

# ENVIRONMENTAL ASSESSMENT REPORT

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## Aerobic Windrow Composting Facility

*Brightsidles, Plenty Valley Road*

Microbial Activity Pty Ltd

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

to the Board of the Environment Protection Authority  
26 November 2009





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

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

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

## Report summary

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

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

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

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

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

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

## Recommendations

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

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

## Report approval

**Prepared by:**

*N.A. Sawyer.*

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

**Reviewed by:**

*[Signature]*  
Section Head, Assessments Section  
Date: 27/11/2009

*[Signature]*  
Regulatory Officer, Waste Section  
Date: 27/11/09.

**Recommendations accepted:**

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

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# 1 Approvals process

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

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

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

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

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

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

## **2 SD objectives and EIA principles**

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

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

### 3 The proposal

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

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

Table 1: Summary of key proposal characteristics

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

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

Figure 1: Location (from the LIST)

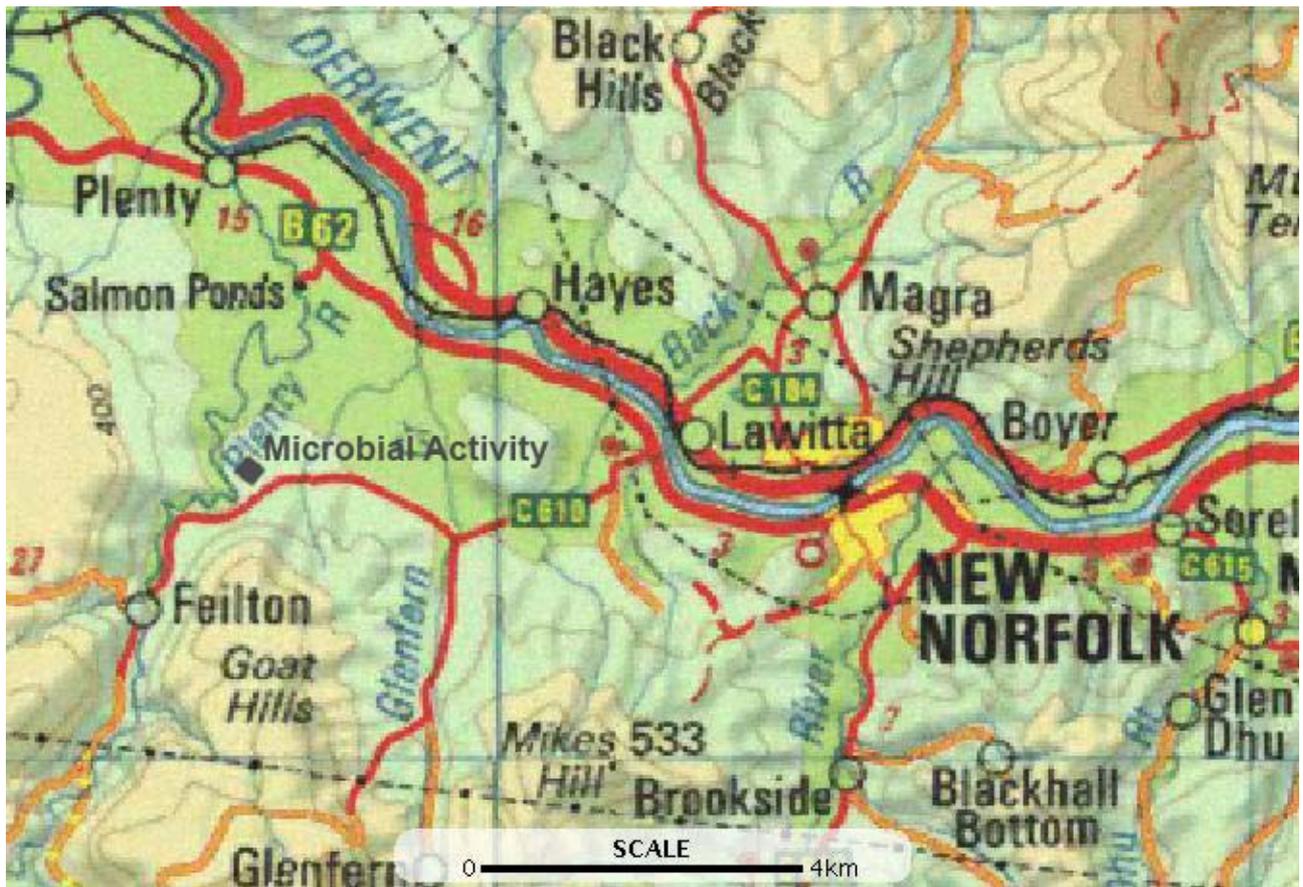


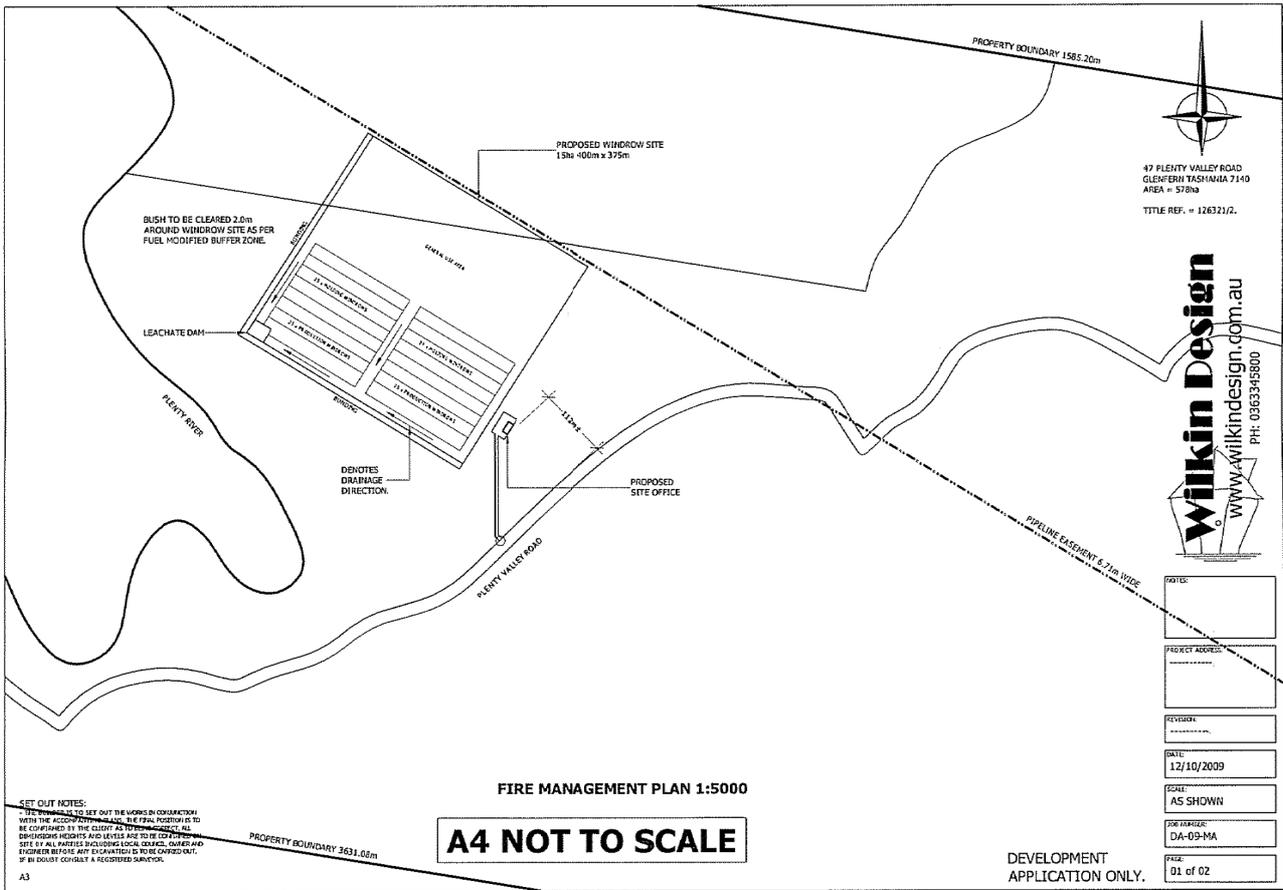
Figure 2: Proposed location (Figure 5c of the DPEMP)

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



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

Figure 3: Site plan (from DPEMP Supplement).



## **4 Need for proposal and alternatives**

### **Project purpose**

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

### **Project alternatives and rationale**

None are considered.

### **Site alternatives and rationale**

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

### **Design alternatives and rationale**

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

### **Consequences of the project not proceeding**

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

## 5 Public and agency consultation

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

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

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

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

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

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

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

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

## 6 Evaluation of key issues

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

- Contamination of surface and groundwater.
- Air emissions.

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

### 6.1 Contamination of surface and groundwater

#### ***Description***

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

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

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

#### ***Management measures***

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

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

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

#### ***Submissions***

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

## ***Evaluation***

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

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

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

## ***Recommendations***

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

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

- OP1** Containment and management of leachate
- M7** Monitoring of boreholes

## **6.2 Air emissions**

### ***Description***

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

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

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

### ***Management measures***

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

- The proponent has undertaken to test the H<sub>2</sub>S level of the sludge prior to delivery. It will be rejected if it is found to be too anaerobic (rejected sludge remains the responsibility of Norske Skog).
- The proponent has committed to deliver all raw materials directly to windrows which will be turned as soon as possible on the day of delivery, so anaerobic conditions should not occur at any stage of the composting process.

The proponent has also committed to monitoring H<sub>2</sub>S and dissolved O<sub>2</sub> levels in the leachate dam which will be aerated if necessary to maintain aerobic conditions.

## ***Submissions***

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

## ***Evaluation***

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

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

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

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

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

## ***Recommendations***

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

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

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

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

### **Dust**

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

## **7 Other environmental issues**

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

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

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

## 8 Conclusions

The Environment Division is of the view that:

- (i) the RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal; and
- (ii) the assessment of the proposal has been undertaken in accordance with the Environmental Impact Assessment Principles; and
- (iii) the recommendations set out in this report accord with the Board's responsibilities in relation to these objectives and principles.

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

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

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

## 9 References

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

## **10 Summary of appendices**

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Appendix 1 Assessment of other environmental issues

Appendix 2 Summary of issues raised by public and agency submissions

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

## Appendix 1 Assessment of other environmental issues

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

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

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

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

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

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

**M4** Monitoring of all compost raw materials

**Issue 6**

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

**Discussion**

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

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

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

## **Appendix 2 Summary of issues raised by public and agency submissions**

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

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

No other significant comment was received from government agencies.

## **Appendix 3 Proposed permit conditions**