRONMENT PROTECTION NOTICE NO. 7216/3

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

Issued to: Meander Valley Council
26 Lyall Street
Westbury
Tasmania 7303

Environmentally Relevant Activity Waste Depot
Tip Road
Deloraine

I, Warren Jones Director of Environmental Management, being satisfied in accordance with Section 44(1)(d) of the *Environmental Management and Pollution Control Act* 1994 (the Act) and in relation to the above-mentioned environmentally relevant activity that it is desirable to vary Permit Number 3458, issue this environment protection notice to the above-mentioned person as the person responsible for the activity..

GROUNDS

This environment protection notice is issued on the grounds that:

It is desirable to vary conditions of Permit 3458 issued on 13th January 1993 for the following reasons:

(a) because some conditions must be varied or new conditions imposed to reflect changed management or operational practices as outlined in *Deloraine Landfill Environmental Management Plan* prepared by SEMF Pty Ltd in July 2006;

(b) because some conditions must be varied or new conditions imposed to reflect current regulatory practices;

(c) to ensure there are adequate safeguards against environmental harm or nuisance being caused by the activity;

(d) because the wording of certain conditions must be varied to reflect current or updated terminology and / or clarify the meaning of the condition.

The further grounds upon which this notice is issued are listed in **Schedule 4**.

DEFINITIONS

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

Director of Environmental Management Date: 12 JUN 2007

REQUIREMENTS

In accordance with s.44(3) of the EMPCA, the person to whom this notice is issued is required to comply with conditions contained in **Schedule 2** of this notice. These conditions prevail over the terms of the permit to the extent of any inconsistency.

INFORMATION

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

PENALTIES

If a person bound by an environment protection notice contravenes a requirement of the notice that person is guilty of an offence and is liable on summary conviction to a penalty not exceeding $50,000 or in the case of a body corporate $100,000.

NOTICE TAKES EFFECT

This notice takes effect on the date on which it is served upon you.

APPEAL RIGHTS

You may appeal to the Resource Management and Planning Appeal Tribunal against this environment protection notice or against any requirement contained in the notice, within 14 days of that date, by writing to:

The Chairperson
Resource Management and Planning Appeal Tribunal
GPO Box 2036
Hobart Tas 7001

.....

Signed: Warren Jones.....

Director of Environmental Management

Date:.....

SCHEDULE 1

Definitions of Terms

In this notice –

'Activity (or Activities)' means any environmentally relevant activity or activities (as defined in Schedule 2 of the EMPCA) to which this notice relates;

'Australian Standard' or **'AS'** means an Australian Standard published by Standards Australia International Ltd. Any reference to an Australian Standard is a reference to the most recent edition of that Standard, unless otherwise stated;

'Authorised officer' means an authorised officer under section 20 of the EMPCA;

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

'Capping' means the placement of one or more layers to form a permanent covering above the waste and includes a reference to such a layer;

'Cell" means a section of the land used for the deposition of waste within the defined landfilling footprint;

'Clean fill' means Soil, rock, concrete, bitumen or similar non-putrescible material that is not contaminated by other waste; and does not contain contaminant levels exceeding limits set by the Director in Bulletin 105, *Classification and Management of Contaminated Soil for Disposal, DPIWE, 2004.*

'Closure' means the cessation of all waste placement activities either within a cell or the entire landfill;

'Composting' means the controlled microbiological transformation of organic materials under aerobic and thermophilic conditions;

'Controlled waste' means controlled waste as defined in Section 3 of the *Environmental Management and Pollution Control Act,* 1994;

'Director' means the Director of Environmental Management holding office under section 18 of the EMPCA and includes a person authorised in writing by the Director to exercise the relevant power or function on the Director's behalf;

'EMP' means the 'Deloraine Landfill Environmental Management Plan', prepared by SEMF Pty Ltd dated April 2007 and includes any revision of the EMP approved in writing by the Director.

'EMPCA' means the *Environmental Management and Pollution Control Act*, 1994;

'Environmental harm' is any adverse effect on the environment (of whatever degree or duration) and includes an environmental nuisance;

'Environmental nuisance' means the emission of a pollutant that unreasonably interferes with, or is likely to unreasonably interfere with, a person's enjoyment o f the environment;

'Incineration' means to consume by fire;

'Inert waste' means waste that does not undergo environmentally significant physical, chemical or biological transformations and has no potentially hazardous content once landfilled and is not contaminated with other material, and includes clean fill.

'Landfill' means a waste depot as described in Schedule 2 of EMPCA;

'Landfill gas' means gaseous emissions from the decomposition of waste;

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

'Liquid Waste' means any waste product that is in liquid form or is substantially comprised of free liquids or is not spadeable. (able to be lifted and moved in heaps with a spade);

'LUPAA' is the *Land Use Planning and Approvals Act*, 1993;

'New Cell' means any new cell for the deposition of waste outside the landfilling footprint;

Permeability means the level of saturated hydraulic conductivity as measured by the K-value;.

'Person Responsible for the activity' is any person who is or was responsible for the environmentally relevant activity (or activities) for which this permit is issued and includes the officers, employees, agents and assigns of that person;

'Planning authority' means a Council;

'Pollutant' includes;

(a) A gas, liquid or solid; or

(b) An odour; or

(c) An organism (whether alive or dead), including a virus; or

(d) Energy, includes noise, radioactivity and electromagnetic radiation; or

(e) A combination of pollutants that may cause environmental harm.

'Putrescible waste' means waste containing materials that are capable of rapid biological decay or rotting;

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

'State Policy' means a Tasmanian Sustainable Development Policy made under Part 2 of the *State Policies and Projects Act* 1993;

'The Board' is the Board of Environmental Management and Pollution Control as established under section 12 of the EMPCA. The Board is located within the Department of Tourism, Arts and Environment;

'The land' means the land on which the activity to which this notice 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:

(a) PID no. 1914365 and Title Reference 130751/1 and,
(b) Appendix F in the EMP – Attachment 1

'Waste' is as defined in EMPCA;

Director of Environmental Management

Date: 12 JUN 2007

SCHEDULE 2

ENVIRONMENTAL CONDITIONS

The permit-holder must comply with the following conditions:

GENERAL CONDITIONS

G1 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 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 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 None of the following changes, if they may cause or increase the emission of a pollutant, or otherwise result in environmental harm, may take place in relation to the activity without a new permit from 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:

(a) a change to a process used in the course of carrying out the activity; or
(b) the construction, installation, alteration or removal of any structure or equipment used, in the course of carrying out the activity; or
(c) a change in the nature of the materials used in the course of carrying out the activity.

G5 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 not later than 30 days after that cessation, that person must:

(a) notify the Director in writing of that fact;
(b) provide the Director with full particulars in writing of any person succeeding him or her as the person responsible; and
(c) notify any such person of the requirements of any relevant permit, environment protection notice or other environmental obligations.

G6 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.

Q1 Maximum Quantities

No more than 8,000 tonnes of waste may be disposed on the land per year, excluding clean fill material as defined in Schedule 1.

(Annual permit and inspection fees are derived from this figure)

Q2 Landfill Area

(a) Deposition of waste must be confined to the future landfill footprint as outlined in Appendix F in the EMP – drawing 682.001/C01 (Attachment 1).

(b) The height of the completed landfill must not exceed the contours specified in the EMP and shown on drawings 682 001-C05 to 682 001-CO7 in the EMP. The maximum height at any point must not exceed RL 283.

Q3 Permitted Waste Types

The following types of waste may be deposited or stored on the land.

General Waste:

- Inert waste
- Clean fill
- Putrescible waste
- Sanitary waste
- Recyclable materials (where stored for recycling)

Controlled waste (subject to Hazardous Substances conditions):

- Asbestos
- Scrap tyres (where stored for recycling)
- Batteries (where stored for recycling)
- Waste oil (where stored for recycling)

Q4 Non-Permitted Waste Types

The following waste types must not be accepted for disposal on the land:

- Controlled wastes unless otherwise approved in these conditions
- Liquid wastes
- Low Level Contaminated Soil as defined in DPIWE Bulletin 105; *Classification and Management of Contaminated Soil for Disposal,* DPIWE, 2004
- Sewage sludge

Q5 Annual and five-yearly reviews

(a) An annual review report must be submitted to the Director within 3 months of the end of each financial year.

(b) The annual review report must review the environmental performance of the site over the preceding financial year. The annual review report must include details of;

i). volume and mass deposited,

ii). a record of waste types received,

iii). compaction density achieved,

iv). an assessment of the leachate collection system

v). a summary of monitoring results,

vi). anomalous monitoring results and discussion of their implications

vii). long-term trends of monitored parameters,

viii). an assessment of the degree of compliance with these conditions,

ix). a summary of complaints received and actions taken in relation to complaints, and

x). any other matters of significance to the environmental management of the activity.

(c) The EMP must be critically reviewed by the person responsible for the activity, taking into account forward strategic planning for the landfill, by 30 September 2011 and at 5 yearly intervals thereafter.

Q6 Availability of the EMP

These conditions and the EMP must be made publicly available.

Q7 Summary of Environmental Commitments

The person responsible for the activity must comply with the commitments as stated in Section 3.9 of the EMP.

ATMOSPHERIC

A1 Dust emissions from roads, disturbed areas, storage heaps, or machinery on the land must be controlled to prevent environmental nuisance.

CONSTRUCTION

C1 Leachate Collection System

a) The landfill must be designed so that pollution of water, including groundwater, by leachate is prevented.

b) A leachate collection system must be designed to collect all leachate likely to arise from waste deposited on the land and to prevent it from escaping from the land into groundwater or surface water.

c) Leachate must be managed to prevent nuisance odours, and to minimise human contact with the leachate.

d) The leachate collection system must be constructed in accordance with the detail provided in Drawing No. 682.001-C01 (Attachment 1).

e) Leachate must be directed to the leachate collection system detailed in Appendix F of the EMP – Drawing No. 682.001-C03 (Attachment 2).

f) The leachate pond must be maintained to ensure a freeboard of 500mm below the top water level in order to maintain adequate storage capacity.

C2 Clay Liner

No waste must be deposited in the area designated as the future landfill footprint in Drawing 682.001-C01 (Attachment 1) unless a landfill liner that conforms to the following requirements has been constructed under the area on which waste is to be deposited.

a) The landfill liner for the proposed extension area [as defined in attachment 1] must consist of a contiguous liner material with a maximum permeability of 3.0×10^{-11} m/s placed over a 0.3m thickness of compacted *in situ* clayey material as specified in Drawing 682.001-C01 (Attachment 1) provided that the following requirements apply:

b) Excavate to the level of the existing leachate underliner and ensure a minimum floor gradient of 2% in all new areas to ensure drainage to the leachate collection system.

c) No foreign matter or loose stones greater than 10mm shall be allowed to protrude out of the subgrade.

d) A clay berm with a minimum height of 0.5m, with a maximum gradient of 33%, must be constructed at the interface to older landfill areas.

e) The liner must be laid over the prepared subgrade and leachate diversion embankments and must be protected with 0.3m thick layer of free draining sand.

C3 Surface Water Management

a) Perimeter drains

i) Unpolluted stormwater must be prevented as far as practicable from mixing with deposited waste.

ii) Unless otherwise approved by the Director, the final contours of the landfill must be in accordance with Drawings 682.001-CO5, 682.001-C06 and 682.001-C07 as provided in the EMP.

iii) The stormwater diversion pipe through the central section of the site must be monitored for any ingress of leachate annually and maintained to prevent the ingress of leachate. In the event that leachate is detected the pipe must be sleeved.

iv) Drains must have sufficient capacity to contain run-off that could reasonably be expected to arise during a 24 hour, 1 in 20 year rainfall event. Maintenance activities must be undertaken regularly to ensure that this capacity does not diminish.

b) Sediment Ponds

Sediment settling ponds must be periodically cleaned out to maintain their efficiency. Sediment removed during this cleaning must be securely deposited such that sediment will not be transported off the land by surface run-off.

c) Contaminated water

i) In the event of a fire, potentially contaminated effluent arising from fire fighting must be treated on the land to the satisfaction of the Director or removed from the site by a person holding all necessary approvals for such transport (such as a Waste Transport Business Environment Protection Notice). It is the responsibility of the owner of the landfill to ensure any fires are fully extinguished.

ii) All contaminated and potentially contaminated stormwater run-off on the land disturbed by the activity must be collected and treated as necessary to prevent pollution of any watercourse by solids, discoloured water or other contaminants.

iii) In the event that a stormwater drain becomes contaminated with leachate, measures must be immediately undertaken to prevent contaminants from discharging beyond the borders of the land. Contaminated stormwater may be either:

- transferred to the leachate dam, providing the dam has adequate capacity;
- be irrigated over the landfill cells; or
- removed to an approved Wastewater Treatment Plant.

C4 Quality Assurance

(a) A suitably qualified person with appropriate experience must be available as the leachate collection system is developed. The engineer must supervise installation of the leachate collection system, liner installation for the leachate dam and quality control. The suitably qualified person must be directly responsible for:

(i) the supervision of all technical staff involved;

(ii) 'signing off' of all quality control testing;

(iii) the recording of engineering construction and quality assurance activities to the satisfaction of the Director;

(b) Quality assurance specifications must be prepared for construction and testing of all significant landfill engineering works, including liners, caps and the leachate collection system. In particular:

(i) Construction specifications for all significant works must include Level 1 supervision and field testing by a qualified geotechnician, as per Australian Standard 3798 Guidelines on Earthworks for Commercial and Residential Developments, for Type 1 earthworks;

(ii) The geometry and thickness of clay liners must be measured by a registered surveyor;

(iii) All testing and certification must be performed independently of both Council and the construction contractor; and

(iv) A report documenting conformity with the specifications and these conditions must be prepared on completion of the works, and submitted to the Director within 30 days of such completion.

Director of Environmental Management

Date:

12 JUN 2007

SITE OPERATIONS

SO1 Hours of Operation

(a) Subject to the following paragraph the landfill facility must not be open for the reception of waste outside the hours of 9.00 am to 5.00 pm Monday, Wednesday, Friday, Saturday and Sunday; and closed on Good Friday and Christmas day.

(b) The responsible person may allow disposal of waste on the site outside the normal operating hours for contractors where a specific prior arrangement has been made, providing all other conditions are complied with.

(c) The hours of operation shall be posted on a sign, which must be erected and maintained at the entrance to the site.

(d) Access must be through a gate that must be secured to prevent unauthorised access when the site is unattended.

SO2 Staffing

While the site is open for the reception of waste, the site must be attended by a person or persons whose duties shall include the management of waste deposition and ensuring compliance with these conditions.

SO3 Operations Manual

A site operations manual or equivalent environmental management system must be developed within 12 months of the date of issuing these conditions. The manual is to provide detailed information relating to landfill operations and must detail operational procedures as required to ensure compliance with these conditions. The person responsible must ensure that landfill personnel carry out their duties in accordance with the manual.

A copy of the Operations Manual must be submitted to the Director upon request.

SO4 Site Security

Unless otherwise approved by the Director a 2.4 metre high security fence must be constructed and maintained around areas that are actively being used for waste deposition.

SO5 Waste Emplacement

(a) Any active tipping face(s) must not exceed 50m in combined length, and public access to the tipping face must be kept to minimum.

(b) Each successive landfilling lift must not exceed 2 m in height, excluding cover material.

(c) The person responsible may choose to operate another tipping face for inert materials.

SO6 Waste Cover

(a) Machinery capable of spreading, compacting and covering the waste must be kept on site at all times. A person competent in operating the machinery must be available for an adequate period of time to spread, compact and cover all waste deposited on a daily basis.

(b) Waste must be covered at the end of each day of operation. Clean material to a depth of 300 mm must be used for daily cover material unless otherwise approved by the Director.

(c) The area of exposed waste (the plan area) without intermediate cover must not exceed 7,000m^2. Intermediate cover comprised of low permeability (hydraulic conductivity < 1 x 10^{-7} m/s unless otherwise approved by the Director) materials must be applied to a depth 300mm to areas in excess of 7,000m^2 except where further waste deposition or final capping material will be applied within 90 days.

(d) Daily cover and intermediate cover may be provided concurrently by a single 300mm layer.

SO7 Waste Capping

(a) Unless otherwise approved by the Director areas to which intermediate cover has been applied must have final capping applied within 2 years unless further waste deposition occurs within 90 days.

(b) Unless otherwise agreed with the Director final capping must comply with Table 5.1 of the *Landfill Sustainability Guide, 2004.*

SO8 Litter Management

(a) Measures must be implemented and maintained throughout the operational life of the site to control and monitor the escape of litter from the land.

(b) Litter control measures, for example mobile litter fences of sufficient height to capture airborne litter, must be employed around and close to active landfilling areas. Fences must be regularly cleared of litter in order to maintain their effectiveness (*ie* the fences must remain permeable to wind).

(c) Neighbouring properties within a one half kilometre radius of the land and the access road, and areas of the land outside the active tipping face(s) must be kept clear of windblown litter originating from the site.

(d) The areas specified above must be inspected and all visible litter must be collected on a weekly basis, or more frequently when litter is readily visible on neighbouring properties. A record of the dates of inspections and litter collection activities must be kept. The person responsible must notify the Director if any owner of adjoining land refuses to allow staff to undertake litter removal on their land.

(e) Waste compaction and covering must be carried out immediately after waste deposition if wind conditions are such that litter cannot be contained within the active landfill area.

(f) During times of gale force wind and at any other time when wind strength is such, notwithstanding all other litter control measures, litter cannot be contained within the boundaries of the land, the landfill must not receive putrescible waste. The person responsible must keep a record of all such occasions and provide a copy to an authorised officer upon request.

SO9 Vehicle Wash Facilities

Mud and waste must be prevented from being deposited on public roads.

SO10 Signage

Signs must be erected and maintained in legible condition to convey important operational and safety information.

(a) Drivers are responsible for ensuring that remnant waste and mud is not carried onto public roads.

(b) Hours of operation and tipping fees (to be installed at the gate or gatehouse).

(c) Wastes that are accepted at the landfill.

(d) Items accepted for recycling and the locations within the site where recyclable items should be deposited for collection / processing.

(e) Contact staff / organisation and relevant telephone numbers to report any fire or other emergency at the site.

SO11 Fire Management

(a) Fire control measures on the land must be to the satisfaction of the Tasmania Fire Service (TFS). Correspondence from the TFS indicating the suitability of fire control measures must be submitted to the Director within 6 months of the date of these conditions.

(b) Any fire occurring on the land must be immediately reported to the Director.

(c) Fires occurring at the on the land must be extinguished as soon as possible using all practical means available.

(d) The lighting of fires on the land is not permitted.

(e) The person responsible must make all reasonable efforts to prevent ignition of green waste stockpiles.

SO12 Weed Management

A weed management plan must be developed to prevent the spread of weeds to areas immediately adjacent to the landfill and must be implemented to the satisfaction of the Director.

SO13 Potential Disease Vectors

A management plan to actively discourage the presence of nuisance animals to the extent necessary to ensure they do not present an unacceptable public health risk must be developed and implemented to the satisfaction of the Director.

SO14 Recycling and Recovery of Waste Materials

(a) A resource recovery facility must be maintained at the landfill that incorporates salvaging of recoverable materials from the active tip face.

(b) Specific clean and secure hard stand areas must be set aside at the landfill site for the segregation and collection of green waste, scrap metal and white goods (i.e. refrigerators, washing machines, dishwashers etc).

(c) A public recycling facility must be maintained at the landfill for the recovery of:

(i) Glass bottles;

(ii) Liquid-paperboard cartons;

(iii) Aluminium cans;

(iv) PET, HDPE and other recyclable plastics;

(v) Cardboard and newsprint;

(vi) Lead acid batteries; and

(vii) Used engine oil.

(d) All recycling and collection areas must be adequately signposted.

(e) All recycling and collection areas shall be kept in a neat and orderly state, with appropriate access.

SO15 Materials Received for Recycling

Materials received for recycling must not be disposed to landfill except where the following circumstances exist:

(i) materials have become contaminated and cannot be recycled; and

(ii) reasonable efforts have been made to remove the contamination; and

(iii) written approval has been received from the Director.

SO16 Green Waste

(a) Green waste stockpiles must be kept free from contamination and heavy wood (such as tree trunks, thick branches and stumps) and must be mulched on a regular basis. The mulch may be used for daily cover, rehabilitation of the landfill site or if suitable, for commercial sale.

(b) Green waste windrows must be separated from adjacent windrows by a distance of no less than 20 metres.

SO17 Composting

Composting activities must not occur on the land without the prior written approval of the Director.

SO18 Noise

Measures must be implemented and maintained throughout the operational life of the site to control and minimise noise levels from operations on the site beyond the boundary of the land.

(a) Noise emissions from the activity when measured at any domestic premises in other ownership and expressed as the adjusted time average A-weighted sound pressure level must not exceed:

- 45 dB(A) during the specified hours of operation, and
- 40 dB(A) outside these hours

(b) Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dB(A).

(c) The time interval over which noise levels are averaged must be between 10 and 20 minutes.

(d) Measured noise levels must be adjusted for tonality and impulsiveness in accordance with the *Tasmanian Noise Measurement Procedures Manual*.

(e) All methods of measurement must be in accordance with the *Tasmanian Noise Measurement Procedures Manual*, issued by the Director of Environmental Management.

HAZARDOUS SUBSTANCES

H1 Record of controlled wastes

A record of **all** controlled waste disposed of at the landfill must be kept and provided to the Director as part of the annual review. This report must include:

(a) the composition and description of the waste;

(b) the quantity of controlled waste disposed;

(c) where possible, the person or organisation which generated the waste.

H2 Controlled waste acceptance at the landfill:

a) Controlled waste other than that listed below in this condition must not be received except with the prior written approval of the Director:

(i) Asbestos waste, appropriately wrapped to avoid the release of asbestos fibres into the atmosphere;

(ii) Scrap tyres for storage and/or recycling as outlined below;

H3 Sanitary waste

Sanitary waste from non-patient areas, commercial premises, aged care facilities, geriatric and maternity wards, child care centres, restaurants, and other public places must be buried immediately under supervision and covered with 300mm of cover material in a designated area of the landfill.

Untreated sanitary waste from patients known or suspected of having a communicable disease and sanitary waste that is saturated with or contains free flowing blood and sanitary waste from those receiving chemotherapy must not be disposed of at the landfill.

H4 Lead acid batteries

Used motor vehicle lead acid batteries received at the landfill must be stored in a facility that conforms to Australian Standard 3780 (Storage and Handling of Corrosive Substances).

H5 Waste tyres

Tyres must be managed in accordance with the following:

a) No more than 500 whole tyres may be stored on the land unless otherwise approved by the Director. Such storage may only occur as an interim measure while awaiting disposal or removal to another site.

b) Tyre stockpiles must contain no greater than 200 tyres per stockpile.

c) Tyre storage must be on a clean, hard stand area that has all weather access.

d) No whole tyres except earthmoving tyres may be disposed in the landfill. Where cut tyres are to be disposed of in the landfill the size of the pieces must not exceed 250 mm in any dimension.

e) Earthmoving vehicle tyres must be individually buried and be filled completely, to remove any voids, with an inert and non-degradable material such as soil or sand.

H6 Waste oil

Waste oil received at the landfill must be placed in suitably sealed containers in a dedicated and appropriately designed receival area.

a) the receival area must be a bunded containment area, constructed of suitable impervious materials and have a roof to stop rain infiltration.

b) waste oil accumulated in the bunded containment area must be emptied into a used oil storage tank on a regular basis.

c) the used oil storage tank must conform with the following requirements:

(i) the tank must be of suitable volume (eg 200 – 500 Litres) to store the volumes of used oil that are likely to be received on a regular basis (eg 4 weeks storage);

(ii) the tank must be placed in a suitable bunded containment area, constructed of suitable impervious materials, designed to contain not less than 110% of the volume of the storage tank.

(iii) storage areas must be designed in accordance with relevant Australian Standards including AS1940 (Storage and Handling of Flammable and Combustible Equipment).

(iv) the storage tank must be covered by to prevent ingress of rainwater into the bunded area.

(v) the bunded area must contain appropriate valves to allow drainage and recovery of materials in the bund. These valves must contain suitable locking mechanisms such that authorised personnel can only operate the valves.

(vi) the storage tank must be secured to prevent unauthorised access.

d) Only operators or contractors authorised by the landfill operator shall be permitted to empty used oil into the used oil storage tank and to handle lead acid batteries for storage purposes.

H7 Transport of controlled waste

Controlled waste, transported for fee or reward, must not be received at the landfill unless delivered to the site by a waste transporter authorised to do so via a valid Waste Transport Business Environment Protection Notice.

DECOMMISSIONING AND REHABILITATION CONDITIONS

R1 The person responsible for the activity must notify the Director in writing of any event or decision which is likely to give rise to the permanent cessation of the activity within 14 days of becoming aware of that event or decision. The notice must specify the date upon which the activity is expected to cease.

R2 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 planned cessation of operations. The DRP must be prepared in accordance with guidelines provided by the Director.

R3 Decommissioning and Rehabilitation Plan

A Decommissioning and Rehabilitation Plan (DRP) for the activity must be prepared in accordance the Acceptable Standards provisions of Section 5 of the *Landfill Sustainability Guide 2004* published by the Director and must specify, without limitation, the following:

- closure date,
- the removal of redundant site structures and equipment,
- details of interim cover material,
- erection of signs to inform the public that the site has closed,
- the maintenance (or erection) of perimeter fences and security measures to prevent unauthorised access,
- management of the leachate collection and containment system post-closure,
- maintenance of stormwater drains,
- intended final profile,
- proposed groundwater and surface water monitoring regime; and
- other matters as may be specified in writing by the Director.

R4 Rehabilitation upon Cessation

Unless otherwise approved in writing by the Director, following permanent cessation of the activity land disturbed or used in carrying out the activity must be rehabilitated in accordance with:

(a) the measures set out in a DRP for the site that has been approved by the Director; or

(b) where an approved DRP for the site is not available, the Acceptable Standards provisions of the *Landfill Sustainability Guide 2004* published by the Director.

R5 Progressive Rehabilitation

Progressive rehabilitation and revegetation must be conducted in accordance with the following:

(a) rehabilitation must commence, on a progressive basis, immediately after completion and capping of each cell,

(b) rehabilitation must include planting or seeding compatible with the proposed end use of the site,

(c) maintenance and monitoring of rehabilitated areas must continue until the Director is satisfied that there is no further risk of environmental harm derived from the activity arising from those areas.

MONITORING CONDITIONS

Sampling Methodology

M1 Any sample required to be obtained by the conditions of this permit or notice must be subject to the following:

(a) The sample 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;

(b) The sample must be collected and analysed in accordance with the relevant Australian Standards, NATA approved methods or other standard(s) approved by the Director;

(c) Details relating to the collecting and analysis of the sample must be retained for at least three years after the date of measurement and be made available on request by an authorised officer.

(d) The sample must be taken and transported by a person with appropriate training and experience.

M2 Reporting of waste tonnage

Commencing with year 1 July 2006 to 30 June 2007 the person responsible must submit to the Director a report on the quantity of waste (measured as tonnes) disposed at the landfill during each financial year. The report must be submitted by 30 September each year and must, as a minimum, contain details of:

(i) the total quantity of waste disposed of at the facility, measured as tonnes using a methodology approved by the Director,

(ii) the methodology by which the quantity disposed of has been calculated.

Waste Data Reporting

M3 Commencing in 2007, by 30 September each year the person responsible must submit to the Director a report, as part of the annual review, on the source of waste disposed while carrying on the activity as follows:

(i) By 30 September each year the person responsible must submit to the Director a report detailing the Processing Route, the Primary Source and Secondary Source for all waste disposed in the preceding financial year. The report must break down the total tonnage disposed using the categories listed in the table below:

Tasmanian Solid Waste Classification System (Based on the Australian Waste Database)		
Processing Route	**Primary Source**	**Secondary Source**
1 Recycling	A Municipal	1 Domestic Waste
2 Composting		2 Other Domestic
3 Incineration		3 Other Council
4. Landfill		
5 Onsite	B Commercial & Industrial	0 Unknown
		X Waste Processing Facility
	C Construction & Demolition	0 Unknown
		2 Other Domestic
		3 Other Council
		X Waste Processing Facility

(ii) In the first year of waste data reporting a 6 monthly report detailing the information required above must be submitted to the Director. This report is to cover waste deposited during the first half of the financial year and must be submitted on or before 31 March 2007.

For the purposes of this condition the following definitions apply:

'Commercial & Industrial' means the component of waste stream originating from wholesale, retail or service establishments and the waste stream arising from industrial processes and manufacturing operations;

'Construction and Demolition' means materials in the waste stream which arise from construction, refurbishment or demolition activities and includes bricks, tiles, concrete, steel, glass, plastics, and soil or naturally occurring excavated material;

'Domestic waste' means all household waste placed on the kerbside for collection by council or council contractors;

'Municipal' Waste arising from domestic premises and Council activities largely associated with servicing residential areas; such as street sweeping, street tree lopping, parks and gardens, and litter bins. (For waste data purposes, Municipal waste = Domestic Waste + Other Domestic waste + Other Council waste.)

'Other Council' means waste collected by council or council contractors from the clean-up of municipal parks and gardens, street sweepings, council engineering works, litter bins, and other clean-up resulting from large festivities organised within the council's jurisdiction;

'Other Domestic' means waste collected by council or council contractors from irregular residential clean-ups at the kerbside; and other wastes transported by residents (in small cars, vans or utes) directly to a waste management facility;

'Waste Processing Facility' includes waste transfer stations,

Monitoring, Record Keeping and Reporting

M4 (a) Unless otherwise approved by the Director monitoring must be carried out at the following points:

(i) at the two new groundwater monitoring bores (being DT-B5 and DT-B6),

(ii) surface water immediately downstream of the leachate sand filter system,

(iii) just beyond the boundary of the land in the natural stormwater course,

(iv) upstream and downstream from where the stormwater enters Bonneys Creek,

(v) and the leachate collection dam.

(b) Unless otherwise specified in writing by the Director, monitoring and the frequency of monitoring, must be undertaken in accordance with Tables 1 and 2.

(c) Unless otherwise approved in writing by the Director, the results of laboratory analysis of samples collected in the course of monitoring must be submitted to the Director within 21 days of completion of those analyses by the laboratory.

Groundwater Bores

M5 (a) All groundwater bores must have an installation and development record, which includes, at least, the following:

(i) Description of materials used for construction;

(ii) Initial field water parameters (conductivity, TDS, pH and temperature);

(iii) Details of slot screens installed, and to what depth;

(iv) Depth of gravel packing;

(v) Depth of bentonite cap;

(vi) Details of bore development during pumping (removal of drilling contamination);

(vii) Aquifer levels; and

(viii) A detailed geological log.

(b) Sampling of all bores must be recorded on a pre-drafted recording sheet which includes, at least, but is not limited to, the following:

(i) Standing water level;

(ii) Bore volume (purging should be 3 times the bore volume);

(iii) Time of purging;

(iv) Sampling time and number; and

(v) Field water quality parameters (such as conductivity, TDS, pH and water temperature).

(c) Bore and piezometer placement must be carried out in consultation with and under supervision of a professional person with suitable expertise in hydrogeology.

M6 Groundwater investigations of any new and existing bores must be carried out as follows:

(a) Any new groundwater bore(s) must have an approved installation and development record as outlined in these conditions. Pump testing must also be carried out.

(b) Any new groundwater monitoring bore(s) must be monitored quarterly for one year. Monitoring must be for chemical analytes outlined in Table 2. After this period of initial monitoring, and dependent on results, the range of parameters and frequency of monitoring may be reduced with the Directors approval.

(c) Groundwater monitoring results and interpretation including trending must be included in the annual review prepared in accordance with these conditions.

M7 Unless otherwise approved by the Director, lysimeters must be installed in final landfill capping to monitor rainfall infiltration rates through the cap as follows:

(a) The number of lysimeters and lysimeter design must be determined during the capping design phase and must be submitted to the Director for approval.

(b) Lysimeters must be monitored regularly, in accordance with their design specifications, in order to determine the rate of infiltration of rainwater through the capping; and

(c) Results of lysimeter monitoring must be submitted to the Director as part of the annual review.

Table 1 Surface Water and Leachate Monitoring

	MONITORING PARAMETERS	MONITORING FREQUENCY
Group 1	pH	3 monthly
	Conductivity	3 monthly
	TDS	3 monthly
	Redox potential (Eh)	3 monthly
	Total Suspended Solids	3 monthly
	Alkalinity (as CaCO3)	3 monthly
	Total Nitrogen	3 monthly
	Ammonia	3 monthly
	Nitrate	3 monthly
	Nitrite	3 monthly
	Total phosphorus	3 monthly
	Orthophosphate	3 monthly
	DOC	3 monthly
	COD	3 monthly
	Thermotolerant Coliforms	3 monthly
	Total CN (as CN)	3 monthly
Group 2	Total Iron (Fe)	3 monthly
	Aluminium (Al)	3 monthly
	Copper (Cu)	3 monthly
	Zinc (Zn)	3 monthly
	Chromium (Cr)	3 monthly
	Manganese (Mn)	3 monthly
	Nickel (Ni)	3 monthly
	Lead (Pb)	3 monthly
	Cadmium (Cd)	3 monthly
Group 3	Chloride	3 monthly
	Sulphate	3 monthly
	Sodium (Na)	3 monthly
	Calcium (Ca)	3 monthly
	Potassium (K)	3 monthly
	Magnesium (Mg)	3 monthly
Group 4	Arsenic (As)	Initially – then at 12 months
	Mercury (Hg)	Initially – then at 12 months
	Selenium (Se)	Initially – then at 12 months
	TPH and BTEX[1]	Initially – then at 12 months
	polynuclear aromatic hydrocarbons[1]	Initially – then at 12 months
	organophosphate pesticides[2]	Initially – then at 12 months
	organochlorine pesticides[2]	Initially – then at 12 months
	poly chlorinated biphenyls[2]	Initially – then at 12 months

Table 2 Groundwater Monitoring

	MONITORING PARAMETERS	MONITORING FREQUENCY
	Bore depth	
	Ground water depth	6 monthly
Group 1	pH	6 monthly
	Conductivity	6 monthly
	TDS	6 monthly
	Redox potential (Eh)	6 monthly
	Total Nitrogen	6 monthly
	Ammonia	6 monthly
	Nitrate	6 monthly
	Nitrite	6 monthly
	Total phosphorus	6 monthly
	Orthophosphate	6 monthly
	DOC	6 monthly
	COD	6 monthly
	Total CN (as CN)	6 monthly
Group 2	Total Iron and dissolved (Fe)	6 monthly
	Copper (Cu)	6 monthly
	Zinc (Zn)	6 monthly
	Chromium (Cr)	6 monthly
	Manganese (Mn)	6 monthly
	Nickel (Ni)	6 monthly
	Lead (Pb)	6 monthly
	Cadmium (Cd)	6 monthly
Group 3	Chloride	6 monthly
	Sulphate	6 monthly
	Sodium (Na)	6 monthly
	Calcium (Ca)	6 monthly
	Potassium (K)	6 monthly
	Magnesium (Mg)	6 monthly
Group 4	Arsenic (As)	Initially – then at 12 months
	Mercury (Hg)	Initially – then at 12 months
	Selenium (Se)	Initially – then at 12 months
	TPH and BTEX[1]	Initially – then at 12 months
	polynuclear aromatic hydrocarbons[1]	Initially – then at 12 months
	organophosphate pesticides[2]	Initially – then at 12 months
	organochlorine pesticides[2]	Initially – then at 12 months
	poly chlorinated biphenyls[2]	Initially – then at 12 months

SCHEDULE 3

Additional Information

1 General requirements

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.

2. 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.*

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

(4) *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.*

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

(5) *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).*

SCHEDULE 4

SUMMARY OF GROUNDS FOR ISSUING THIS ENVIRONMENT PROTECTION NOTICE

The following table provides the grounds for varying the Conditions in Permit reference No L/3458 (waste disposal activity).

Condition in this EPN	Condition in this Permit	Grounds
G1.	G1	to prevent environmental harm by ensuring that best practice environmental management is maintained at all stages of development and operation of the waste depot
G2	G4	to ensure all persons responsible for the activity have access to and are familiar with the relevant documents associated with activities at the site and thereby promote compliance with the conditions.
G3	nil	to ensure all practical steps are taken to protect the environment following an incident
G4	G2	to ensure there are no changes in the activity that may lead to the release of a pollutant without approval.
G5	nil	To require notification to the Director of a change of person responsible, as it may be necessary in that event to reissue this notice or to alert the person responsible to current environmental issues.
G6	nil	to require notification to the Director of a change in ownership of the land, as the Director may have statutory duties in respect of the land.
Q1	nil	to impose a limit on the amount of waste disposed because environmental management infrastructure on the land has been designed accordingly.
Q2	G6	to restrict the land area in which waste may be disposed so that waste is only placed in areas designed to receive it.
Q3	nil	to ensure only permitted waste types are disposed on the land because environmental infrastructure on the land has been designed accordingly.
Q4	nil	to restrict the types of wastes that may be landfilled in order to protect the environment.

Director of Environmental Management

Date: 12 JUN 2007

Condition in this EPN	Condition in this Permit	Grounds
Q5	nil	to specify the minimum content requirements of the Environmental Management Plan review report and to set the date of submission of this report to the Director to ensure the timely submission of environmental information relating to the activity.
Q6	nil	to ensure the permit and EMP can be made available to the public and thereby promote transparency..
Q7	nil	to require the permit holder to comply with environmental commitments specified in the EMP.
A1	nil	to ensure odorous gases do not cause an environmental nuisance.
A5	G6	To prevent dust causing an environmental nuisance.
C1	nil	to ensure the leachate and leachate collection system are managed so as not to give rise to environmental harm.
C2	nil	To ensure the landfill liner is designed so as not to give rise to environmental harm
C3	G6	to ensure surface waters are managed so as not to give rise to environmental harm nor become contaminated with leachate.
C4	nil	to ensure quality assurance specifications is undertaken in order to protect the environment.
SO1	nil	to specify the hours of staffing and machinery operations in order to minimise off site impacts, such as noise, as well as ensure site security.
SO2	nil	to ensure an adequate level of staffing is present on the site to facilitate compliance with these conditions.
SO3	nil	to require the person responsible to develop an Operations Manual to facilitate the proper functioning of the facility and to ensure compliance with the conditions.
SO4	nil	to ensure the site is secure through the provision of fencing in order to prevent illegal access and entry by animals.
SO5	G6	to control the size of the tipping face in order to minimise the possibility of off site impacts, such as

Condition in this EPN	Condition in this Permit	Grounds
		windblown litter.
SO6	G3	to specify minimum covering requirements to ensure the site is managed in accordance with BPEM.
SO7	R1	to specify final capping requirements to prevent the ingress of water into the landfill once final design height has been reached in order to minimise the generation of leachate.
SO8	G6	to specify litter control measures to reduce environmental nuisance arising from the dispersal of litter.
SO9	nil	to control the spread of mud and waste from the land.
SO10	G7	to ensure that the landfill has appropriate signage to prevent inappropriate disposal on the land and promote safe practices by users.
SO11	G8	to specify fire control measures to reduce the potential hazard that may arise from a landfill fire.
SO12	nil	to develop and implement a weed management plan to reduce the threat of weeds encroaching onto neighbouring land.
SO13	G6	to specify disease vector control measures to minimise the risk of the landfill giving rise to infestations of rodents and / or scavenging birds.
SO14	C1	to specify recycling measures to assist with resource recovery and the minimisation of the amount of material being landfilled.
SO15	C1	to ensure recyclable materials are not unnecessarily landfilled.
SO 16	nil	to ensure the quality and protection from fire of green waste windrows.
SO17	nil	to control composting activities.
SO18	nil	to control noise emanating from the site. The condition reflects the terminology in the *Tasmanian Noise Measurement Procedures Manual* and provides consistency with other Level 2 activities.
H1	S1	to ensure that an accurate record of controlled wastes is maintained.
H2	S1	to ensure specified controlled wastes are safely disposed.

Condition in this EPN	Condition in this Permit	Grounds
H3	nil	to permit the receipt of sanitary waste and to ensure it is immediately covered to prevent environmental nuisance.
H4	nil	to ensure used motor vehicle lead acid batteries are managed in a secure manner and in accordance with the relevant Australian Standard.
H5	nil	to ensure tyres are managed in an environmentally sustainable manner.
H6	nil	to ensure waste oil is managed in a sustainable manner and in accordance relevant Australian Standards
H7	nil	to guarantee the legal transport of controlled wastes to the landfill.
R1, R2, R3, R4, R5	R1	to require timely notification of cessation of operations to enable appropriate rehabilitation procedures to be carried out, and to require rehabilitation to be carried out in accordance with an approved *Decommissioning and Rehabilitation Plan* that meets BPEM standards.
M1, M4, M5, M6	M1	to require the use of modern accreditation practice and currently applicable standards in sample collection and sample analysis procedures, as well as specify monitoring and reporting requirements.
M2, M3	nil	to ensure the timely notification of waste tonnes, types and source are provided to the Director.
M7	Nil	To monitor the integrity of the landfill cap through the installation of lysimeters.

Director of Environmental Management

Date: 12 JUN 2007

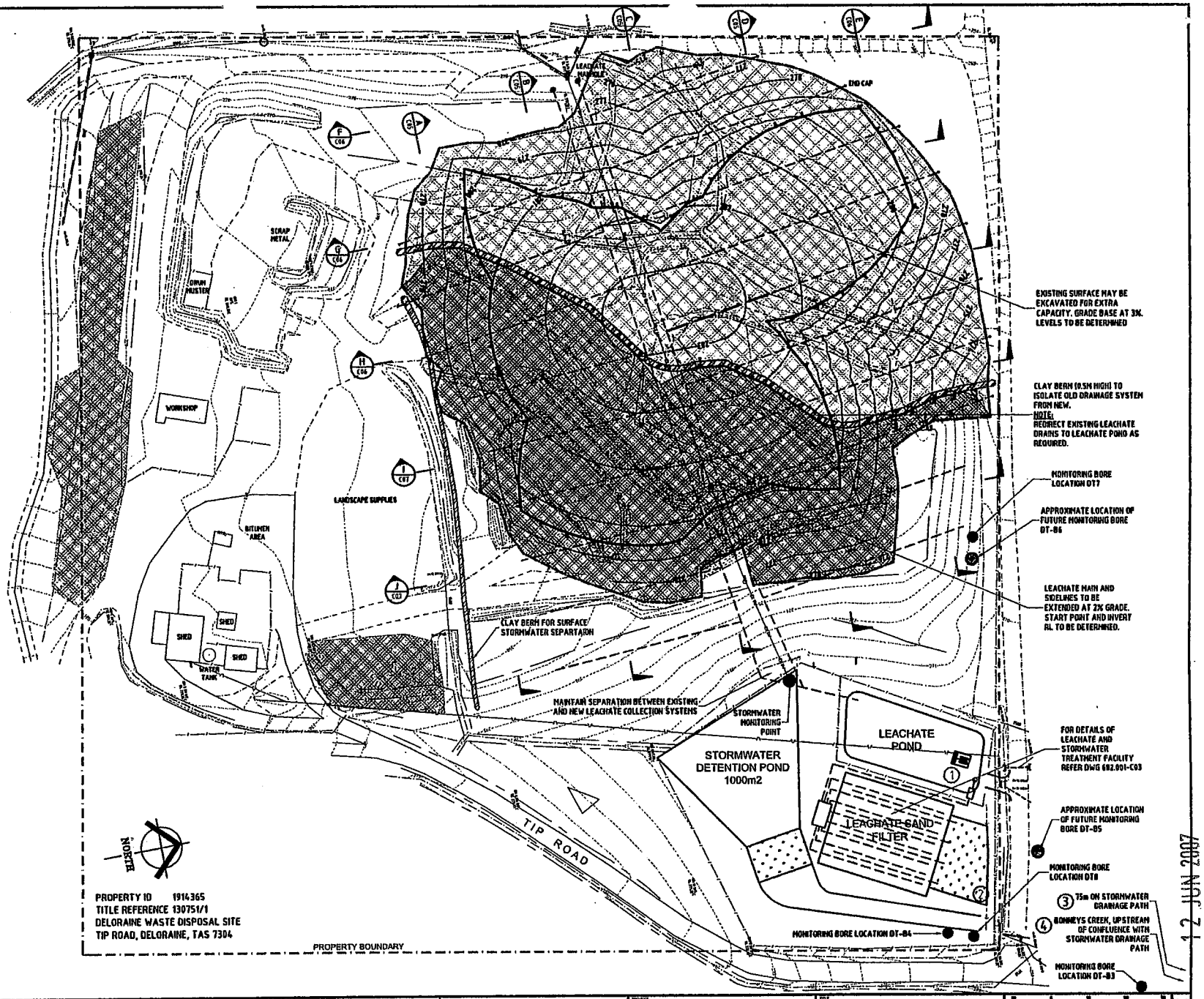
ATTACHMENT 1 **Tip Site Filling Plan**

ATTACHMENT 2 **Leachate and Stormwater Treatment Facility Layout**

Director of Environmental Management

Date: 12 JUN 2007

ATTACHMENT 1



21 JUN 2007

REV	DESCRIPTION	APP.	DATE
H	CLAY ISOLATION BERM ADDED		22.5.07
G	STORMWATER MONITORING ADDED		22.5.07
F	NOTES AMENDED		27.11.06
D	GENERAL REVISION		12.10.06
E	RE-ISSUED FOR DISCUSSION		18.8.06
B	DETAIL AMENDED		16.8.06
A	ISSUED FOR DISCUSSION		9.8.06

DRAWING CHECK	SIGNATURE	DATE
DRAWN	BRE	22.5.07
DESIGNED		
CHECKED		
VERIFIED		
APPROVED		

CO-ORDINATION CHECK	SIGNATURE	DATE
STAGE:		
MECH.		
ELECT.		
HYDRAUL.		
PROGRAM.		

CLIENT: Meander Valley Council

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ACN 117 492 814 ABN 24 117 492 814

PROJECT: DELORAINE REFUSE DISPOSAL SITE ENVIRONMENTAL MANAGEMENT PLAN

TITLE: TIP SITE FILLING PLAN

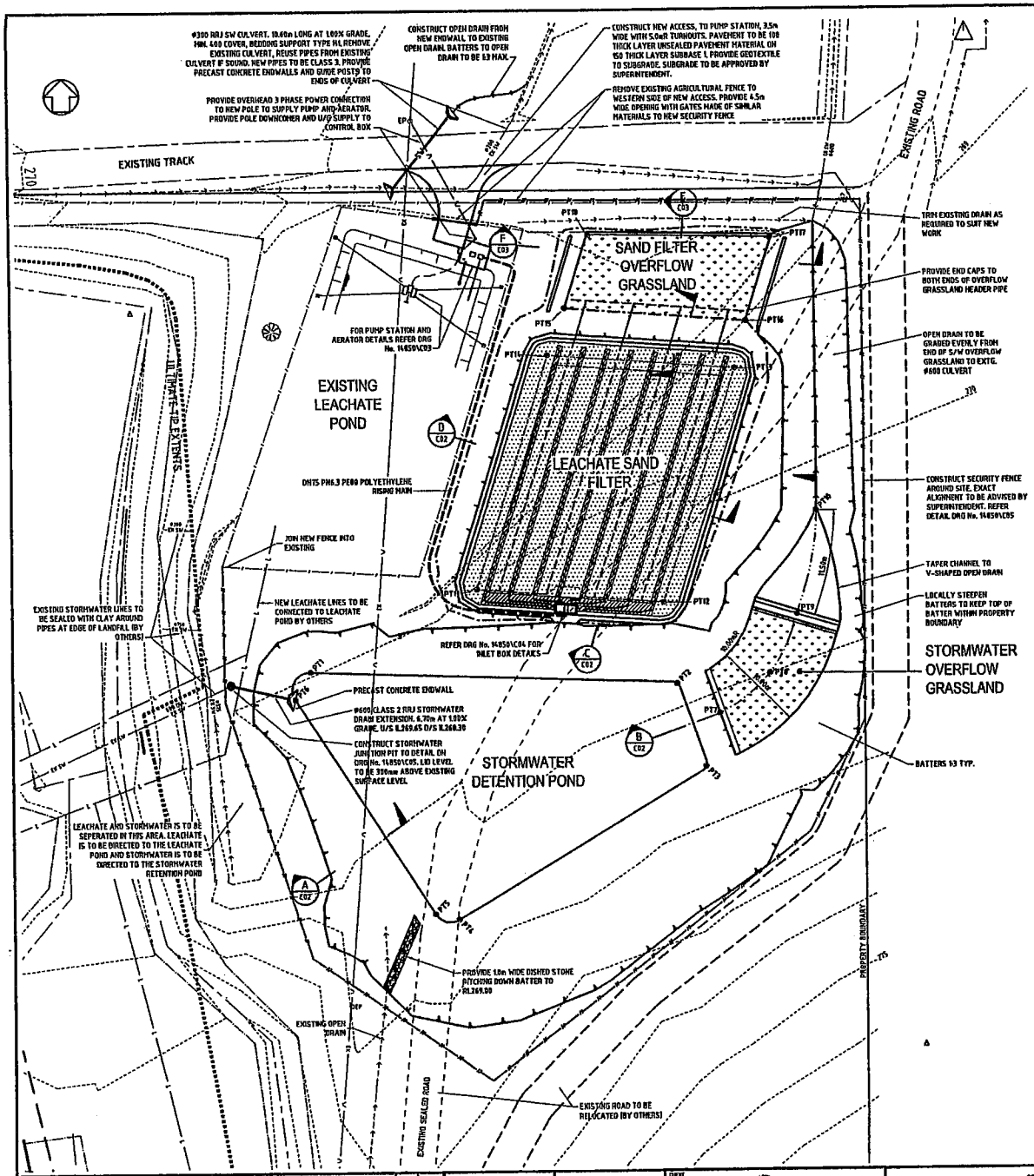
A1

STATUS: PRELIMINARY ONLY
NOT TO BE USED FOR CONSTRUCTION

SCALE @ A1: 1:500 DIMENSIONS IN: METRES

DRAWING NO.: 682.001-C01 REV: H

S:\Jobs\682.001 Deloraine RDS EMP\0500-Outputs\501-Drawings\682.001-C01, C05-C07.dwg, 22/05/2007 8:16:08 AM


#300 RRJ SW CULVERT. 10.60m LONG AT 1.00% GRADE, MIN. 600 COVER, BEDDING SUPPORT TYPE H1, REMOVE EXISTING CULVERT, REUSE PIPES FROM EXISTING CULVERT IF SOUND, NEW PIPES TO BE CLASS 3. PROVIDE PRECAST CONCRETE ENDWALLS AND SURE POSTS TO ENDS OF CULVERT
CONSTRUCT OPEN DRAIN FROM NEW ENDWALL TO EXISTING OPEN DRAIN. BATTERS TO OPEN DRAIN TO BE 1:3 MAX.
CONSTRUCT NEW ACCESS, TO PUMP STATION, 3.5m WIDE WITH 5.0m@ TURNOUTS. PAVEMENT TO BE 100 THICK LAYER UNSEALED PAVEMENT MATERIAL ON 150 THICK LAYER SUBBASE 1. PROVIDE GEOTEXTILE TO SUBGRADE. SUBGRADE TO BE APPROVED BY SUPERINTENDENT.
REMOVE EXISTING AGRICULTURAL FENCE TO WESTERN SIDE OF NEW ACCESS. PROVIDE 4.5m WIDE OPENING WITH GATES MADE OF SIMILAR MATERIALS TO NEW SECURITY FENCE
PROVIDE OVERHEAD 3 PHASE POWER CONNECTION TO NEW POLE TO SUPPLY PUMP AND AERATOR. PROVIDE POLE DOWNCOMER AND U/G SUPPLY TO CONTROL BOX
EXISTING TRACK
EXISTING ROAD
TRIM EXISTING DRAIN AS REQUIRED TO SUIT NEW WORK
SAND FILTER OVERFLOW GRASSLAND
PROVIDE END CAPS TO BOTH ENDS OF OVERFLOW GRASSLAND HEADER PIPE
FOR PUMP STATION AND AERATOR DETAILS REFER DRG No. 14850\C03
OPEN DRAIN TO BE GRADED EVENLY FROM END OF S/W OVERFLOW GRASSLAND TO EXTG. #600 CULVERT
EXISTING LEACHATE POND
LEACHATE SAND FILTER
DN75 PN6.3 PE80 POLYETHYLENE RISING MAIN
CONSTRUCT SECURITY FENCE AROUND SITE. EXACT ALIGNMENT TO BE ADVISED BY SUPERINTENDENT. REFER DETAIL DRG No. 14850\C05
JOIN NEW FENCE INTO EXISTING
TAPER CHANNEL TO V-SHAPED OPEN DRAIN
NEW LEACHATE LINES TO BE CONNECTED TO LEACHATE POND BY OTHERS
LOCALLY STEEPEN BATTERS TO KEEP TOP OF BATTER WITHIN PROPERTY BOUNDARY
EXISTING STORMWATER LINES TO BE SEALED WITH CLAY AROUND PIPES AT EDGE OF LANDFILL (BY OTHERS)
REFER DRG No. 14850\C04 FOR INLET BOX DETAILS
STORMWATER OVERFLOW GRASSLAND
PRECAST CONCRETE ENDWALL
#600 CLASS 2 RRJ STORMWATER DRAIN EXTENSION. 6.70m AT 1.00% GRADE. U/S RL269.65 D/S RL268.98
CONSTRUCT STORMWATER JUNCTION PIT TO DETAIL ON DRG No. 14850\C05. LID LEVEL TO BE 300mm ABOVE EXISTING SURFACE LEVEL
STORMWATER DETENTION POND
BATTERS 1:3 TYP.
LEACHATE AND STORMWATER IS TO BE SEPERATED IN THIS AREA. LEACHATE IS TO BE DIRECTED TO THE LEACHATE POND AND STORMWATER IS TO BE DIRECTED TO THE STORMWATER RETENTION POND
PROVIDE 10m WIDE DISHED STONE PITCHING DOWN BATTER TO RL269.00
EXISTING OPEN DRAIN
EXISTING ROAD TO BE RELOCATED (BY OTHERS)
EXISTING SEALED ROAD
PROPERTY BOUNDARY
U/L TIMBER POWER POLE & STAYS
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PT2
PT3
PT4
PT5
PT6
PT7
PT8
PT9
PT10
PT11
PT12
PT13
PT14
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PT16
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A C02
B C02
C C02
D C02
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