

Environmental Assessment Report

Compost Facility

*314 Midland Highway
Bridgewater*

BG & JM Barwick Pty Ltd

May 2020



ENVIRONMENT PROTECTION AUTHORITY

Environmental Assessment Report

Proponent	BG & JM Barwick Pty Ltd
Proposal	Resource Recovery (Schedule 2 (3)(d)(i))
Location	314 Midland Highway Bridgewater
NELMS no.	10096
Permit Application No.	DA/2020/00042 (Brighton Council)
Electronic Folder No.	EN-EM-EV-DE-256501
Document No.	M660117
Class of Assessment	2B

Assessment Process Milestones

6 December 2018	Notice of Intent lodged
12 February 2019	Guidelines Issued
11 February 2020	Permit Application submitted to Council
21 February 2020	Application/Referral received by the Board
21 March 2020	Start of public consultation period
23 April 2020	End of public consultation period
16 June 2020	Date draft conditions issued to proponent
20 June 2020	Statutory period for assessment ends

Acronyms

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

Report Summary

This report provides an environmental assessment of a proposal by BG & JM Barwick Pty Ltd for a compost facility comprising a Level 2 activity under Schedule 2 Clause (3)(d)(i) of the *Environmental Management and Pollution Control Act 1994* (EMPC Act), being: *Resource recovery: the conduct of works for the production of compost or mushroom substrate, with a production capacity of 100 tonnes per year or more.*

The operation will accept pine bark and green waste to produce up to 2,000 tonnes of mature compost and 500 tonnes of potting mix per year and will be sited alongside an existing landscape supply yard.

This report has been prepared based on information provided in the Development Proposal and Environmental Management Plan (DPEMP). Relevant government agencies and the public were consulted, and their relevant submissions and comments considered as part of the assessment.

Further details of the assessment process are presented in section 1 of this report. Section 2 describes the statutory objectives and principles underpinning the assessment. Details of the proposal are provided in section 3. Section 4 reviews the need for the proposal and considers the proposal, 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 in section 6, and other issues are evaluated in sections 7 and 8 and Appendix I. The report conclusions are contained in section 9.

Appendix 2 contains a table of proponent commitments. Appendix 3 contains the environmental permit conditions for the proposal.

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I Approval Process

The Board of the Environment Protection Authority (the Board) received a Notice of Intent in relation to the proposal on 23 November 2018.

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPA Act) was submitted to Brighton Council on 11 February 2020.

The proposal is defined as a 'level 2 activity' under Schedule 2 Clause 3(d)(i) of the *Environmental Management and Pollution Control Act 1994* (EMPC Act), being; *Resource recovery: the conduct of works for the production of compost or mushroom substrate, 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 for assessment under the Act. The development application was referred to the Board on 21 February 2020.

The Director, Environment Protection Authority, has undertaken determination of the assessment under delegation from the Board.

The Board required that information to support the proposal be provided in the form of a Development Proposal and Environmental Management Plan (DPEMP) prepared in accordance with guidelines issued by the Board on 30 January 2019. Several drafts of the DPEMP were submitted to EPA Tasmania for review against the guidelines before a final document was accepted on behalf of the Board on 6 February 2020.

The DPEMP was released for public inspection for 28 days starting on 21 March 2020. Advertisements were placed in *The Mercury Newspaper* and on the EPA website. The DPEMP was also referred to relevant government agencies for comment. No representations were received.

2 SD Objectives and EIA Principles

The proposal must be considered by the Board in the context of the 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) (both sets of objectives are set out in Schedule 1 of the EMPC Act). The functions of the Board are to administer and enforce the provisions of the Act, and to use its best endeavours to further the RMPS and EMPCS objectives.

The Board must assess the proposal in accordance with the Environmental Impact Assessment Principles defined in Section 74 of the EMPC Act.

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

3 The Proposal

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.

Compost will be produced from a mixture of pine bark from the Norske Skog paper mill and green waste from local council waste transfer stations. No putrescible materials such as manure, sewage sludge or food waste will be composted.

Composting will be conducted on a 125m x 25m asphalt pad (Figure 1). Incoming green waste will be chipped offsite before delivery. The compost heaps will be turned and mixed using a front end loader, once every 2 to 7 days. A Schematic of the composting sequence is shown in Figure 2. Urea will be mixed into the feedstock where nitrogen levels need to be increased.

An irrigation system will be used to maintain the correct moisture conditions and control dust as required. All run off / leachate from the composting pad will drain to a collection dam in the south east corner of the site and be recycled back through the irrigation system.

Table 1: Summary of the proposal’s main characteristics

Activity	
Composting 500 tonnes of pine bark and 2,000 tonnes of green waste producing up to 2,500 tonnes of compost per annum (500 tonnes of potting mix compost and 2,000 tonnes of mature compost).	
Location and planning context	
Location	1 Parkholme Drive, Bridgewater, Tas, 7030
Land zoning	General Industrial
Land tenure	Private Land
Existing site	
Land Use	The site comprises cleared land historically used for grazing. A portion of the site contains an existing landscape supply yard.
Topography	Undulating land (3-10%).
Geology	Substrate is Tertiary basalt incised at the Jordan River with Quaternary alluvium and marsh deposits.
Soils	Moderate to imperfectly drained black cracking soils developed on Tertiary basalt bedrock and colluvium.
Hydrology	The site has a shallow gradient falling towards the east and south, with the Jordan River located approximately 100 metres to the east.
Natural Values	The site is classified as FAG Agricultural land under Tas Veg 3.0.
Local region	
Climate	Rainfall is approximately 490.4 mm per annum. Wind direction is predominantly north westerly.
Surrounding land zoning, tenure and uses	The land title on which the facility is proposed is zoned General Industrial and is adjacent to land zoned Utilities and Rural Resources under the Brighton Planning Scheme. Surrounding land comprises an active quarry, the Midlands Highway, Brighton Industrial Estate and grazing land. The nearest residence is located approximately 320 m to the south (Figure 3).

Species of conservation significance	The following threatened species have been recorded near the site: <ul style="list-style-type: none"> • Double jointed speargrass, <i>Austrostipa bigeniculata</i>; • Bastal guineaflower, <i>Hibbertia basaltica</i>; and • Eastern barred bandicoot, <i>Perameles gunnii</i>
Proposed infrastructure	
Major equipment	Trucks, trommel and earth moving equipment.
Other infrastructure	The site will consist of a composting pad, stockpile area, leachate drain and collection pond, stormwater infrastructure, and access roads.
Inputs	
Water	The site is serviced by two water lines running along the western and northern boundaries. These lines will be connected to form a continuous potable water supply for irrigation of the compost windrows as required.
Energy	Diesel fuel for machinery.
Other raw materials	The feed stock for the compost facility will comprise category I organic material being green waste (grass, leaves, plants, tree branches, trunks and stumps) and pine bark. The process will also involve the input of urea to the potting mix compost at a rate of approximately 300 kg N / 150 m ³ compost.
Wastes and emissions	
Liquid	Stormwater and leachate run off from the site and stockpile areas.
Atmospheric	Odour from compost piles and leachate pond as well as dust from internal and external traffic, and blow-off from stockpiles.
Solid	The operator will strive to ensure that no products are received at the site that are unsuitable for composting. Any deleterious materials extracted will be carted back to the originating waste facility.
Controlled wastes	No controlled wastes will be generated.
Noise	Noise will be generated by the wheel loader, shredder, trommel and screen, as well as trucks using Blue Stone Drive for the delivery and removal of material.
Greenhouse gases	Diesel emissions associated with the wheel loader and associated machinery.
Construction, commissioning and operations	
Proposal timetable	Once the pads, drainage systems, traps and ponds have been constructed and specifications met, the compost yard will be commissioned. No timetable for construction, commissioning or operation of the facility was provided in the DPEMP.
Operating hours (ongoing)	0700 to 1900 hours Monday to Friday 0800 to 1800 hours Saturday

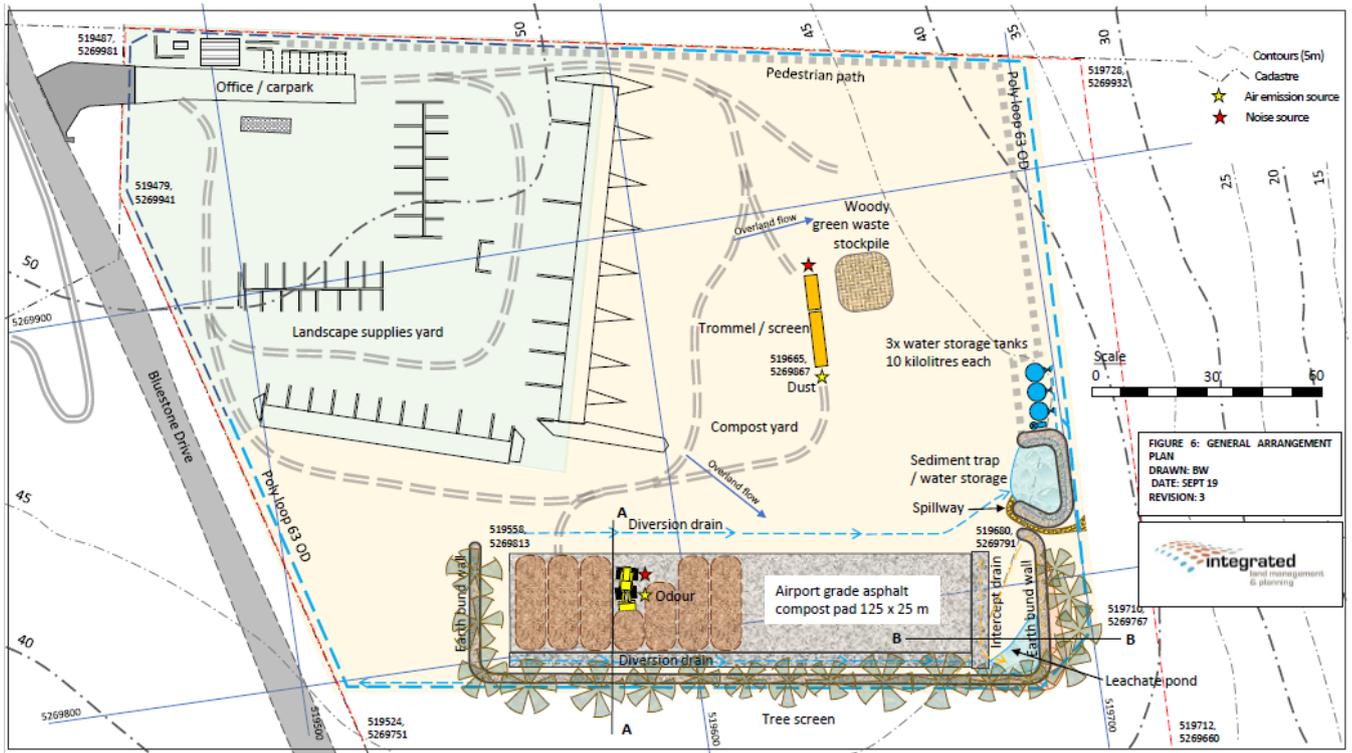


Figure 1: Site plan (Figure 6 of the DPMP).

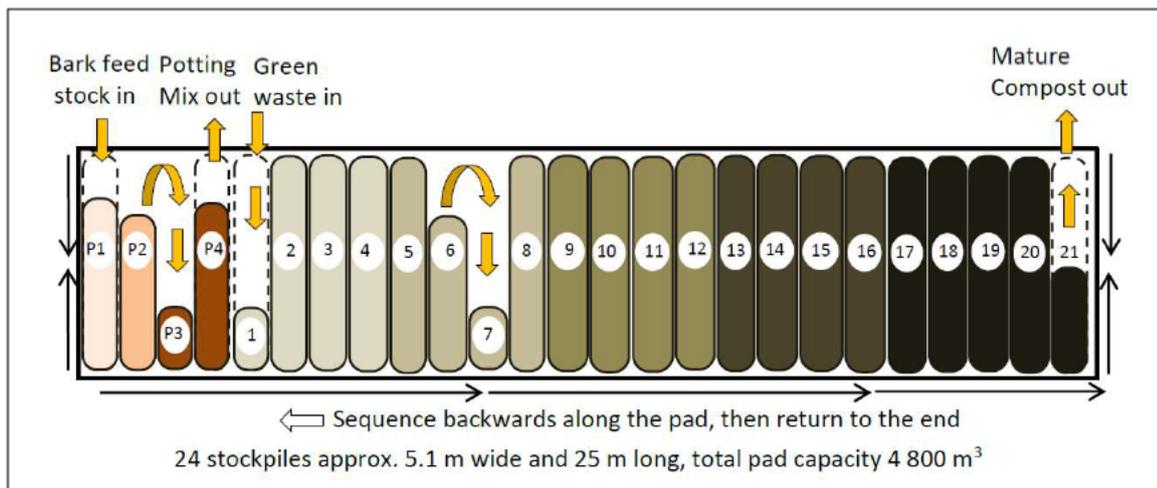


Figure 2: Process overview (Figure 1 of the DPMP).

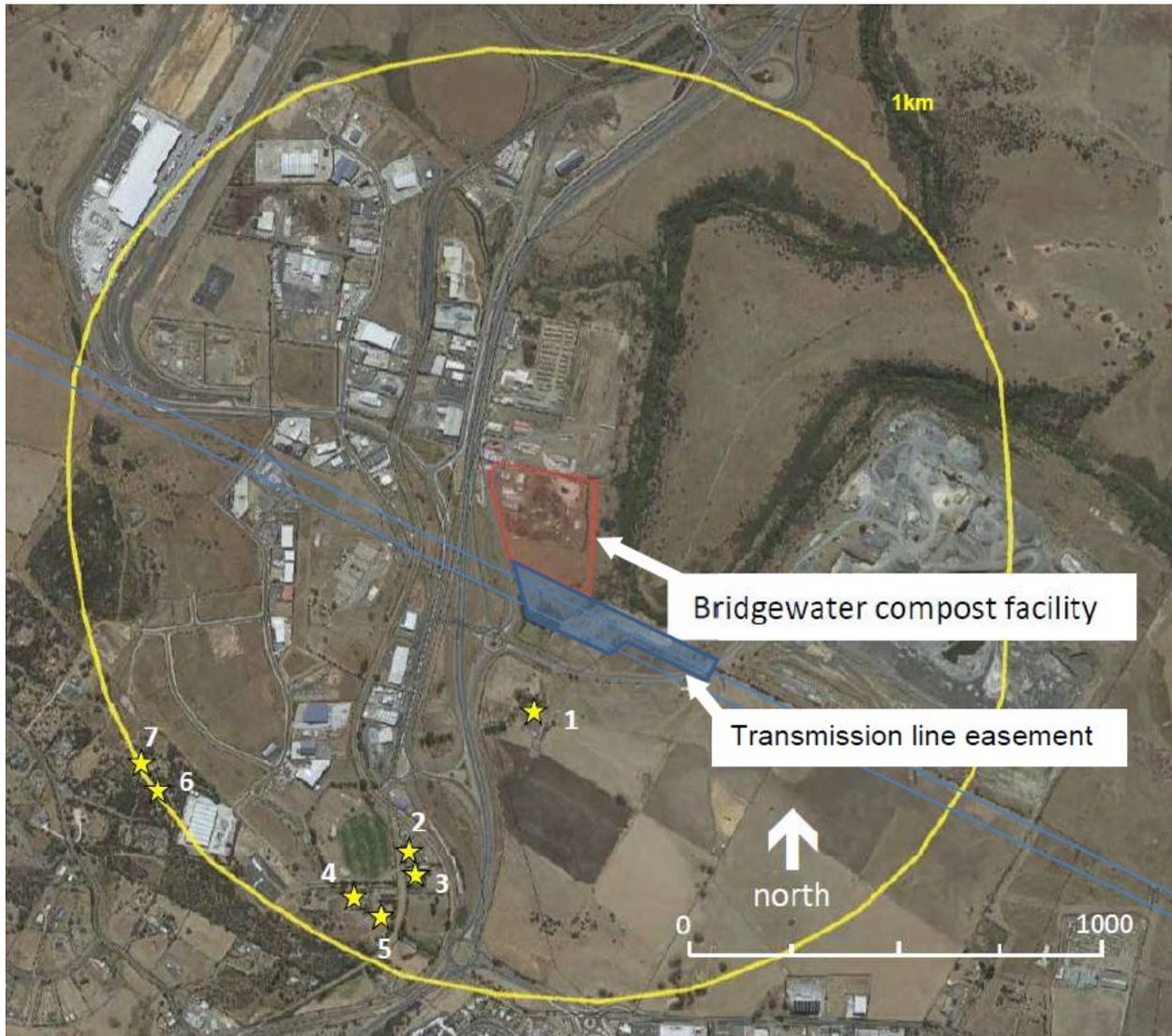


Figure 1 - Location Plan (Base Image from theList)

Figure 3: Proposed site location, showing residences located within 1,000 m (yellow stars) (Figure 4 of DPEMP).

4 Need for the Proposal and Alternatives

The facility will accept pine bark waste generated as a by-product from the Norske Skog paper mill operation at Boyer. To date this product has been chipped for pine bark and composted at the proponent’s Granton site. In 2014 Norske Skog undertook a conversion which increased the volume of pine bark waste. According to the DPEMP, the Granton site cannot absorb the additional volume.

This proposal seeks to relocate the existing Granton pine bark and potting mix operations to an industrial site at Bridgewater, which will allow for a modest expansion. The Bridgewater compost facility will contribute to the effort to dispose of pine bark waste from the Boyer Mill and green waste from transfer stations.

5 Public and Agency Consultation

No public representations were received.

The proposal was referred to government agencies/bodies, and submissions were received from the following:

- Aboriginal Heritage Tasmania
- Tasmanian Fire Service

The following Divisions/areas of the Department of Primary Industries, Parks, Water and Environment also provided advice on the proposal:

- Regulatory Officer, EPA Tasmania
- Air Specialist, EPA Tasmania
- Water Specialist, EPA Tasmania
- Noise Specialist, EPA Tasmania

6 Evaluation of Key Issues

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

- Potential impacts of air emissions on sensitive receivers.
- Potential impacts of compost leachate on surface water and groundwater.
- Potential impacts of noise emissions on sensitive receivers.

Each of these issues are discussed in the following subsections.

General conditions

The following general conditions will be imposed on the activity:

- G1** Access to and awareness of conditions and associated documents
- G2** Incident response
- G3** No changes without approval
- G4** Change of responsibility
- G5** Change of ownership
- G6** Complaints register
- G7** Notification prior to commencement

Legal obligations

The following legal obligations are detailed in the permit:

- L01** EMPCA
- L02** Storage and handling of dangerous goods, explosives and dangerous substances
- L03** Aboriginal relics requirements

Other information

Other information included in the permit:

- O11** Waste Management hierarchy

6.1 Key Issue 1 Air Emissions

6.1.1 Description

Odour and dust will be generated by the activity.

The main odour sources on site will be the composting piles and leachate pond.

Air dispersion modelling was undertaken to predict the ground level odour concentrations as a result of emissions from the facility. The modelling used emission rates measured at the Baywater composting facility in Victoria for the odour input sources. These included the woody green waste stockpile, compost piles at 0-2 weeks, 2-4 weeks and 4 weeks plus, and the leachate pond. Appendix 1 of the DPMP summarises the methodology and inputs used in the air dispersion model.

The results of the odour modelling indicate that the proposed facility will exceed 2 OU beyond the boundary of the land, by about 30m beyond the eastern boundary and 60m beyond the southern boundary (Figure 4).

According to the DPMP, no sensitive uses are currently located in these areas and existing constraints make it highly unlikely that the land will be developed in the future. The maximum predicted odour level on the boundary is 3.1 OU.

The nearest residence is located approximately 320 m to the south of the proposed composting pad, approximately 290 metres from the boundary of the land (Figure 4). There are seven residences within a 1 kilometre radius of the proposed facility (Figure 1). At its closest, the 2 OU isopleth is approximately 210 m from the nearest residence.

The DPMP concludes that while the predicted odour concentrations do not meet the requirements of the Environment Protection Policy (Air) 2004 (Air EPP), the expected odour levels are unlikely to adversely affect the amenity of residents or cause environmental nuisance.

According to the DPMP, dust will most likely be generated by truck and heavy vehicle movements on site. Dust is unlikely to be caused by compost stockpile turning as the stockpiles will be maintained within a moisture range of 45%-60%.

6.1.2 Management measures

Commitment 7 Key parameters will be monitored, and numerical results recorded to maintain a record of compost process performance.

The following monitoring regime was outlined in the DPMP:

Parameter	Acceptable range	Frequency	Method
Nutrient balance	25:1 – 35:1	During turning	By observation
Temperature	55 ^o - 75 ^o (C)	Weekly	Hand held temperature probe
Moisture content	45 – 60 %	Weekly	Hand held moisture content meter
Oxygen content	> 10 %	Weekly	Hand held oxygen content meter

Odours from the compost stockpiles and any leachate residue will be monitored by the operator each day the stockpiles are turned.

The DPEMP also outlined the following relevant measure:

- Feed stock will not include any putrescible waste and will be blended to ensure a low nitrogen to carbon ratio.

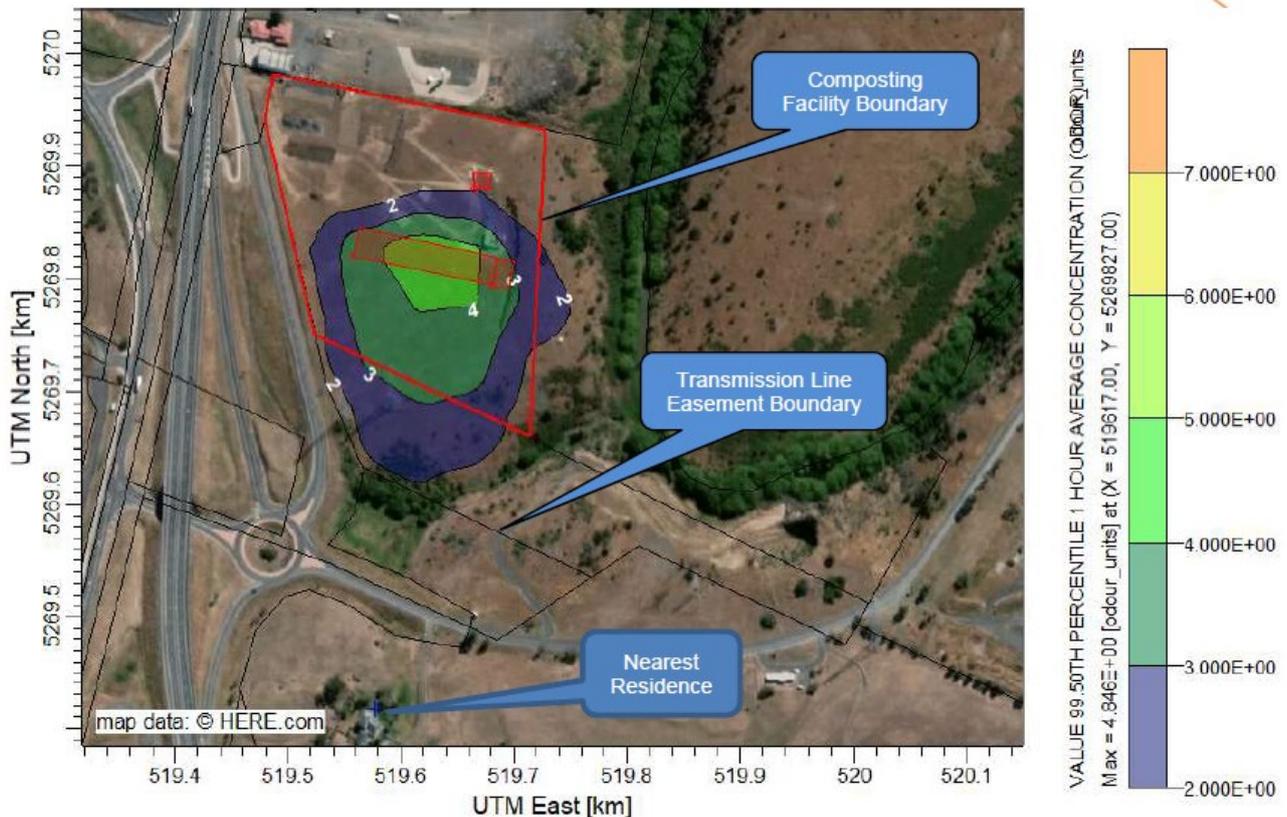


Figure 4 Odour Modelling Results

Commitment 4 Dust suppression techniques will be employed in adverse dust conditions.

The DPEMP outlined the following measures to mitigate dust emitted from vehicle movements and operation of the trommel:

- Vehicle speed will be limited to 15 km/hr on unmade surfaces.
- A water cart will be used in extremely dry and windy conditions to control emissions.
- A water spray will be applied to the trommel if operation is resulting in visible dust emissions.

According to the DPEMP, the site operator will continually monitor dust emissions and will ensure that mitigation actions are deployed to minimise the likelihood of visible dust beyond the premise’s boundary.

6.1.3 Public and agency comment and responses

No comments were received.

6.1.4 Evaluation

Air dispersion modelling of odour was undertaken in accordance with the Air EPP, presenting the 99.5th percentile, 1 hour ground level concentration. The most likely odour sources on site were incorporated into the model, based on measured emission rates at an existing composting facility.

The modelling demonstrates exceedances of 2 OU at the boundary of the Land.

According to Section 13 of the Air EPP, if an odour is likely to cause an environmental nuisance, odour emissions from the activity should not exceed 2 OU at the boundary. The intent of Section 13 is captured by Clause 1, Section 9 of the Air EPP, which states that point sources of air pollution which have the potential to cause environmental nuisance should be managed in such a manner as to not prejudice the environmental values defined in Section 6 of the Air EPP. Of particular relevance is *“the life, health and well-being of humans at present and in the future.”*

In considering that 2 OU is generally regarded as a measure of concentration at which one may expect a nuisance to occur, based on the results of the modelling, the nearest residence is unlikely to experience a nuisance. The maximum predicted odour level on the boundary is not significant, at 3.1 OU, and the location of the modelled 2 OU isopleth indicates that a buffer is likely to exist between the residence and any odorous plumes that may arise during normal operating conditions.

While the activity is considered relatively low risk due to the nature of the wastes that will be managed on site, open-air compost facilities have the potential to generate significant odour emissions, particularly from the compost windrows and leachate ponds, if not well managed. Ensuring the correct balance of moisture levels, carbon to nitrogen ratios, pH and oxygen levels is maintained within windrows is important to reduce the risk of nuisance odours.

To ensure all aspects of the facility are managed such that odour emissions from the land do not result in a nuisance, **Condition A1** is required.

The commitment (Commitment 7) to monitor key parameters to ensure the composting process is well maintained is supported and required by **Condition CGI**. **Condition CGI** requires monitoring of key parameters from each compost windrow weekly. Given the relatively low risk nature of the Activity, this is considered sufficient. The condition nevertheless allows for the Director to consider a change to the frequency at a later date, should issues pertaining to the compost processing arise, or conversely should the processing be demonstrated to be well managed.

Condition G6 will ensure any complaints received are recorded and appropriately dealt with.

It is noted that the areas of land outside the facility boundary, that may experience 2 OU or greater, are owned by Boral and, according to the DPEMP, not currently used for any activities other than occasional grazing. It is agreed that this land is unlikely to be developed in the future for sensitive use, and given the level of odour likely to be experienced in the area, nuisance is highly unlikely to occur as a result of any of odour levels that may slightly exceed 2 OU.

The dust suppression measures outlined in the DPEMP (Commitment 4) are considered appropriate. **Condition A2** will ensure dust is managed on site such that it is unlikely to cause a nuisance beyond the boundaries. **Condition A3** is also imposed to ensure material cartage to and from the site does not cause a dust nuisance from loss of load.

If the facility is managed and operated in accordance with the conditions contained herein, it is considered that air emissions from the proposed facility will not result in environmental nuisance or harm.

6.1.5 Conclusions

The proponent will be required to comply with the following conditions:

- A1** Odour Management
- A2** Control of dust emissions
- A3** Covering of vehicles
- CG1** Compost windrow monitoring

6.2 Key Issue 2 Surface water and groundwater

6.2.1 Description

The site has a shallow gradient falling towards the east and south and drains onto pasture land sloping towards the Jordan River. The shortest horizontal flow distance between the perimeter of the compost site and the Jordan River is approximately 100 metres.

The compost pad will be constructed of dense grade 'airport quality' asphalt, 75 mm thick, with a maximum permeability of 12.5×10^{-8} m/s, on a compacted fine crushed rock base approximately 25 metres wide by 125 metres long. The pad will be cut and filled to provide a consistent grade of approximately 3% fall towards the east.

A leachate intercept drain will capture flow that is not absorbed by the composting windrows and direct it to a leachate pond. The leachate drains and pond will also be lined with dense grade asphalt to a maximum permeability of 12.5×10^{-8} m/s.

The leachate collection pond will have a capacity of 50 m^3 with an additional freeboard of 150 m^3 provided by the construction of a 1.5 m bund on the southern and eastern perimeter of the site (earth bund wall, Figure 2). According to the DPMP, the bund will be able to retain the leachate from a 24 hour 5% annual exceedance probability (1:20) event. The DPMP states that the leachate can be tested and if suitable, pumped back onto the compost stockpiles, otherwise allowed to evaporate off or be disposed of to an approved site by pump trucks.

A diversion drain will direct overland flow away from the compost pad to a purpose-built sediment trap / water supply reservoir. The following calculations were presented in the DPMP:

- Sediment trap volume of 54 m^3 (calculated based on a rainfall intensity of 60 mm/hr); and
- A clean out frequency of 1.9 years, assuming 50% of the volume is for sediment storage.

A pump will be fitted to the trap with the water to be used to irrigate the compost stockpiles. Three 10,000 litre water tanks will also be located adjacent to the trap providing additional water storage. A reticulated water connection will supplement the recycled water as required, via the tanks.

The sediment trap will have a formed spillway with stone pitching to prevent erosion in the event of an uncontrolled discharge. According to the DPMP, the spillway will discharge to existing pasture, with at least 100 metres distance to the Jordan River.

A description of the local groundwater is provided in the DPMP, based on the results from core drilling and test pits undertaken on adjacent land. The drilling logs report groundwater not having been encountered, suggesting that it lies below 8.0 metres depth. According to the DPMP,

infiltration is likely to be slow into the silt clay topsoil and subsoil, and slower still into the weathered basalt substrate underlying the site.

6.2.2 Management measures

Commitment I Construct drains to direct leachate to containment pond for reuse or disposal, drains and pond lined with dense graded asphalt to permeability of less than 10^{-8} m/s.

6.2.3 Public and agency comment and responses

No comments were received.

6.2.4 Evaluation

Leachate from the compost windrows may be high in nutrients, and a favourable host for bacteria and other micro-organisms which have a high biological oxygen demand. Uncontrolled discharge of leachate to the environment therefore has the potential to result in environmental nuisance or harm.

The proposal to construct a low permeability composting pad, and leachate collection and storage system is supported and considered necessary to minimise the potential for seepage and discharge to the environment. The proposal to reuse the captured leachate for windrow irrigation, augmented with stored potable water as necessary, is also considered an appropriate management of the water resource on site.

Given that category I wastes are unlikely to produce significant concentrations of contaminants of concern, the EPA Water Specialist considers the proposed design and construction of the compost pad to be suitable for the proposed activity.

It is acknowledged that urea will be added in sufficient quantity to ensure the composting process is maintained. According to the DPEMP, urea will only be added to the potting mix compost, representing a small portion of the total composting on site.

Condition CG2 nevertheless stipulates several criteria considered important in the construction and design of the pad, including a minimum drainage gradient and construction of the pad over a compacted stable base allowing for all-weather access by vehicles and machinery. Maintenance of the asphalt seal is also considered critical to ensuring the protection of the surface and groundwater environments. **Condition CG3** requires a Composting Pad Inspection report be submitted after construction, outlining any areas of inadequate coverage, hydraulic seal or poor drainage, and a program of repairs as necessary. The condition allows for further inspections to be carried out at a later date if required.

Condition CG4 will ensure that all composting is undertaken on the constructed pad.

The leachate management installations described in the DPEMP are expected to ensure that leachate produced by composting is controlled and contained on site. If leachate is not recycled back through the composting process, it will be allowed to evaporate off or be disposed of to an approved site by pump trucks. Given the site is located in a low rainfall area, the leachate pond is likely to be used more for temporary storage.

Commitment 1 to line the leachate collection drains and pond to a permeability of less than 10^{-8} m/s is supported and required by **Condition EF1**. **Condition EF2** will ensure that stormwater is excluded from mixing with the compost windrows as far as practicable, thereby ensuring the integrity of the leachate collection and storage system is not compromised. The construction of a diversion drain and sediment pond to manage stormwater from other areas on site is in accordance with **Conditions EF3** and **EF4**. This will ensure that the stormwater collection and treatment system is designed to appropriate standards.

6.2.5 Conclusions

The proponent will be required to comply with the following conditions:

- CG2** Design of composting pad
- CG3** Composting pad inspection and repair
- CG4** Composting
- EF1** Leachate management
- EF2** Stormwater to be excluded
- EF3** Perimeter drains or bunds
- EF4** Stormwater

6.3 Key Issue 3 Noise

6.3.1 Description

Seven residences are located at or within 1 kilometre of the proposed facility. A noise assessment was undertaken to predict the likely sound generated by the facility in full operation, with the resultant noise levels expected at the closest residences. The full report is contained in Appendix 2 of the DPMP.

The noise rating for the proposed equipment to be used on site is detailed below (Table 22 of the DPMP).

TABLE 22: MACHINERY OPERATING (FROM NOISE REPORT)

Type	Data origin	Sound power level (dBA)
Wheel loader	Measured by NVC	105
Shredder	Measured by third party	117
Trommel	Predicted by NVC	101
Screen & trommel	Measured by NVC	104

The results of the predicted noise levels at the residence locations A to G (1 to 7 in Figure 1), based on the above equipment, are provided below (Table 23 of the DPMP).

Location	Distance from site (m)	Predicted noise level (dBA)
A	320	52
B	790	40
C	820	40
D	910	40
E	930	39
F	1 000	38
G	1 000	38

The closest residence (Location A in Table above, or residence I in Figure I of EAR) has a predicted noise level of 52 dBA. Three residences are predicted to experience a noise level of 40 dBA.

The dominant noise source in the model is the shredder.

According to the DPEMP, the shredder is unlikely to be located at the site. If it is located at the site, it will only operate for short periods. The Noise report also refers to previous noise measurements conducted 220 metres from the operating shredder (TANA Shredder Noise Tests, Pearu Terts, 2017). At this location the measured noise level was 46 dBA. Based on this, the DPEMP suggests that the noise level at the closest residence is likely to be closer to 45 dBA.

The noise report details the following assumptions used in the model:

- All noise sources are located together, on the southern boundary of the site (nearest to the residences);
- All ground is totally reflective. This is conservative, as the intermediate ground in particular will be partially absorptive;
- Residents B to G (referred to as “Location” in the Table above) are screened from the site by topographic features. Eight dB attenuation has been assumed; and
- All equipment operates simultaneously. This is likely to be a rare occurrence during normal operation.

The DPEMP concludes that the compost facility will meet the expected noise criteria during day time operations (45 dBA), and slightly exceed the criteria in the evening (40 dBA). When the high ambient noise environment emanating from the Industrial Estate and Midland Highway traffic is taken into account, the DPEMP considers that it is unlikely that the compost facility will cause an environmental nuisance as a result of noise emissions.

6.3.2 Management measures

No specific management measures were proposed in the DPEMP.

6.3.3 Public and agency comment and responses

No comments were received.

6.3.4 Evaluation

Seven residences live within 1 km of the proposed facility. According to the results of the noise modelling, the closest residence, at approximately 320 metres to the south, is predicted to experience a noise level of 52 dB(A). The DPEMP however presents an argument to suggest that

the likely noise level will be closer to 45 dB(A), based on actual measurements of the most significant noise source, the shredder. It is also noted that the model contains several conservative assumptions. It is agreed that it is highly likely that the actual noise level at the nearest residence will be considerably less than that modelled.

It should be noted that the proposed facility is located on land a short distance from, and running parallel, to the Midland Highway. The Midland Highway has a speed limit of 110 kilometres per hour along this section, is four lanes, elevated and has a ramped exit lane servicing the Brighton Transport Hub. Ambient noise levels measured at a location a similar distance from the Highway as the nearest residence were, 52 dB(A) Leq during daytime (0700 to 1800 hours) and 53 dB(A) Leq during evening (1800 to 2200 hours) (Appendix 2).

Given the proximity of the nearest residence to the Midland Highway and existing industries, and the proposed operating hours (0700 to 1900 hours Weekdays and 0800 to 1800 hours on Saturdays), it is considered highly unlikely that the facility would result in environmental nuisance due to noise emissions.

To ensure that noise does not become an issue, for example should additional equipment be used or become noisy through lack of maintenance, **Condition N1** imposes the following limits:

- 50 dB(A) daytime, 7am to 6pm;
- 50 dB(A) evening, 6pm to 10pm; and
- 40 dB(A) night time, 10pm to 7am.

These limits are considered appropriate and achievable.

Condition N2 will ensure that the facility is operated within the proposed hours and does not extend into night time hours. Should a request be received for a temporary extension of hours however, **Condition N1** will ensure that noise levels are maintained at an acceptable level.

6.3.5 Conclusions

The proponent will be required to comply with the following conditions:

N1 Noise emission limits

N2 Operating hours

7 Other Issues Assessed by the Board

In addition to the key issues, the following environmental issues are considered relevant to the proposal and have been evaluated in Appendix I, Section A.

1. Waste management
2. Dangerous goods and environmentally hazardous materials
3. Biodiversity and natural values
4. Decommissioning and Rehabilitation

8 Other Issues

The following issues that have been raised during the assessment process are discussed in Appendix I, Section B. These are either issues which are not the Board's responsibility under the EMPC Act or are issues which are more appropriately addressed by another regulatory agency.

- Heritage
- Visual impacts
- Fire risk
- Traffic impacts

9 Report Conclusions

This assessment has been based on the information provided by the proponent, BG & JM Barwick Pty Ltd, in the permit application and the case for assessment (the DPEMP).

This report incorporates specialist advice provided by EPA Tasmania scientific specialists and regulatory staff, other Divisions of DPIPWE and other government agencies.

It is concluded that:

1. the RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal;
2. the assessment of the proposal has been undertaken in accordance with the Environmental Impact Assessment Principles; and
3. 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 Permit Conditions - Environmental No. 10096 appended to this report are imposed and duly complied with.

10 Report Approval

Environmental Assessment Report and conclusions, including environmental conditions, adopted:



Wes Ford

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY

Acting under delegation from the Board of the Environment Protection Authority

Date: 19 June 2020

11 References

Integrated Land Management & Planning (2019); *Development Proposal & Environmental Management Plan, Bridgewater Compost Facility*, BG & JM Barwick, 314 Midland Highway, Bridgewater.

12 Appendices

- Appendix 1 Assessment of Other Issues
- Appendix 2 Table of proponent commitments
- Appendix 3 Permit conditions

Appendix I – Section A – Assessment of other issues assessed by the Board

Issue I: Waste management
Description of potential impacts
<p>Materials received will be derived from waste management sites such as Boyer Mill pine bark storage facility, Mornington waste transfer facility and other waste transfer facilities. All waste products received will be subjected to preliminary screening by the operator at the respective waste management sites to ensure no deleterious products are incorporated (e.g. plastic, glass, metal and any other material which will not be converted through the composting process).</p> <p>According to the DPEMP, product stockpiles destined for the Bridgewater facility will be screened a second time by the driver before the stockpile is loaded for carting to Bridgewater. Any deleterious materials found and extracted at the Bridgewater facility will be carted back to the originating waste facility.</p> <p>Additional exclusions are required for the potting mix compost stream, including stones, soil and intact plants.</p>
Management measures proposed in DPEMP
<p>Commitment 2 Green waste sourced from the waste transfer stations will be screened twice to remove deleterious materials.</p>
Public and agency comment
<p>No comments were received.</p>
Evaluation
<p>The proposal is for the composting of pine bark and non-putrescible green waste only. The incorporation of putrescible material such as manure, sewage sludge or food waste, and other deleterious products, into the windrows would likely compromise the composting process and potentially lead to increased risk of odour and leachate issues.</p> <p>The proposed screening process (commitment 2), including carting deleterious materials from the site back to the originating facility, is supported. Indeed, according to the DPEMP, the site operator will implement procedures to ensure that no products are received at the Bridgewater site that cannot be subjected to the waste conversion process.</p> <p>Condition OPI restricts the waste types to be stored and composted on The Land to only those waste types that are the subject of this assessment, i.e. pine bark and non-putrescible green waste.</p>
Conclusion
<p>The proponent will be required to comply with the following condition:</p> <p>OPI Permitted waste types</p> <p>The proponent will be made aware of Other Information relating to waste management:</p> <p>OII Waste management hierarchy</p>

Issue 2: Dangerous goods and environmentally hazardous materials
Description of potential impacts
The only dangerous goods and or environmentally hazardous materials that will be used by the compost facility will be diesel fuel for the wheel loader and mechanical trommel and screen. A mobile refuelling vehicle will be used to refuel the above equipment/vehicles.
Management measures proposed in DPMP
Commitment 3 A proprietary hydrocarbon spill containment and clean up kit will be available for immediate deployment during refuelling operations.
Public and agency comment
No comments were received.
Evaluation
The proponent's commitment to have a spill kit available for immediate deployment is supported. According to the DPMP, the mobile refuelling vehicle used at the proponent's neighbouring landscape yard will be used to refuel equipment on the composting site. This vehicle has a proprietary spill kit on board. Condition H1 will ensure that appropriate measures are put in place to prevent the discharge of fuel to the environment during mobile refuelling, such as the provision of spill kits, bunds or absorbent pads, and automatic pump cut-offs. Note, it is implied in the DPMP that fuel will not be stored on site. Should fuel be stored on site, temporarily or otherwise, Condition H2 will ensure that it is done so appropriately.
Conclusion
The proponent will be required to comply with the following conditions: H1 Handling of hazardous material – mobile H2 Storage and handling of hazardous materials

<p>Issue 3: Biodiversity and natural values</p>
<p>Description of potential impacts</p> <p>There are records of two threatened flora species in close proximity to the property: double jointed speargrass (<i>Austrostipa bigeniculata</i>) and basalt guinea flower (<i>Hibbertia basaltica</i>).</p> <p>The records of both species are associated with land outside the boundary of the proposed site. Double jointed speargrass is recorded on the roadside verge located between the property boundary and Bluestone Drive, with the guinea flower recorded on steeply sloping land close to the Jordan River.</p> <p>A single threatened fauna species, Eastern barred bandicoot, has also been recorded in proximity to the site.</p> <p>An ecological assessment of the site was undertaken by Ecological Consulting Options. No records or observations of threatened species were found on the site during a survey. The majority of the site has a high level of disturbance as a result of the landscape yard development, with small areas of undisturbed grass land (lowland grassland complex) dominated by <i>Austrostipa</i> (speargrass) species and <i>Rytidosperma</i> (wallabygrass). <i>Austrostipa bigeniculata</i> was not found to occur within these areas. See Appendix 3 for the full report.</p> <p>The DPEMP concluded that it is highly unlikely that the site supports any threatened species listed under state or commonwealth legislation.</p> <p>According to the DPEMP, the site will remain vulnerable to the introduction of weeds from surrounding farmland and from vehicles and green waste originating from other weed infected areas. No declared weeds were found to be present on site, although some exotic herbaceous plant species were observed outside the perimeter of the site during the survey (Appendix 3).</p>
<p>Management measures proposed in DPEMP</p> <p>Commitment 8 Undertake an annual weed control program to ensure the site remains free from declared weeds and product stockpiles are clear of all recognised weeds.</p>
<p>Public and agency comment</p> <p>No comments were received.</p>
<p>Evaluation</p> <p>It is noted that the survey for threatened flora was conducted outside the ideal time of year to identify grass species. The specialist consultant however was satisfied that the site did not support the threatened double jointed speargrass. In the preceding week the consultant had noted that the species was still detectable at two other locations near Hobart.</p> <p>The other threatened flora species potentially present (basalt guineaflower) can be identified at any time of year and was not observed within the confines of the site. Given the nature of the site, it is agreed that the proposal is unlikely to impact on any threatened species or communities.</p> <p>The commitment (commitment 8) to undertake an annual weed control program is supported. According to Appendix 3 (Ecological Assessment Report), the site has been well managed for weeds in the past in order to maintain a weed free status for the proponent's neighbouring commercial landscape supply business. Condition OP2 will ensure weed management is</p>

maintained at the site.
Conclusion
The proponent will be required to comply with the following conditions: OP2 Weed management

Issue 4: Decommissioning and rehabilitation
Description of potential impacts
<p>According to the DPEMP, if the facility is forced to close the land will be rehabilitated and made available for other developments or activities.</p> <p>If it is necessary to decommission the site, the following actions will be undertaken:</p> <ul style="list-style-type: none"> • Compost the remaining material on the pad. • The asphalt surface on the compost pad, intercept drains and water / sediment pond will be stripped and disposed of to a designated facility. • All equipment including tanks and pumping equipment will be removed. • The water storage / sediment trap and leachate collection pond will be filled following a clean out. • The compost pad substrate will be ripped. • Soil will be spread over disturbed surfaces and sown to grass to provide erosion protection and fodder for stock. The earthen bunds will be retained along with the established trees.
Management measures proposed in EER
Commitment 9 Soil sampling and analysis will be undertaken if a history of contaminating events has occurred during operations.
Public and agency comment
No comments were received.
Evaluation
The proponent's proposed actions in relation to decommissioning and rehabilitation of the site, including Commitment 9, are considered adequate and supported. Conditions DC1, DC2, DC3 and DC4 are imposed to ensure appropriate care and maintenance during any temporary suspension of activity, and that notification and closure decommissioning and rehabilitation is undertaken appropriately.
Conclusion
<p>The proponent will be required to comply with the following conditions:</p> <p>DC1 Notification of cessation DC2 DRP requirements DC3 Rehabilitation following cessation DC4 Temporary suspension of activity</p>

Appendix I – Section B – Other Issues

Issue I: Heritage
Description of potential impacts
Three properties in the vicinity of the site are listed on the Tasmanian Heritage Register. Of these properties the Parkholm homestead is closest, being situated south of the proposed Bridgewater compost yard on the opposite side of Parkholme Drive. The Parkholm homestead and the proposed compost yard are situated on neighbouring parcels of land.
Management measures proposed in DPEMP
No specific management measures were proposed in the DPEMP.
Public and agency comment
No comments were received.
Evaluation
<p>The DPEMP considers that it is unlikely that the compost operation will affect any neighbouring historic site. The proponent considers that the controls to limit dust emissions (Section 6.1 of the DPEMP) and the threat of fire escaping from the site (Section 6.19 of the DPEMP) are also relevant.</p> <p>The DPEMP did not provide any comment on the potential to impact Aboriginal heritage.</p> <p>Aboriginal Heritage Tasmania (AHT) has nevertheless considered the significance of the site. The area has been previously disturbed by the existing landscape supply business and there are no recorded Aboriginal heritage sites within the property. AHT also noted that part of the project area has been previously assessed for Aboriginal heritage. AHT have no objection to the project proceeding.</p>
Conclusion
The Board does not have responsibility for built or Aboriginal heritage and cannot impose relevant permit conditions.

Issue 2: Visual impacts
Description of potential impacts
<p>The proposed facility will share a site with the existing Bridgewater landscape supplies yard. The combined operation is located within an industrial precinct with similar businesses to the north of the site, sharing the view field from the Midland Highway. Businesses to the north include a truck trailer manufacturing and sales yard and a timber supplies yard, both of which have similar visual characteristics to the proposed compost yard.</p> <p>There is no intervening vegetation or topography to screen the proposed operation from the Midland Highway.</p>
Management measures proposed in DPEMP
<p>According to the DPEMP, a tree screen will be planted and maintained on three sides of the compost pad to provide a partial wind barrier. The tree screen will introduce an element of screening making the compost turning aspect of the operation less obvious from the Midland Highway.</p>
Public and agency comment
<p>No comments were received.</p>
Evaluation
<p>According to the DPEMP, the proposed compost yard will be visually consistent with the appearance of the other existing businesses and operations sharing the same view field from the Midland Highway.</p>
Conclusion
<p>The Board does not have responsibility for visual impacts and cannot impose relevant permit conditions.</p>

Issue 3: Fire risk
Description of potential impacts
According to the DPEMP, there is potential for heat to build up in the stockpiles of organic materials during the early stages of decomposition, to reach temperatures which may cause the stockpile to smoulder and under adverse conditions to ignite.
Management measures proposed in DPEMP
No specific measures were proposed in the DPEMP.
Public and agency comment
<p>The Tasmanian Fire Service (TFS) provided the following comment:</p> <p>The site is regarded as bushfire-prone and will have considerable potential bushfire fuel on site both prior to conversion and then during the composting process. TFS is able to support the proposal on the basis that prior to commencing operations the following is undertaken:</p> <ul style="list-style-type: none"> • The area containing the stockpiles awaiting conversion is provided with fire prevention equipment complying with Regulation 8(1) or (2) of the Fire Service (Miscellaneous) Regulations 2017; • The operators develop and implement an appropriate emergency plan which incorporates bushfire hazard; • The emergency plan is provided to the TFS for incorporation with a Pre-Incident Plan for the site.
Evaluation
<p>The compost facilities will have irrigation infrastructure present to enable the operator to maintain the ideal moisture content within the stockpiles to achieve rapid decomposition. According to the DPEMP, these sprinklers will be available to extinguish any spontaneous ignition that may occur within the stockpile. A water main loop will also be installed to provide access to mains water to help maintain the water storage tanks (30,000 litres) at full level.</p> <p>The DPEMP concludes that, with the available water supply and sprinkler system, the threat of the compost process causing an out of control grass fire is as low as can be reasonably expected.</p> <p>The proponent has indicated that the TFS will be consulted prior to works commencing, and all installations will be in accordance with TFS site specific requirements.</p>
Conclusion
Fire risk will be managed in accordance with the Tasmanian Fire Service's requirements.

Issue 4: Traffic impacts
Description of potential impacts
<p>The proposed compost facility will share an entrance with the existing Bridgewater landscape supplies yard.</p> <p>According to the DPEMP, the compost operation will generate on average no more than 7 extra movements per day using the existing access roads and junctions. Bluestone Drive is classified as a 'local road', hence Category 5. Once traffic has merged with other traffic from the neighbouring businesses and the Bridgewater Quarry, the additional traffic will not exceed an extra 10%.</p>
Management measures proposed in DPEMP
No Specific measures were proposed.
Public and agency comment
No comments were received.
Evaluation
The DPEMP concludes that an increase of 7 movements per day is unlikely to be significant in relation to the high existing traffic load on the road network in the vicinity of the facility.
Conclusion
The Board does not have responsibility for traffic related issues, other than noise (see Section 6.3) and dust (see Section 6.1) and cannot impose relevant permit conditions.

Appendix 2 – Table of proponent commitments

Commitment	Description	Responsible	Period
1	Construct drains to direct leachate to containment pond for reuse or disposal, drains and pond lined with dense graded asphalt to permeability of less than 10 ⁻⁸ m/s.	Operator	Prior to commencement of operations
2	Green waste sourced from the waste transfer stations will be screened twice to remove deleterious materials.	Operator	Prior to receiving green waste.
3	A proprietary hydrocarbon spill containment and clean up kit will be available for immediate deployment during refuelling operations.	Operator	At all times
4	Dust suppression techniques will be employed in adverse dust conditions.	Operator	At all times
5	A pedestrian pathway will delineate access through the compost yard to the water pump and water storage pond.	Operator	Commencement of operations
6	The Proponent will ensure all staff are aware of and adhere to the commitments of the company's Environment Policy.	Operator	At all times
7	Key parameters will be monitored and numerical results recorded to maintain a record of compost process performance.	Operator	Weekly
8	Undertake an annual weed control program to ensure the site remains free from declared weeds and product stockpiles are clear of all recognised weeds.	Operator	At all times
9	Soil sampling and analysis will be undertaken if a history of contaminating events has occurred during operations.	Operator	Decommissioning

Appendix 3 – Permit conditions – Environmental



ENVIRONMENT PROTECTION AUTHORITY

PERMIT PART B
PERMIT CONDITIONS - ENVIRONMENTAL No. 10096

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

Activity: **The operation of a composting facility (ACTIVITY TYPE: Resource Recovery)**
 BARWICKS LANDSCAPE SUPPLIES YARD, 314 MIDLAND HIGHWAY
 BRIDGEWATER TAS 7030

The above activity has been assessed as a level 2 activity under the *Environmental Management and Pollution Control Act 1994*.

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

Municipality: **BRIGHTON**
Permit Application Reference: **DA00042/2020**
EPA file reference: **256501**

Date conditions approved: 19 June 2020

Signed:



DELEGATE FOR THE BOARD OF THE ENVIRONMENT PROTECTION AUTHORITY

DEFINITIONS

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

ENVIRONMENTAL CONDITIONS

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

INFORMATION

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

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Attachments

Attachment 1: The Land (modified: 16/06/2020 08:50)..... 2 pages

Schedule 1: Definitions

In this Permit Part B:-

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

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

Composting means the process whereby organic materials are microbiologically transformed under controlled aerobic conditions.

Composting Pad a defined area of demonstrated low-permeability land, as delineated in Attachment 1, upon which composting and related activities may be lawfully carried out.

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

DRP means Decommissioning and Rehabilitation Plan.

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

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

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

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

Noise Sensitive Premises means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

Organic material includes wood, green waste and other carbon-rich matter.

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

Stormwater means water traversing the surface of The Land as a result of rainfall.

Tasmanian Noise Measurement Procedures Manual means the document titled *Noise Measurement Procedures Manual*, by the Department of Environment, Parks, Heritage and the Arts, dated July 2008, and any amendment to or substitution of this document.

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

- 1 Land title reference 156753/6; and

2 as further delineated at Attachment 1

Weed means a declared weed as defined in the *Weed Management Act 1999*.

Schedule 2: Conditions

Maximum Quantities

Q1 Regulatory limits

- 1 The activity must not exceed the following limits :
 - 1.1 2,500 tonnes per year of production of compost or mushroom substrate.

General

G1 Access to and awareness of conditions and associated documents

A copy of these conditions and any associated documents referred to in these conditions must be held in a location that is known to and accessible to the person responsible for the activity. The person responsible for the activity must 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.

G2 Incident response

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

G3 No changes without approval

- 1 The following changes, if they may cause or increase the emission of a pollutant which may cause material or serious environmental harm or environmental nuisance, must only take place in relation to the activity if such changes have been approved in writing by the EPA Board following its assessment of an application for a permit under the *Land Use Planning and Approvals Act 1993*, or approved in writing by the Director:
 - 1.1 a change to a process used in the course of carrying out the activity; or
 - 1.2 the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or
 - 1.3 a change in the quantity or characteristics of materials used in the course of carrying out the activity.

G4 Change of responsibility

If the person responsible for the activity intends to cease to be responsible for the activity, that person must notify the Director in writing of the full particulars of any person succeeding him or her as the person responsible for the activity, before such cessation.

G5 Change of ownership

If the owner of The Land upon which the activity is carried out changes or is to change, then, as soon as reasonably practicable but no later than 30 days after becoming aware of the change or intended change in the ownership of The Land, the person responsible must notify the Director in writing of the change or intended change of ownership.

G6 Complaints register

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

- 1.1 the date and time at which the complaint was received;
 - 1.2 contact details for the complainant (where provided);
 - 1.3 the subject matter of the complaint;
 - 1.4 any investigations undertaken with regard to the complaint; and
 - 1.5 the manner in which the complaint was resolved, including any mitigation measures implemented.
- 2 Complaint records must be maintained for a period of at least 3 years.

G7 Notification prior to commencement

The Director must be notified in writing of the commencement of operations at least 14 days before that occurs.

Atmospheric

A1 Odour management

The person responsible must institute such odour management measures as are necessary to prevent odours causing environmental nuisance beyond the boundary of The Land.

A2 Control of dust emissions

Dust emissions from The Land must be controlled to the extent necessary to prevent environmental nuisance beyond the boundary of The Land.

A3 Covering of vehicles

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

Composting

CG1 Compost windrow monitoring

- 1 Unless otherwise approved in writing by the Director, the following measurements must be taken at several locations along each compost windrow, and at different depths from the top and sides of the windrow, a minimum of once per week:
 - 1.1 Temperature (°C); and
 - 1.2 Oxygen levels (%); and
 - 1.3 Moisture levels (%).
- 2 Details of equipment used for the measurements required under section 1 of this condition must be recorded.
- 3 Records of measurements obtained and related details in relation to sections 1 and 2 of this condition must be maintained for a minimum of three (3) years and must be made available to an Authorized Officer on request.

CG2 Design of composting pad

- 1 Unless otherwise approved in writing by the Director, the design and construction of the composting pad must be undertaken in accordance with the document titled, *Development Proposal & Environmental Management Plan, Bridgewater Compost Facility, BG & JM Barwick Pty Ltd, 314 Midland Highway, Bridgewater*, dated 18 December 2019.
- 2 Notwithstanding clause 1, the compost pad must be designed and constructed:

- 2.1 from an inert low-permeability material such as compacted clay, asphalt or concrete over a compacted base;
- 2.2 to have a minimum 2% drainage gradient, and direct all potentially contaminated runoff and leachate into a leachate management system; and
- 2.3 to provide a stable base allowing all-weather access by vehicles and machinery.

CG3 Composting pad inspection and repair

- 1 Within six months after commencement of composting, or by a date otherwise specified by the Director, a Composting Pad Inspection Report, prepared by a suitably qualified person, must be submitted to the Director for approval.
- 2 The report must contain;
 - 2.1 Details of the condition of the pad, including a map of 'unusable areas' such as;
 - 2.1.1 Areas of exposed bedrock
 - 2.1.2 Areas of inadequate coverage or where hydraulic sealing may be compromised.
 - 2.1.3 Areas with poor drainage.
 - 2.2 A map of the depth of the sealing layer across the pad
 - 2.3 A program of works to repair any failures identified in the Composting Pad Inspection Report.
 - 2.4 A timetable of works to be undertaken to restore the integrity of the composting pad.
- 3 All restoration works must be completed within six months of the approval of the report by the Director.
- 4 Any areas of the pad identified as unusable must be identified and marked on the site and composting activities excluded from them until repairs have been undertaken and appropriate geotechnical properties verified.
- 5 At a time reasonably required by the Director by notice in writing, a revised Composting Pad Inspection Report must be undertaken within the timeframe specified in the notice.

CG4 Composting

Composting and any incorporation of liquid ingredients not carried out in a designated pit lined with a suitable material, such as compacted clay, asphalt or concrete, with a permeability of less than 10^{-8} m/s, must be confined to the authorised composting pad identified in Attachment 1.

CG5 Waste reporting

- 1 Where required by the Director by notice in writing, the person responsible must provide a written report showing the quantity and type of all waste materials received on The Land for composting during the specified period.
 - 1.1 The report must be submitted by the date specified by the Director.

Decommissioning And Rehabilitation

DC1 Notification of cessation

Within 30 days of becoming aware of any event or decision which is likely to give rise to the permanent cessation of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to cease or has ceased.

DC2 DRP requirements

Unless otherwise approved in writing by the Director, a 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 the activity or by a date specified in writing by the Director. The DRP must be prepared in accordance with any guidelines provided by the Director.

DC3 Rehabilitation following cessation

- 1 Following permanent cessation of the activity, and unless otherwise approved in writing by the Director, The Land must be rehabilitated including:
 - 1.1 stabilisation of any land surfaces that may be subject to erosion;
 - 1.2 removal or mitigation of all environmental hazards or land contamination, that might pose an on-going risk of causing environmental harm; and
 - 1.3 decommissioning of any equipment that has not been removed.
- 2 Where a Decommissioning and Rehabilitation Plan (DRP) has been approved by the Director, decommissioning and rehabilitation must be carried out in accordance with that plan, as may be amended from time to time with written approval of the Director.

DC4 Temporary suspension of activity

- 1 Within 30 days of becoming aware of any event or decision which is likely to give rise to the temporary suspension of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to suspend or has suspended.
- 2 During temporary suspension of the activity:
 - 2.1 The Land must be managed and monitored by the person responsible for the activity to ensure that emissions from The Land do not cause serious environmental harm, material environmental harm or environmental nuisance; and
 - 2.2 If required by the Director a Care and Maintenance Plan for the activity must be submitted, by a date specified in writing by the Director, for approval. The person responsible must implement the approved Care and Maintenance Plan, as may be amended from time to time with written approval of the Director.
- 3 Unless otherwise approved in writing by the Director, if the activity on The Land has substantially ceased for 2 years or more, rehabilitation of The Land must be carried out in accordance with the requirements of these conditions as if the activity has permanently ceased.

Effluent**EF1 Leachate management**

- 1 A leachate collection system must be constructed and managed to prevent leachate generated within compost windrows from polluting groundwater or surface waters.
- 2 The leachate intercept drain and leachate pond must be lined with a suitable material, such as compacted clay, asphalt or concrete, with a permeability of less than 10^{-8} m/s.
- 3 Leachate on The Land must be managed such that it is not discharged from The Land.

EF2 Stormwater to be excluded

Stormwater must be prevented as far as practicable from mixing with compost windrows or compost feed stockpiles.

EF3 Perimeter drains or bunds

- 1 Perimeter cut-off drains, or bunds, must be constructed at strategic locations on The Land to prevent surface run-off from entering the area used or disturbed in carrying out the activity. All reasonable measures must be implemented to ensure that sediment transported along these drains, or bunds, remains on The Land. Such measures may include provision of strategically located sediment fences, appropriately sized and maintained sediment settling ponds, vegetated swales, detention basins and other measures designed and operated in accordance with the principles of Water Sensitive Urban Design.
- 2 Drains, or bunds, must have sufficient capacity to contain run-off that could reasonably be expected to arise during a 1 in 20 year rainfall event. Maintenance activities must be undertaken regularly to ensure that this capacity does not diminish.

EF4 Stormwater

- 1 Polluted stormwater that will be discharged from The Land must be collected and treated prior to discharge to the extent necessary to prevent serious or material environmental harm, or environmental nuisance.
- 2 Notwithstanding the above, all stormwater that is discharged from The Land must not carry pollutants such as sediment, oil and grease in quantities or concentrations that are likely to degrade the visual quality of any receiving waters outside The Land.
- 3 All reasonable measures must be implemented to ensure that solids entrained in stormwater are retained on The Land. Such measures may include appropriately sized and maintained sediment settling ponds or detention basins.

Hazardous Substances**H1 Handling of hazardous materials - mobile**

- 1 Where mobile containment of environmentally hazardous materials is utilised for the fuelling or servicing of mobile or fixed plant on The Land, all reasonable measures must be implemented to prevent unauthorised discharge, emission or deposition of pollutants:
 - 1.1 to soils within the boundary of The Land in a manner that is likely to cause serious or material environmental harm;
 - 1.2 to groundwater;
 - 1.3 to waterways; or
 - 1.4 beyond the boundary of The Land.
- 2 Reasonable measures may include spill kits, spill trays/bunds or absorbent pads, and automatic cut-offs on any pumping equipment.

H2 Storage and handling of hazardous materials

- 1 Unless otherwise approved in writing by the Director, environmentally hazardous materials held on The Land must be:
 - 1.1 stored within impervious bunded areas, spill trays or other containment systems; and
 - 1.2 managed to prevent unauthorised discharge, emission or deposition of pollutants:
 - 1.2.1 to soils within the boundary of The Land in a manner that is likely to cause serious or material environmental harm;
 - 1.2.2 to groundwater;
 - 1.2.3 to waterways; or
 - 1.2.4 beyond the boundary of The Land.

Noise Control

N1 Noise emission limits

- 1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
 - 1.1 50 dB(A) between 0700 hours and 1800 hours (Day time); and
 - 1.2 50 dB(A) between 1800 hours and 2200 hours (Evening time); and
 - 1.3 40 dB(A) between 2200 hours and 0700 hours (Night time).
- 2 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).
- 3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.
- 4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.
- 5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

N2 Operating hours

- 1 Unless otherwise approved in writing by the Director, activities associated with the Activity, including the loading/unloading of deliveries to and from The Land, must not be undertaken outside the following times:
 - 1.1 0700 hours to 1900 hours Monday to Friday; and
 - 1.2 0800 hours to 1800 hours Saturdays.
- 2 Notwithstanding the above paragraph, the above activities must not be carried out on Public Holidays that are observed State-wide (Easter Tuesday excepted) without the written approval of the Director.

Operations

OP1 Permitted waste types

- 1 Unless otherwise approved in writing by the Director, only the following waste materials may be used in the production of compost on The Land, or stored on The Land as feedstock for the production of compost:
 - 1.1 Pine bark; and
 - 1.2 Non-putrescible green waste derived from vegetation, such as grass, leaves, plants, tree branches, trunks and stumps.

OP2 Weed management

The Land must be kept substantially free of weeds to minimise the risk of weeds being spread through the transport of products from The Land.

Schedule 3: Information

Legal Obligations

LO1 EMPCA

The activity must be conducted in accordance with the requirements of the *Environmental Management and Pollution Control Act 1994* and Regulations thereunder. The conditions of this document must not be construed as an exemption from any of those requirements.

LO2 Storage and handling of dangerous goods, explosives and dangerous substances

1 The storage, handling and transport of dangerous goods, explosives and dangerous substances must comply with the requirements of relevant State Acts and any regulations thereunder, including:

1.1 *Work Health and Safety Act 2012* and subordinate regulations;

1.2 *Explosives Act 2012* and subordinate regulations; and

1.3 *Dangerous Goods (Road and Rail Transport) Act 2010* and subordinate regulations.

LO3 Aboriginal relics requirements

1 Aboriginal relics, objects, sites, places and human remains regardless of whether they are located on public or private land, are protected under the *Aboriginal Heritage Act 1975*.

2 Unanticipated discoveries of Aboriginal heritage must be reported to Aboriginal Heritage Tasmania on **1300 487 045** as soon as possible.

Other Information

OI1 Waste management hierarchy

1 Wastes should be managed in accordance with the following hierarchy of waste management:

1.1 waste should be minimised, that is, the generation of waste must be reduced to the maximum extent that is reasonable and practicable, having regard to best practice environmental management;

1.2 waste should be re-used or recycled to the maximum extent that is practicable; and

1.3 waste that cannot be re-used or recycled must be disposed of at a waste depot site or treatment facility that has been approved in writing by the relevant planning authority or the Director to receive such waste, or otherwise in a manner approved in writing by the Director.

ATTACHMENT 1

The Land (CT 156753/6) (Figures 1 and 2)

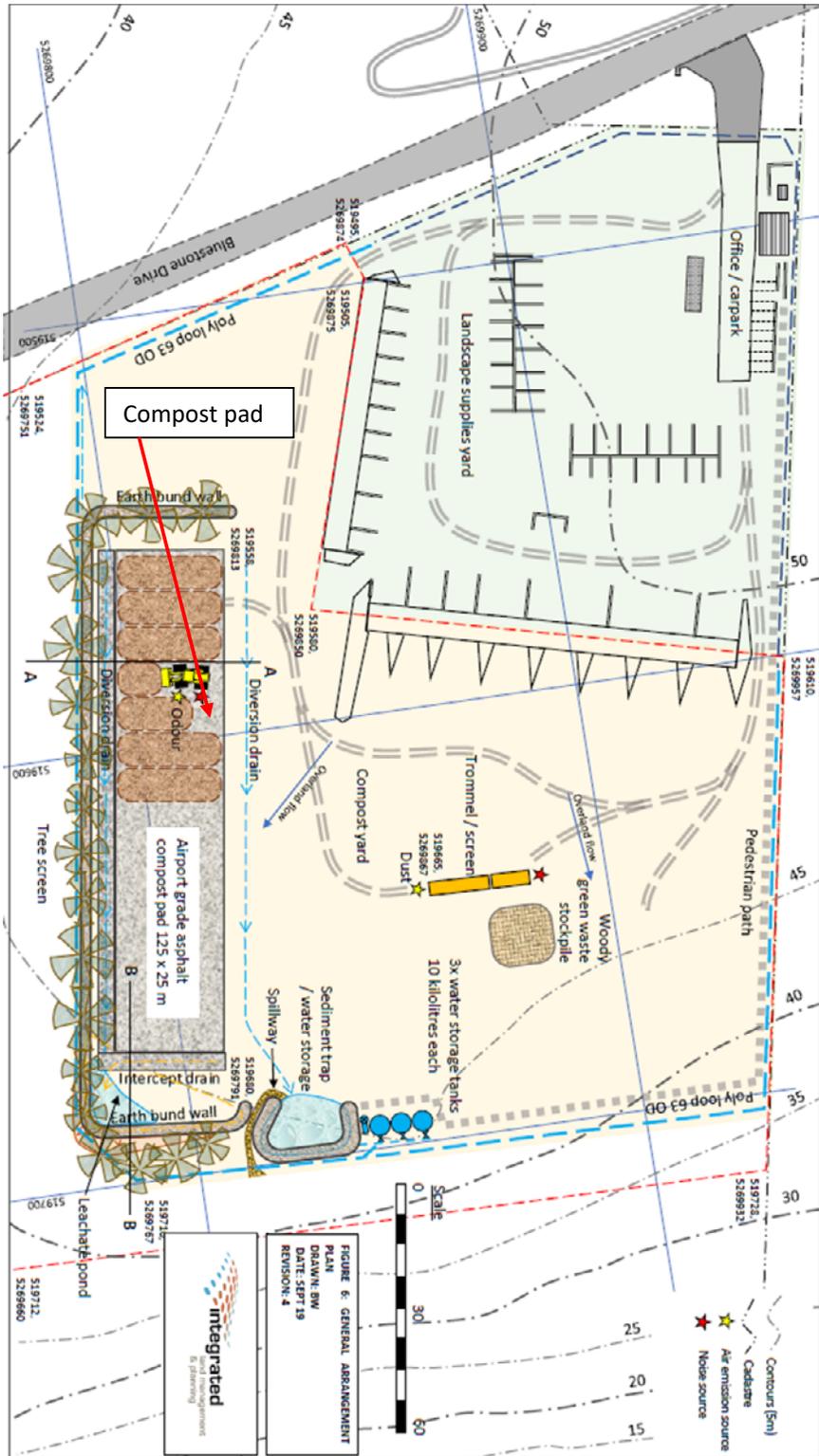


Figure 1 – The Land and site detail. The Land is shown by red dashed outline, grid reference co-ordinates shown at each corner.

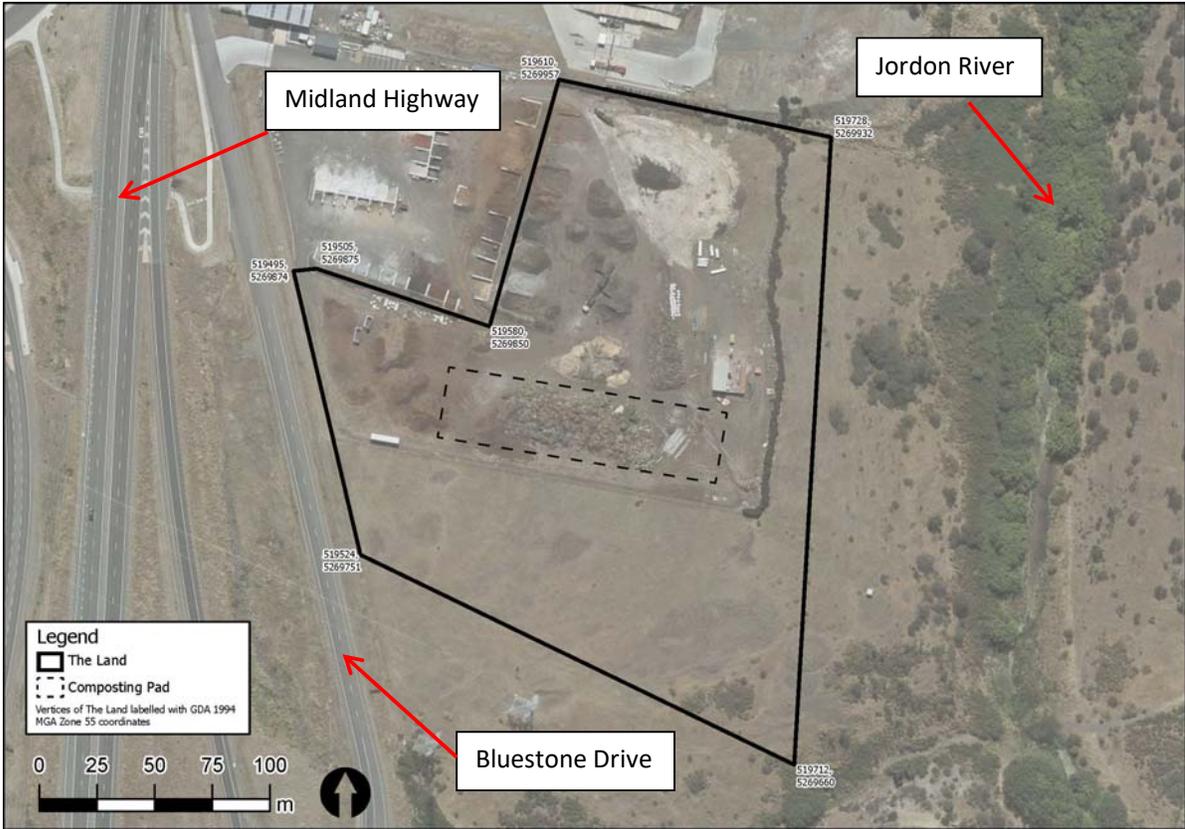


Figure 2 – The Land shown by black boundary, compost pad shown by black dashed boundary.