Environmental Assessment Report
Compost Kings Tasmania
Compost Facility
Lovely Banks Road

November 2025

ENVIRONMENT PROTECTION AUTHORITY

Environmental Assessment Report

Proponent	Seaton Edward Clarence Waterfield, trading as Compost Kings Tasmania
Proposal	Compost Facility
Location	Lovely Banks Road, Melton Mowbray
Class of Assessment	2B
PCE no.	10562
Permit Application No.	DA 2500091 (Southern Midlands Council)
myDAS Folder No.	EN-EM-EV-DE-262140-001
myDAS Document No.	D25-174943

Assessment Process Milestones

Date	Milestone
22 June 2020	Permit Application submitted to Council
26 October 2020	Referral received by the Board
24 December 2020	Guidelines Issued
2 September 2025	Start of public consultation period
30 September 2025	End of public consultation period
25 November 2025	Date draft conditions issued to proponent
28 November 2025	Statutory period for assessment ends

Acronyms

Term	Detail
AEP	Annual Exceedance Probability
Board	Board of the Environment Protection Authority
EIA	Environmental impact assessment
EIS	Environmental Impact Statement
EMPCA	*Environmental Management and Pollution Control Act 1994*
EMPCS	Environmental management and pollution control system
EPBCA	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
LUPAA	*Land Use Planning and Approvals Act 1993*
NCA	*Nature Conservation Act 2002*
NOI	Notice of Intent
NRE	Department of Natural Resources and Environment Tasmania
NVA	Natural Values Assessment
OU	Odour Unit
RMPS	Resource Management and Planning System of Tasmania
SD	Sustainable development
TSPA	*Threatened Species Protection Act 1995*
tpa	Tonnes per annum

Definitions[1]

Term	Definition
Anaerobic	In the absence of oxygen. Composting systems subject to anaerobic conditions often produce odorous compounds and other metabolites that are partly responsible for the temporary phytotoxic properties of compost. Anaerobic conditions are employed in anaerobic digestion systems.
AS 4454: 2012	Australian Standard 4454:2012 for Composts, Soil Conditioners, and Mulches. A manufacturing standard that provides quality assurance on the process and product.
5% annual exceedance probability	Equating to approximately 1 in 20-year rainfall event.
Biochemical oxygen demand	The quantity of oxygen used in the biochemical oxidation of organic matter in a specified time, at a specified temperature, and under specified conditions. Normally five days at 20°C unless otherwise stated. There is a standard test used in assessing the biodegradable organic matter in municipal wastewater.
Biosolids	Biosolids are organic solids derived from the sewage treatment processes.
Carbon to nitrogen ratio (C:N ratio)	The ratio of the weight of organic carbon (C) to that of total nitrogen (N) in an organic material.
Compost	An organic product that has undergone controlled aerobic and thermophilic biological transformation through the composting process to achieve pasteurisation and reduce phytotoxic compounds, and achieved a specified level of maturity required for compost.
Composting	The process where organic materials are microbiologically transformed under controlled aerobic conditions to achieve pasteurisation and a specified level of maturity.
Feedstock	The raw organic materials, such as food scraps, yard trimmings, and agricultural residue, that are used as the input for the composting process.
Leachate	Any liquid that is contaminated with organic matter from the composting process.
Maturation	The final stage of composting where the temperature is shown to decline and stabilise to an extent that it can be safely used on land and to come into direct contact with plants without any negative effects.
Pasteurisation	A process where organic materials are heat-treated to significantly reduce the numbers of plant and animal pathogens and plant propagules.
Pasteurised product	An organic product that has undergone pasteurisation, but is relatively immature and lacking in biological stability.

[1] Adapted from Environment Protection Authority Victoria, 2017

Report summary

This report provides an environmental assessment of a proposal for the construction and operation of a composting facility on Lovely Banks Road, approximately 5 km east of Melton Mowbray (the proposal) by Compost Kings Tasmania (the proponent).

The composting facility will have the capacity to produce up to 10,000 tonnes per annum (tpa) of compost. The material proposed for composting (feedstock) includes green waste, tree trimmings, sawdust, pine park, medium odour biosolids and aged manures.

This report has been prepared based on information provided in the permit application and Environmental Impact Statement (EIS). Relevant government agencies and the public were consulted, and their submissions considered as part of the assessment.

Table of Contents

1. Approval process

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPAA) in relation to the proposal was submitted to Southern Midlands Council (Council) on 22 June 2020.

The proposal is defined as a 'level 2 activity' under clause 3(d)(i) Schedule 2 of the *Environmental Management and Pollution Control Act 1994* (EMPCA), being the production of 100 tonnes per year or more of compost or mushroom substrate.

Section 25(1) of the EMPCA required Council to refer the application to the Board of the Environment Protection Authority (the Board) for assessment under EMPCA. The application was received by the Board on 26 October 2020.

The Board required that information to support the proposal be provided in the form of an Environmental Impact Statement (EIS), prepared in accordance with the Guidelines issued by the Board on 24 December 2020. Multiple drafts of the EIS were submitted to EPA for review against the Guidelines prior to finalisation and acceptance on behalf of the Board on 15 April 2025.

The proponent subsequently withdrew the original planning application and resubmitted it under the Tasmanian Planning Scheme. Section 25(1) of EMPCA required Council to refer the new application to the Board for assessment under EMPCA. The new application was received by the Board on 28 July 2025.

The EIS was released for public inspection for a 28-day period commencing on 2 September 2025. Advertisements were placed in the Mercury and on the EPA website. The EIS was also referred to relevant government agencies for comment. No representations were received.

The Executive Director, Environmental Assessments has undertaken determination of the assessment under delegation from the Board.

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 the Environmental Management and Pollution Control System (EMPCS). Both sets of objectives are specified in Schedule 1 of EMPCA.

The functions of the Board are to administer and enforce the provisions of EMPCA, 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 EMPCA.

3. The proposal

The main characteristics of the proposal are summarised below. A detailed description of the proposal is provided in Section 2 of the EIS.

Summary of the proposal's main characteristics

Activity

The production of a maximum of 10,000 tonnes per year of compost.

Defined areas for the Activity

Three key areas are referred to in this EAR and PCE 10562:

- The Activity Area for the operation is an approximately 23 ha area located in the NW corner of the CT 134018/1, shown in Figure 2 and referred to in the EIS as the "composting site."
- The Operational Area is an approximately 6.5 ha area within the Activity Area, where operations will be restricted to minimise the footprint and limit additional impacts to threatened flora within the site. It is shown in Figure 2 and referred to in the EIS as the "composting facility".
- The Composting Pad means a defined area of demonstrated low-permeability land upon which composting and related activities may be lawfully carried out. It sits within the Operational Area, and is shown in Figure 3 as the "hardstand".

Location and planning context

Location	'Somerton', Lovely Banks Road, Melton Mowbray
Land zoning	Agriculture
Land tenure	Private Freehold (CT 134018/1)

Activity area

Land Use	Agriculture (Grazing modified pastures, grazing native vegetation)
Topography	The site is on a 400 m wide southwest-facing plateau between about 320 m and 330 m elevation, on a west sloping hillside segment.
Geology	Permian marine and Triassic non-marine sedimentary rocks, intruded by sheets of Jurassic-age dolerite.
Soils	Dark-coloured sandy topsoil over a lighter-coloured high plasticity sandy clay subsoil. Highly dispersive soils on the site. No acid sulfate soils occur in the site.
Hydrogeology	Groundwater flows very slowly under gravity in a three-dimensional network of intersecting secondary openings (eg joints); the intervening rock is dry.
Hydrology	Surface water at the site will drain westwards to Serpentine Valley Creek by an unnamed tributary (Figure 8).
Natural Values	The majority of the site classified as GCL (Lowland Grassland Complex) The northern corner of the site contains1.5ha of DAS (*Eucalyptus amygdalina* forest and woodland) There are also potential habitat trees for *Tyto novaehollandiae* subsp. *castanops* (Tasmanian masked owl) and *Lathamus discolor* (swift parrot) on the site, which are listed threatened species under the *Threatened Species Protection Act 1995* (TSPA). There are also records of two TSPA listed flora species, *Leucopogon virgatus* var. *brevifolus (*shortleaf beardheath), *Scleranthus fasciculatus (*spreading knawel), on the site.

Location region

Climate	Rainfall approximately 501 mm per annum. Wind direction predominantly north and west. Low (<2.8m/s) wind speeds occur approximately 30% of the time in summer, and up to 50% of the time in winter
Surrounding land zoning, tenure and uses	Agriculture (Southern Midlands Local Provisions Schedule of the Tasmanian Planning Scheme)
Species of conservation significance	*Leucopogon virgatus var. brevifolus (*shortleaf beardheath); TPSA rare *Scleranthus fasciculatus (*spreading knawel); TPSA vulnerable

Proposed infrastructure

Major equipment	1 x front-end loader 1 x 7t excavator 1 x 10,000L water truck 1 x windrow turner
Other infrastructure	Dam 1 (stormwater and leachate - capturing runoff from operational areas) 7ML Dam 2 (stormwater - capturing runoff from non-operational areas) 6ML Office and adjacent toilet/shower/septic tank system Diesel and petrol pumps Irrigation pipework for windrows 2 x 24kL fresh water tanks Vehicle washdown equipment Aerator for Dam 1 (leachate and stormwater dam)

Composting process and inputs

Water	Water for composting, washdown, staff ablutions, dust suppression and firefighting (2.2.5 of EIS) Freshwater from waterhole north of facility, or imported from contractors or neighbouring properties. Some water to be recycled from stormwater for composting.
Energy	Diesel and petrol for on-site plant and equipment Solar energy and battery storage for the weather station and office
Other raw materials	Feedstock for composting, including: • Green wastes from municipal and other sources • Sawdust, wood chips and shavings • Stabilised biosolids • Aged manures
Process	The composting process involves combining the proposed feedstock in open windrows under controlled conditions to achieve pasteurisation. Figure 4 shows an overview of the 12-week process, including mixing and processing.

Wastes and emissions

Liquid	Irrigation of stormwater and leachate from Dam 1 to neighbouring agricultural land when required to manage water balance. Discharge of stormwater Dam 2 is expected to be unlikely.
Atmospheric	Odour from composting, dust from transport and movement.
Solid	Compostable and non-compostable oversize from compost screening Washdown solids Rejected raw materials
Controlled wastes	Waste oil
Noise	From equipment on site, and vehicles on site and going to and from the site.
Greenhouse gases	The composting process releases gases carbon dioxide and monoxide, methane, nitrous oxides, sulphur oxides and volatile organic compounds.

Construction, commissioning and operations

Proposal timetable	Construction includes fencing, preparation of hardstand, construction of dams, installation of weather station and site office and staff facilities.
Operating hours (ongoing)	0700 to 1700 hours Monday to Friday (excluding public holidays) First waste delivery proposed for 0800.

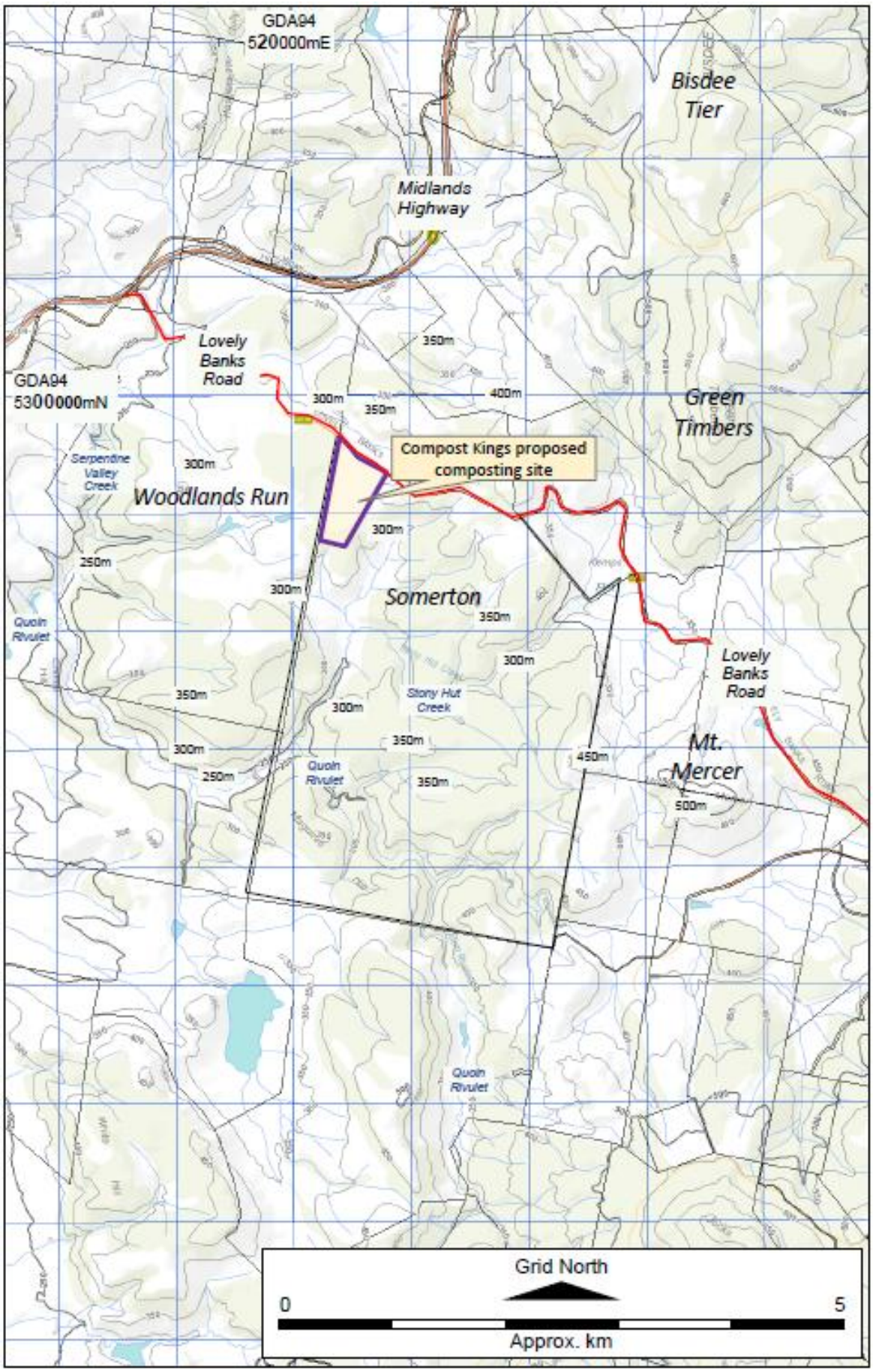


Figure 1: Proposed location (Figure 3 of the EIS)

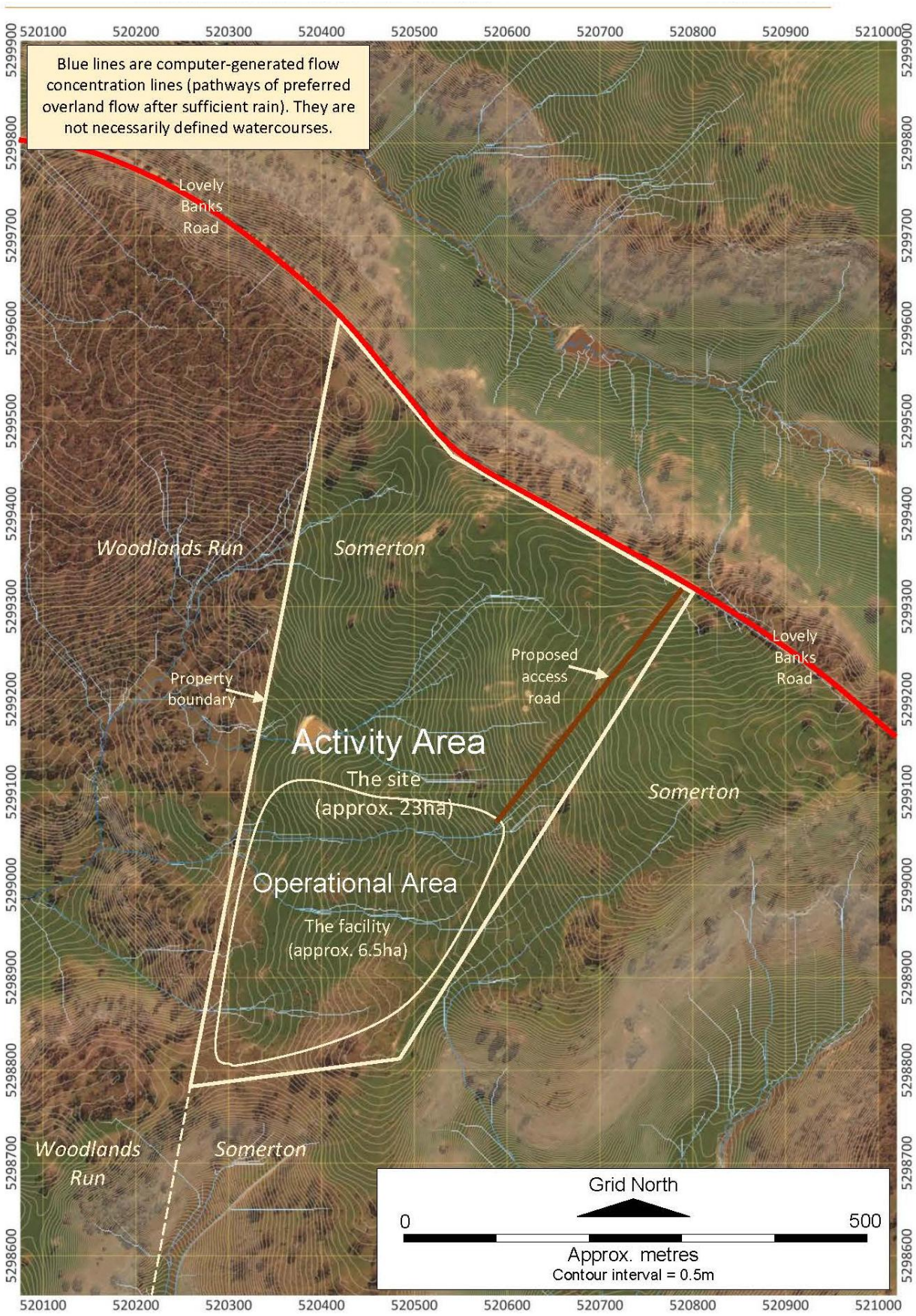


Figure 2: location of the Operational area (composting facility) within the activity area (the site) (figure 4 of the EIS)

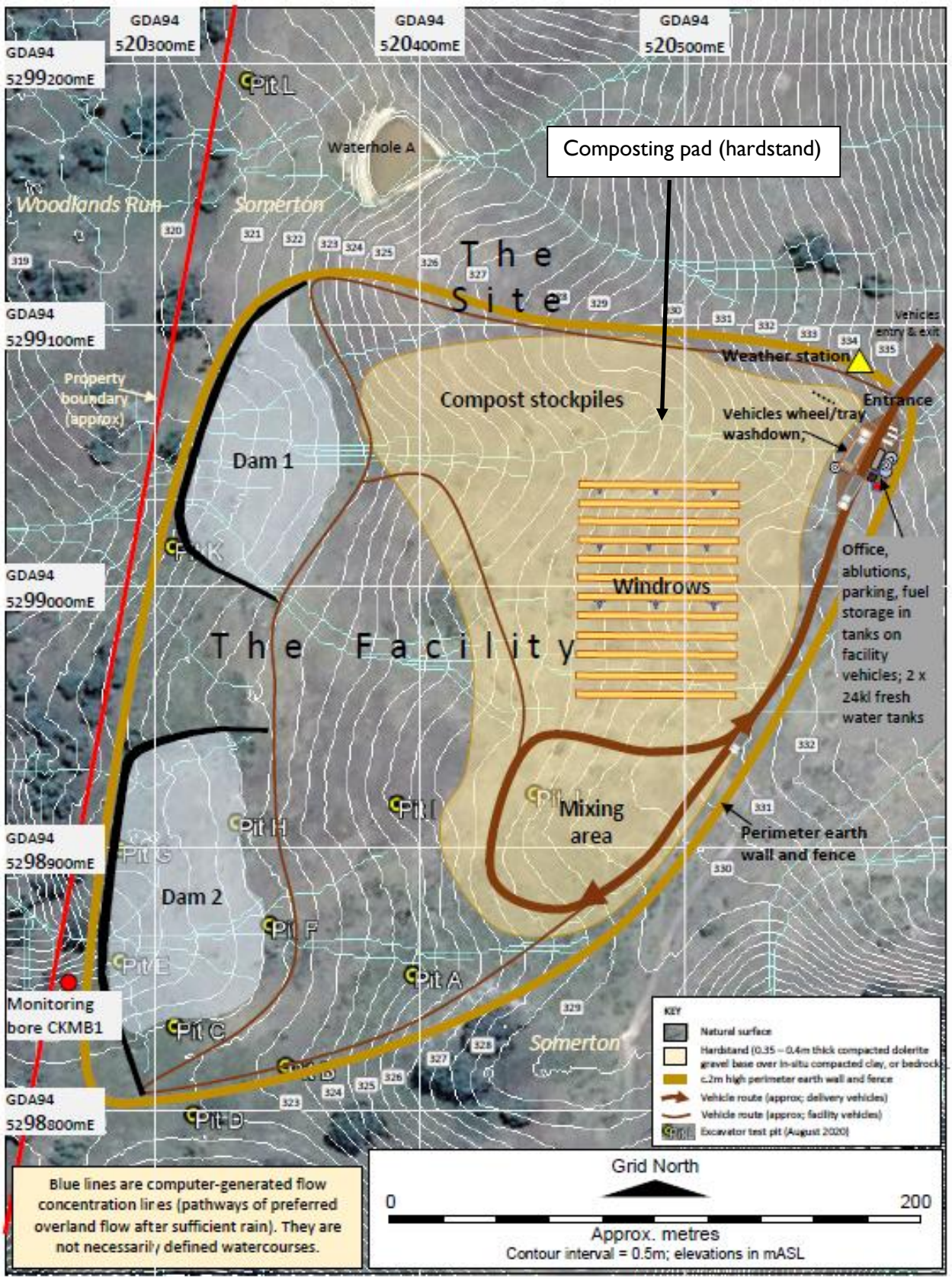


Figure 3 Site plan of the composting facility (amended figure 7 of the EIS)

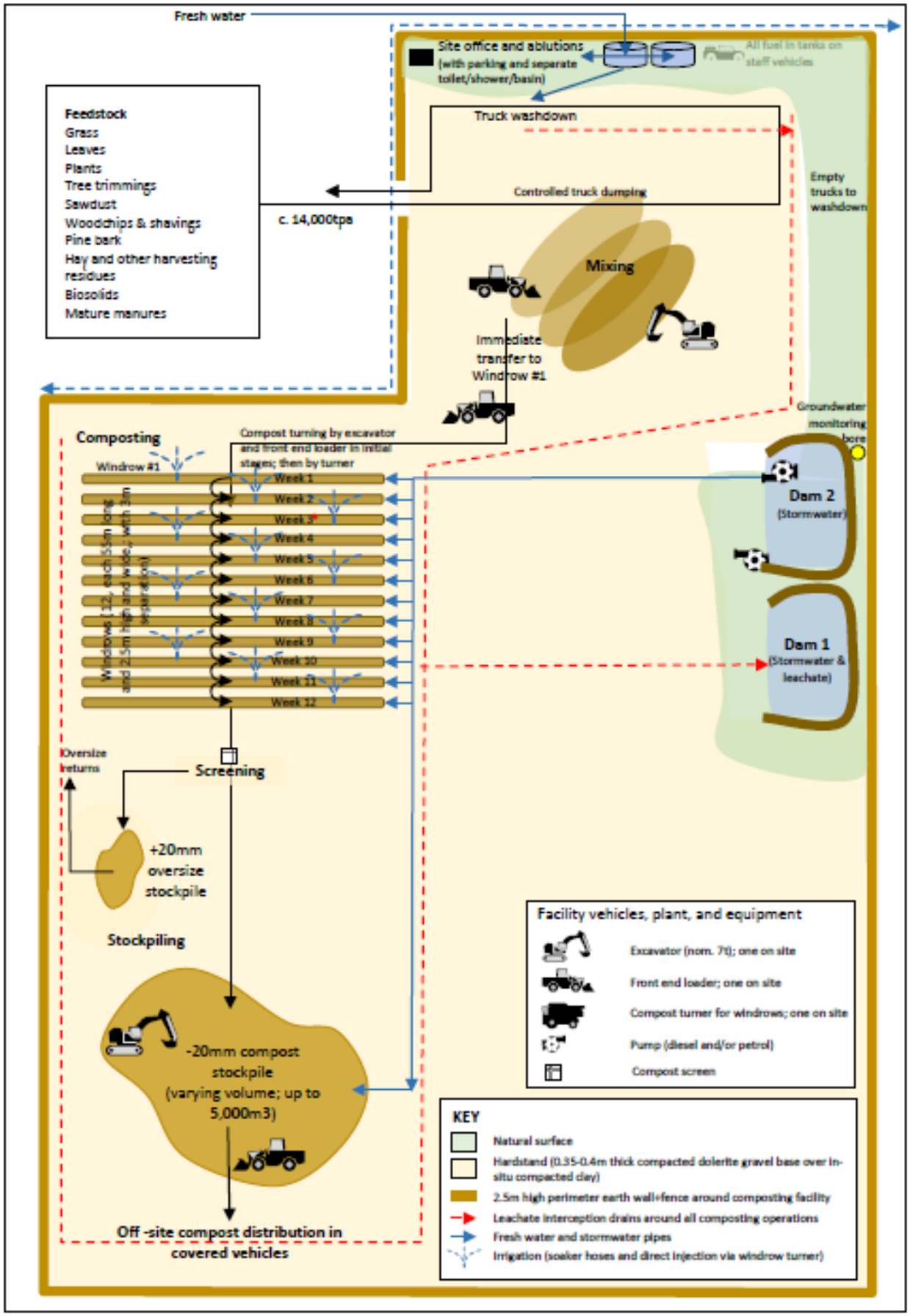


Figure 4 Overview of composting operations (Figure 8 of the EIS)

4. Project rationale and alternatives

According to the EIS, site selection was based on the following criteria:

- Distance from Hobart,
- Length and condition of road access from state highways,
- Distance from sensitive receptors (principally residential houses),
- Land availability and degree of landowner support,
- Minimal site clearance requirement,
- Distance from significant watercourses, and
- Availability of water supply.

The EIS states that one other location closer to Hobart, which shared similar attributes to the 'Somerton' site, was considered. However, the landowner did not provide ongoing support and further consideration of the site was subsequently abandoned.

The proposal originally included fish waste as a feedstock, but this was revised after consultation with the EPA. The EIS states that closed vessel composting (considered to be best practice for most types of high odour feedstocks,) is prohibitively expensive as a start-up operation. Therefore, the proposal is for open windrow composting and will only accept only low - to medium odour feedstock.

The most likely markets for the compost are local and district landowners, for pasture improvement and replacement of some or most other commercial fertilisers. The properties managed by the landowner are likely to receive most of the compost.

5. Public and agency consultation

No public submissions were received during the public consultation period.

The EIS was also referred to several government agencies with an interest in the proposal. Submissions were received from:

- Conservation Assessment Section (CAS), Department of Natural Resources and Environment Tasmania (NRE Tas),
- Waste Levy and Data Team (WLD), NRE Tas.

Appendix 1 of this report contains a summary of the public and government agency submissions received.

6. General permit conditions

The following general conditions will be imposed on the activity:

G1 Activity Area

G2 Access to and awareness of conditions and associated documents

G3 Incident response

G4 Proposed change to activity

G5 Change of responsibility

G6 Change of ownership

G7 Complaints register

G8 Annual Environmental Review

G9 Amendment of required plans and reports

7. Evaluation of key environmental issues

Four key environmental issues were identified for detailed evaluation in this report:

- Air emissions
- Surface water
- Groundwater
- Natural values and weeds and diseases

These issues are discussed in the following subsections.

7.1 Air emissions

The proposed composting operation will produce odour and dust during composting and transport. This has the potential impact sensitive receptors beyond the boundary of the activity area if not appropriately managed. Figure 6 shows sensitive receptors surrounding the site, and the closest receptor is 1.3 km from the site boundary (R1, Redside). High levels of odour emissions can be generated when the composting process is not appropriately controlled, and this is one of the most common causes of complaints from the community from composting operations.

7.1.1 Description

Odour impact assessment

Multiple activities during the proposed composting process will cause odour emissions, which may be either continuous or transient. Continuous sources of odour include stockpiled odorous feedstock and product, and stored leachate as shown in Figure 7. Transient sources of odour occur when compost stockpiles are turned, and when feedstock and compost are screened, turned, moved and delivered. Proposed feedstocks for composting include low-odour green-waste, municipal-sourced landscaping and garden supplies, and medium-odour biosolids and aged manures. The risk of nuisance from odour increases when wind speeds are low and odour is not dispersed, which according to the EIS is approximately 30% of the time in summer and 50% of the time in winter at the site.

The Odour Impact Assessment (Appendix 8 of the EIS) presented modelling to predict odour concentrations during normal and upset (worst case) conditions. It is noted that upset conditions may occur if the composting process is not managed appropriately or atmospheric conditions are unfavourable.

The Odour Impact Assessment found that:

- During normal and upset conditions, the highest predicted odour concentrations at the boundary of the Activity Area are 45.5 odour units (OU) and 85.4 OU (1-hour, 99.5th percentile) respectively,
- During normal conditions, the highest predicted odour concentration at the closest sensitive receptor (R1, Redside) is 0.34 OU 1-hour (99.5th percentile)
- During upset conditions, the highest predicted odour concentration at the closest sensitive receptor (R1, Redside) is 0.66 OU 1-hour (99.5th percentile) .
- The activities of stockpiling and windrow maturation are the most significant contributors to odour emissions under both normal and upset conditions.

Dust emissions

There is potential for dust emissions to be produced from vehicle movements on the unsealed Lovely Banks Road and on internal roads within the composting facility site.

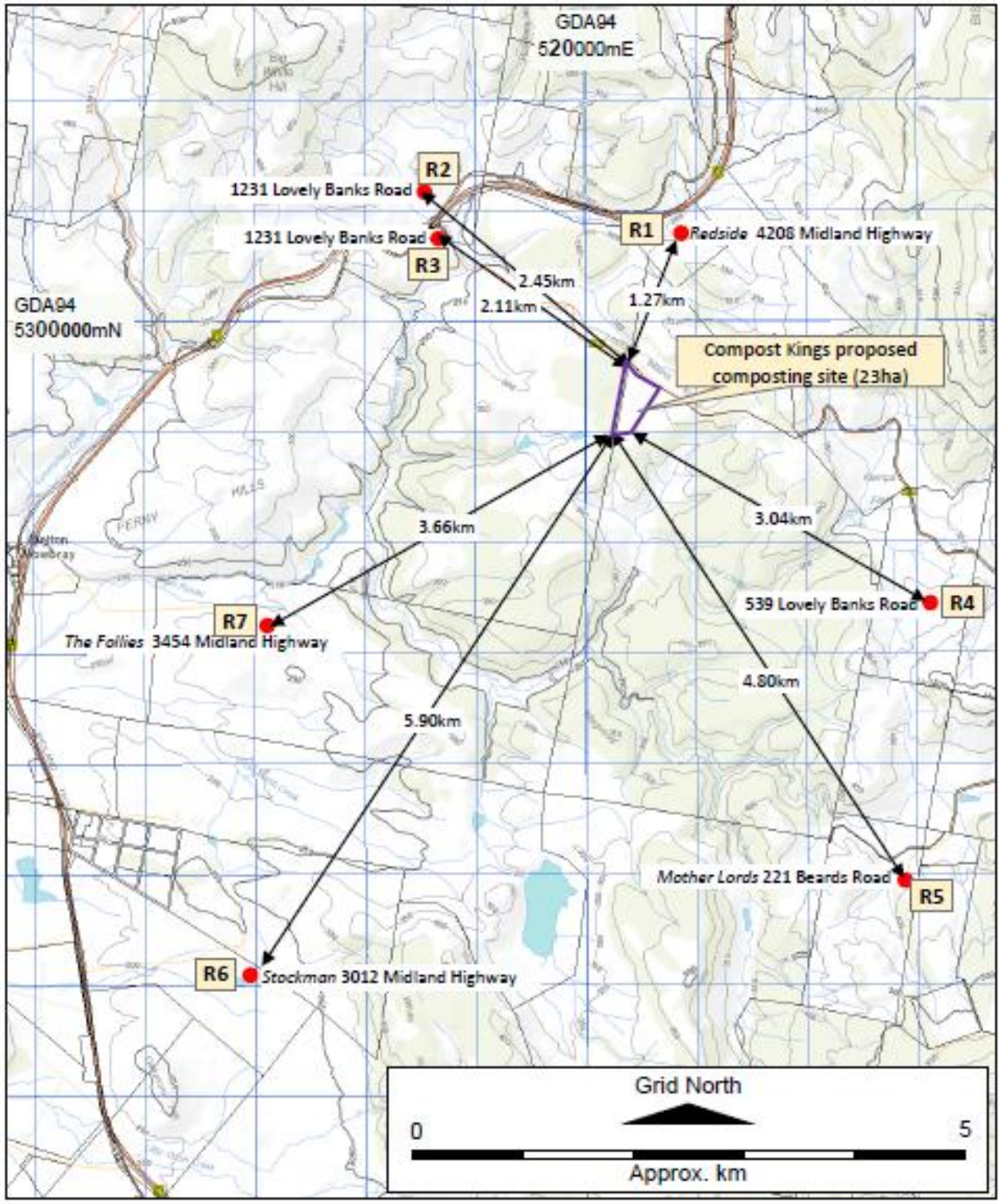


Figure 5: Seven residences closest to the site (Figure 31 of the EIS)

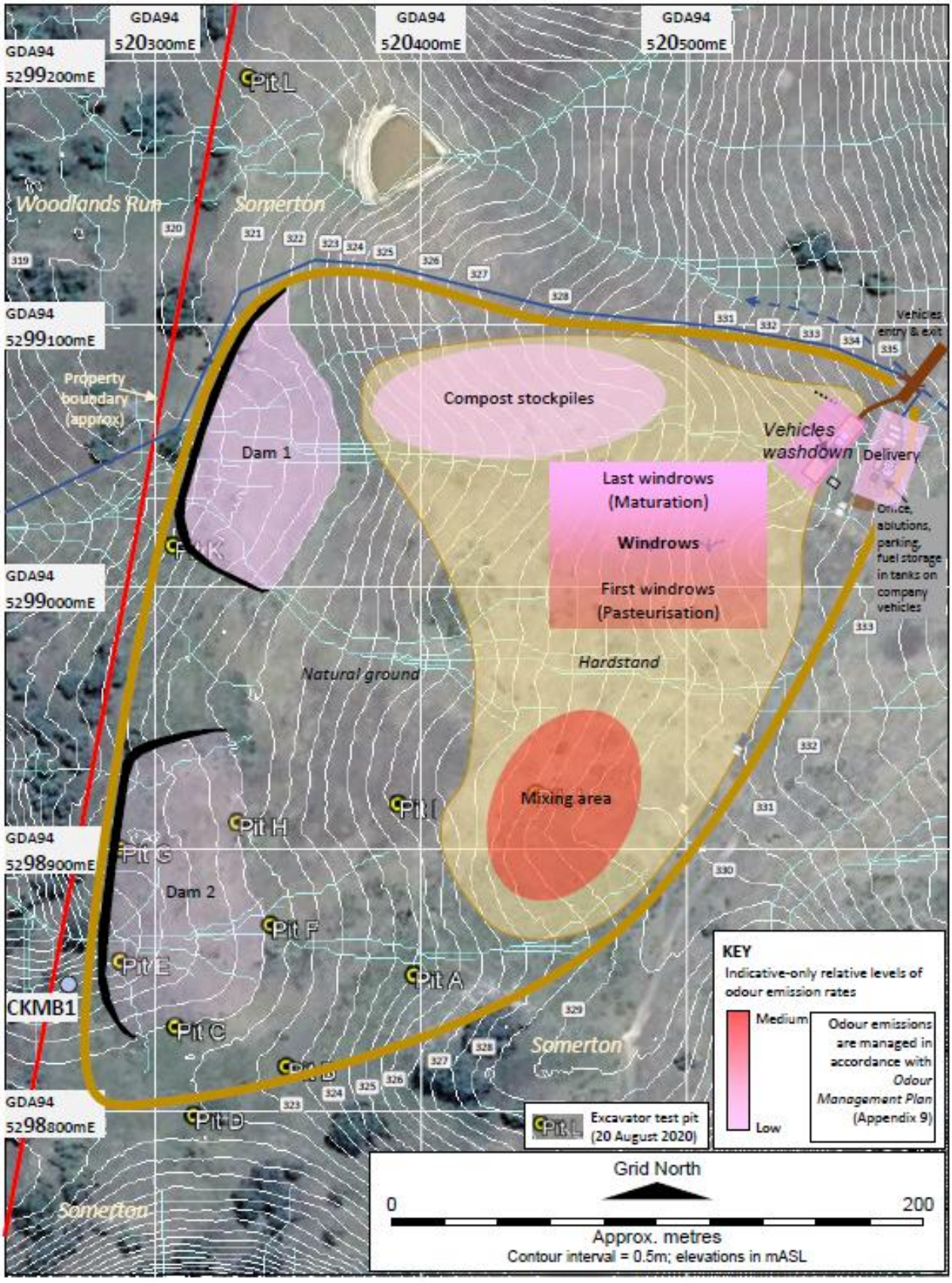


Figure 6 Odour sources at the composting facility (Figure 31 of the EIS)

7.1.2 Management measures

Managing odour

An Odour Management Plan (OMP) has been developed (Appendix 9 to the EIS) by the proponent. Table 4 of the OMP contains several proposed odour management controls including:

- Only approved suppliers will be permitted to deliver wastes. There will be no contractual arrangements for on-going acceptance of waste types or volumes and approved suppliers have agreed in writing to:
    - Verbally pre-book and receive approval for each waste load before leaving the site of the waste source,
    - Only supply weed and FOGO-free waste, and deliver wastes in appropriately covered vehicles.
- At the verbal pre-booking stage, the site operator will refuse delivery if the waste type or volume cannot be accepted at the facility and dealt with appropriately.
- The main access gate on Lovely Banks Road, and the internal gate to the facility, will both be locked at all times (i.e., after hours, at weekends and public holidays) unless the site operator or other staff are in attendance to receive wastes. The gates will also be locked during upset conditions
- All incoming waste vehicles will be stopped at facility office; uncovered loads will be refused entry and suppliers notified. All loads will be checked for contamination status. Hand-picked contaminants separately stored in dedicated, enclosed container and removed as required off-site to an approved facility. Loads with unacceptably high contamination levels will be refused entry.
- All accepted loads will be entered into daily waste receival records.
- Wastes will be directed to mixing area.
- Solid wastes will be segregated by type: low-odour high-carbon solid wastes will be stockpiled separately (i.e. sawdust, bark etc to separate piles).
- Medium-odour low-carbon putrescible solids will be immediately mixed and covered with low-odour wastes; Regular checks will be undertaken of low-odour stockpiles for temperature, moisture, pH, O_2 and CO_2 to optimise composting rates and reduce odour; Regular turning as required.
- Biosolids accepted at the facility will be sourced only from licenced producers and transporters, and will be rated as Class 1 and 2, contaminant grades A and B, and stabilisation grades A and B. Sewage sludge will not be accepted.
- Mixed wastes will be moved to windrows via front end loader. Solid spillages will occur. The track of the loader shall be as constant as possible, to avoid spreading spillages over the hardstand; all spillages shall be removed to the windrows immediately as soon as the transfer of materials is complete.
- Regular checks of windrows for temperature, moisture, pH, O_2 and CO_2 will be undertaken to optimise composting rates and reduce odour; irrigation and turning will be done as required.
- Daily visual and sniff-testing of the facility perimeter and internal areas will be undertaken; clean-up of any areas of spilled waste or compost; enter monitoring results into daily Inspection Checklist.
- Continuous records will be maintained from the on-site weather station (rain, temperature, humidity, wind speed and direction), and dam water levels as well as daily flow meter readings of water pumped from the dams.

Managing dust emissions on Lovely Banks Road and within the Activity Area

Dust emissions along Lovely Banks Road and within the Activity Area will be mitigated by:

- Reducing speed limits for delivery trucks on Lovely Banks Road during dry weather,

- Reporting pot-holes and other defects on Lovely Banks Road to Council,
- Maintaining the internal roads within the Activity Area in good condition,
- Watering the internal roads within the Activity Area in dry windy conditions,
- Limiting speed on the internal roads within the Activity Area to 10km/h, and closing the facility and broader site during periods of high winds.

7.1.3 Public and agency comment and responses

No public submissions were received.

7.1.4 Evaluation

Odour management

Odour modelling predicts that odour concentrations will be less than 1 OU (considered to be detectable) at sensitive receptors, during both normal and upset conditions. The modelling also indicates that odour emissions will be non-compliant with the *Tasmanian Air Environment Protection Policy (Air Quality) 2004* (Environment Division, 2004), which prescribes a limit of 2 OU when modelled at the boundary of the facility.

Given the modelled results of less than 1 OU at sensitive receptors, the EPA's Air Section has advised that with implementation of appropriate management methods based on best practice (as documented in the OMP), odour is not expected to cause environmental nuisance. Condition **A1** requires the proponent to prevent odours causing environmental nuisance beyond the boundary of the Activity Area. The modelling and management measures presented indicate that this requirement will be met.

To minimise the risk of nuisance, condition **A2** requires the proponent to manage activities on the site in accordance with the OMP. The OMP identifies best practice management procedures to minimise odour and must be updated to reflect changes in operation and accurately represent the current operational conditions, on request of the Director.

Several key aspects of the OMP relating to odour management during the composting process are separately conditioned to facilitate transparent and robust compliance:

- Condition **A3** requires the proponent to undertake a daily odour inspection of the facility perimeter and internal processing areas to detect the presence and intensity of odours. This will identify if any process issues are causing increased odour levels which require management actions in accordance with the OMP.
- Condition **OP6** limits feedstock to green wastes, Class 1 and Class 2 biosolids, untreated timber, and aged cattle manure. A balanced feedstock reduces the risk of odour, by allowing key parameters to be met for oxygen, temperature, carbon/nitrogen ratio and pH levels. The proposed feedstock ratios to be accepted for composting, approximately 80% low-odour feedstock and 20% medium-odour feedstock, are expected to achieve this to limit potential odour generation.
- Condition **OP2** requires that when the facility is open, it is attended by a person to supervise waste receival to ensure compliance with these conditions.
- Condition **OP7** requires compost management actions, including incorporation of odourous feedstock into windrows on the day of arrival and maintaining a reserve of high-carbon, low-odour feedstock at the site as a contingency measure to allow mixing or capping of odorous windrows. **OP7** also requires pasteurisation of windrows to be in accordance with AS4454 - 2012. Pasteurisation must be achieved through adequate aeration and effective compost management which results in lower odour emissions.
- While odour is not expected to cause nuisance at sensitive receptors, a complaints register must be maintained to ensure any complaints are registered and investigated, under condition **G7.**

Dust

The proposed dust management measures are considered appropriate and standard conditions have been imposed. Condition **A4** requires that vehicles are covered to prevent materials escaping when they leave the Activity area, and **A5** requires that dust emissions are controlled to prevent environmental nuisance beyond the boundary of the Activity Area.

7.1.5 Conditions

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

G8 Complaints register

A1 Odour management

A2 Odour management plan

A3 Odour inspections

A4 Covering of vehicles

A5 Control of dust emissions

OP2 Site staff

OP6 Receivable wastes

OP7 Compost management

7.2 Surface water

Leachate and stormwater from the composting facility has the potential to pollute surface water if it is not appropriately managed. Leachate is created when water comes into contact with organic materials through the composting process. Surface water will drain from the Activity Area westwards to Serpentine Valley Creek by an unnamed tributary which sits within the Quoin – Serpentine Valley Subcatchment of the Jordan Catchment (see Figure 8 below). According to the EIS, the proponent will construct infrastructure to manage surface water impacts, including two leachate and stormwater dams. Leachate irrigation onto agricultural land outside of the Activity is proposed as a measure to manage dam capacity.

7.2.1 Description

Leachate and stormwater generation

Leachate has a high biological oxygen demand (BOD), which may impact freshwater ecosystems if discharged to the receiving environment by reducing available oxygen. Leachate will be generated during the composting process, including when:

- Feedstock is received, stored, and processed,
- Compost is pasteurised, matured, screened and stored, and
- When water is used to wash machinery will be contaminated with organic materials.

Stormwater will also be generated on parts of the Activity Area that are not involved in compost production (see Figure 9 below). In addition, wastewater will be produced at the site offices from toilet and shower facilities.

Water balance and leachate discharge

Two dams are proposed to be constructed:

- Dam 1 will have a capacity of 7 megalitre (ML) and will capture leachate and stormwater from all operational areas, and
- Dam 2 will have a capacity of 6 ML and will only capture stormwater from parts of the Activity Area that are not involved in compost production (see Figure 9 below).

High rainfall events present the potential for these dams to overflow if inappropriately managed, leading to impacts on the surrounding environment. The Activity Area is generally considered to be dry, with evaporation expected to exceed rainfall for 80% of the year.

Table 12 of the EIS presents a monthly water balance of Dam 1 for a potential scenario which assumes mean monthly rain and two months (June and July) of 2-day 5% AEP rain. The required capacity of a leachate dam to accommodate direct rain and hardstand runoff for this scenario was 5.2 ML, including approximately 18 ML of pumping out over the year to maintain dam capacity. Therefore, given the conservative scenario presented, the proposed 7 ML leachate dam is appropriately sized to capture leachate, provided appropriate monitoring and contingency measures are in place to manage water levels during periods of higher rainfall. The annual volume of leachate to be disposed of was found to be 18 ML.

Leachate dam capacity is to be managed via irrigation onto agricultural land at the 'Somerton' property, outside of the Activity Area.

Potential impacts to receiving environment

Figure 10 below shows the two closest surface water bodies to the Activity, Dam A and Waterhole A. The EIS states that if Dam 1 (leachate and stormwater) and Dam 2 (stormwater) failed their contents would flow down the adjacent un-named watercourse to enter two adjacent farm dams on a neighbouring property (see Figure 1 above), and subsequently the Serpentine Valley Creek, Quoin Rivulet and the Jordan River.

Leachate irrigation onto agricultural land at the 'Somerton' property, outside of the Activity Area, is proposed to manage the capacity of Dam 1 (leachate and stormwater and prevent leachate overflow during high rainfall events. If not managed appropriately, leachate irrigation has the potential to cause adverse environmental impacts, such as the stimulation of aquatic plant growth. Figure 11 below shows approximately 40 ha of land available in seven areas across the 'Somerton' property for leachate irrigation. The 'Somerton' property also sits within the wider Jordan River catchment.

Sampling of existing environment

Figure 7: Composting site within Quoin-serpentine valley sub-catchment (Figure 22 of EIS)

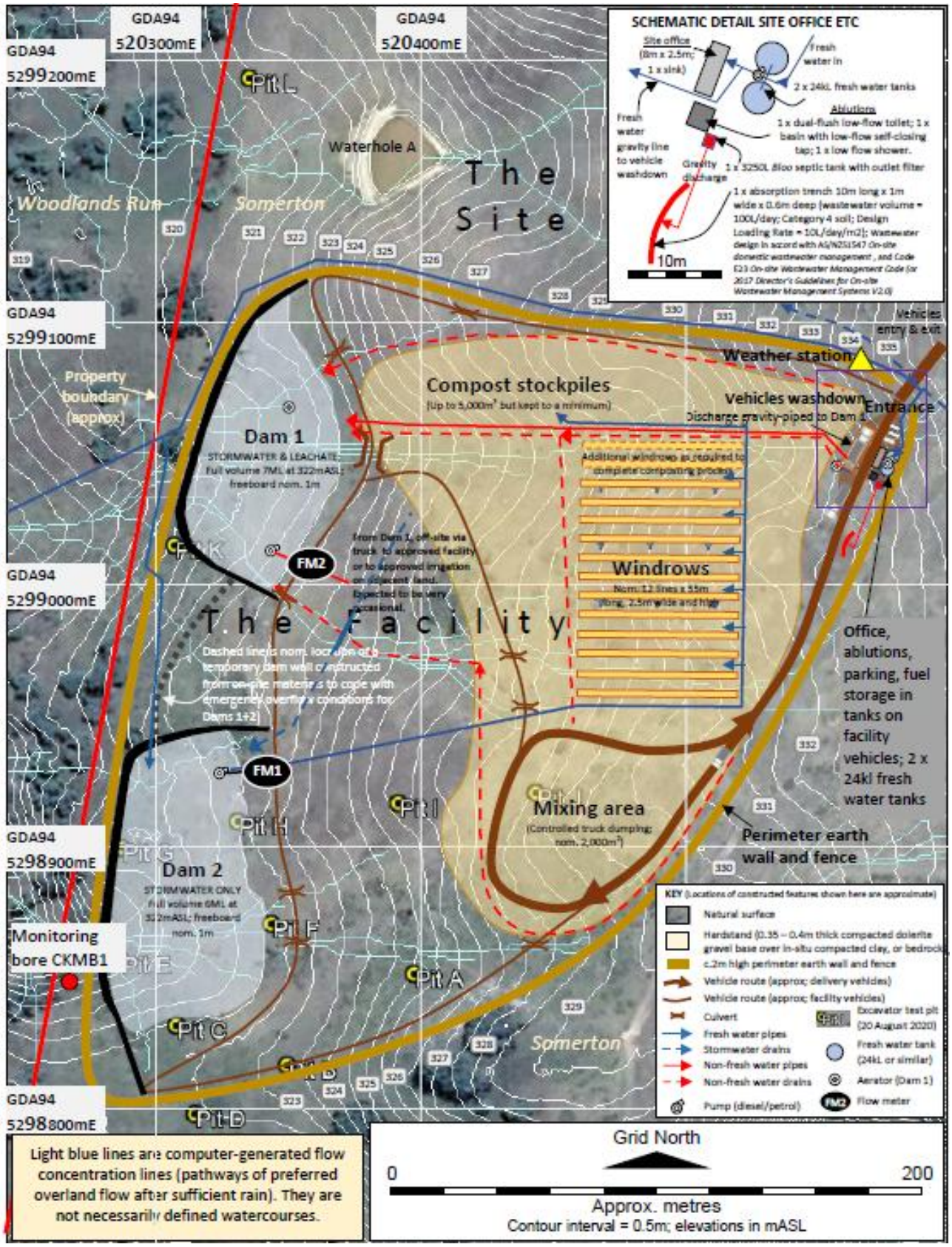


Figure 8: Proposed layout of the composting facility (Figure 37 of EIS). The hardstand, shown in light yellow, is indicative of the Composting Pad.

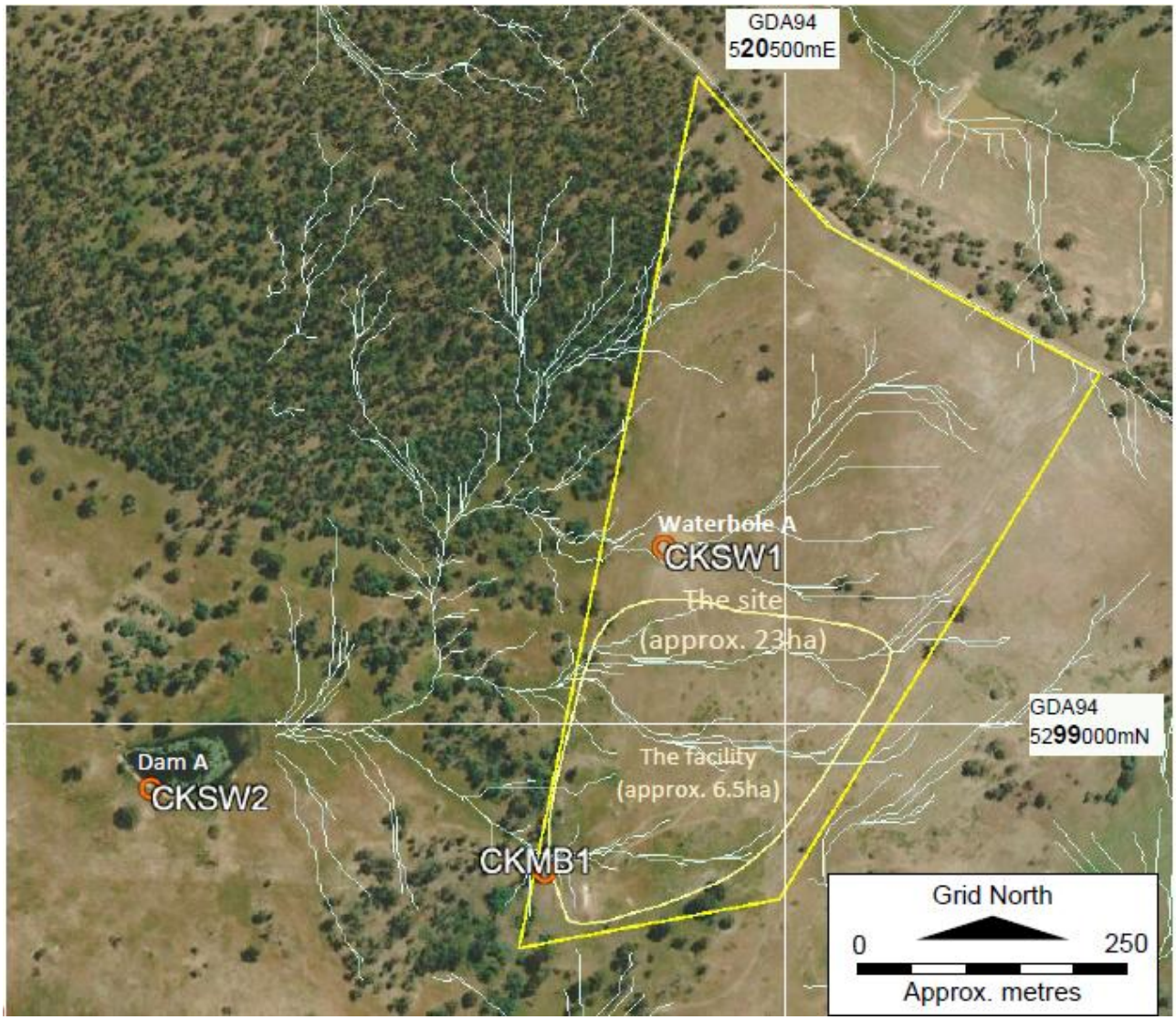


Figure 9: Location of waterbodies and groundwater and surface water sampling points (Figure 29 of EIS)

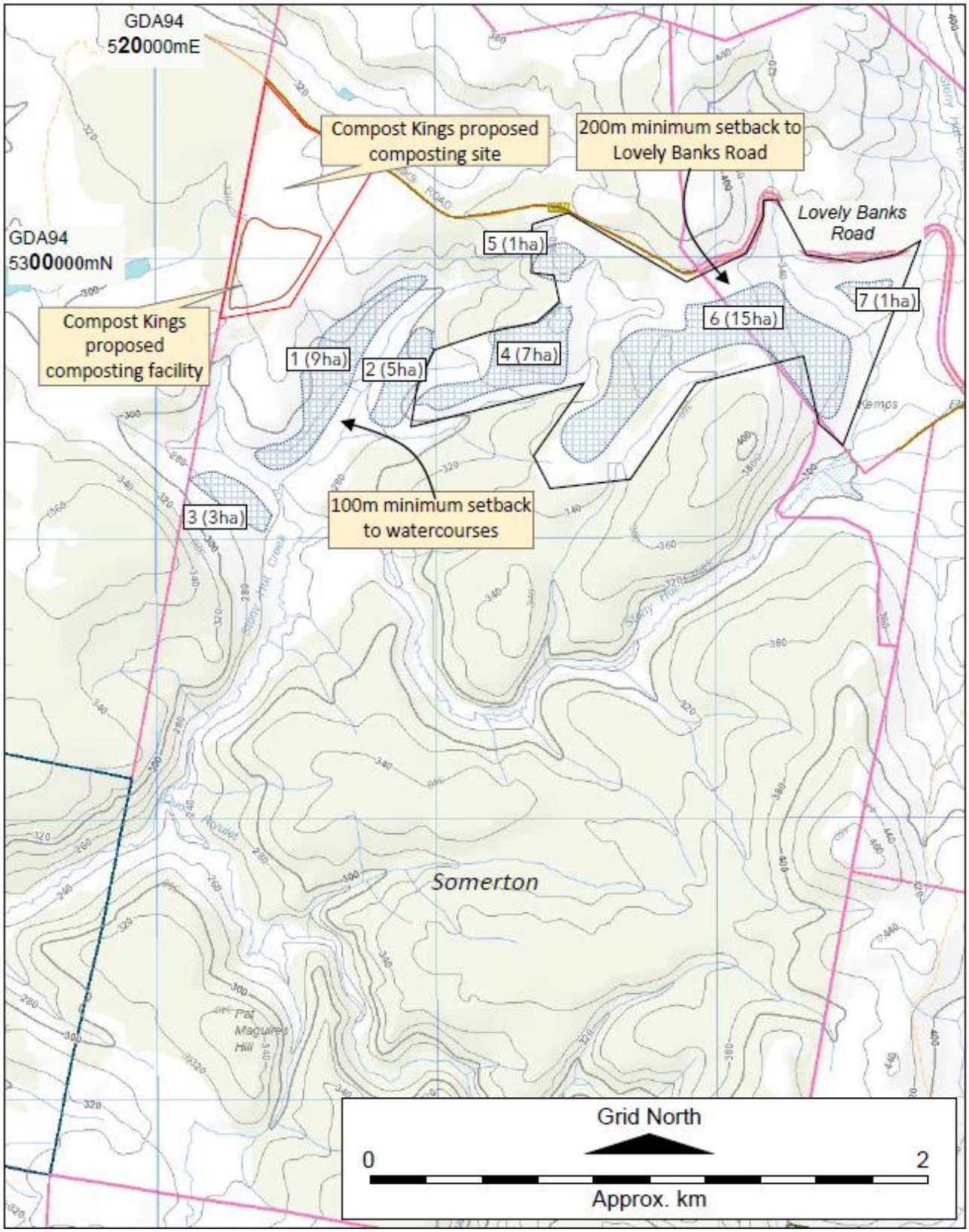


Figure 10: Areas allocated on the 'Somerton' property total approximately 40 ha for the controlled irrigation of leachate from the composting facility (Figure 35 of EIS)

7.2.2 Management measures

Section 4.3 of the EIS outlines a number of proposed management measures for potential impacts to surface water associated with the proposed Activity:

- Proposed construction and design measures including:
    - Dams 1 and 2 will act as stormwater/leachate and stormwater-only collection facilities respectively.
    - Dam 1 full volume is 7ML, and Dam 2 is 6ML.
    - The design and construction of Dam 1 and Dam 2 will be in accordance with engineering principles and the works codes for Division 3 or 4 dams (DPIPWE 2015a or DPIPWE 2015b).
    - Dam 1 has been sized to contain all leachate water with a minimum 0.5m high freeboard. It is proposed to maintain the leachate level in it at or below a minimum volume by pump-out to irrigation of agricultural land on 'Somerton'. Pump out will be triggered by leachate volumes in the dam exceeding this volume.
    - A 2.5m high perimeter earth wall fence will be constructed around composting facility.
    - Leachate interception drains will be constructed around all composting operations.
- Regular surveillance of the conditions of the dam walls will be undertaken. To help manage storage capacities in Dam 1 and Dam 2, and their responses to various rain intensity-duration events, water levels will be monitored (to the nearest millimetre) every 15 minutes (nominal) by a digital submersible logger. The data, including trigger alerts for high and low water levels, will be available via the GIS-centric cloud-based platform to allow remote wireless review by permitted users.
- To avoid re-contamination of feedstock undergoing pasteurisation and maturation, no leachate/stormwater from Dam 1 will be recycled to windrows. Water needed for composting will be pumped only from Dam 2.
- Leachate irrigation on 'Somerton' will be done in accordance with an approved management plan developed in conjunction with or by the owners and managers of Somerton. Each irrigation area has been setback nominally 100m from watercourses, and 200m from Lovely Banks Road.
- Stormwater from Dam 2 will be pumped via poly pipes to windrows and stockpiles at the discretion of the operator.
- Hardstand will cover approximately 40 – 50% of the internal footprint of the 6.5ha earth-walled composting facility. It will be of sufficient thickness (350mm), compacted, regularly inspected and maintained to ensure it is capable of withstanding all truck and plant movements during operations. Any small areas of exposed sandstone bedrock will be covered with hardstand.
- To mitigate the effects of dispersive soils in areas not covered by the hardstand:
    - All surface drains which collect stormwater/leachate from hardstand areas (the catchment for Dam 1) and stormwater from natural surface areas (the catchment for Dam 2) will be lined with geofabric/heavy duty plastic to prevent point sources of discharge from developing along their lengths, and
    - The earthen bases and clay-core walls of Dams 1 and 2 will be constructed of appropriately-compacted low-permeability non-dispersive clay.
- Vehicle and plant wheel clean and washdown procedures will include:
    - Wheel cleaning for departing vehicles
    - Washdown facilities
    - Collection of washdown water, estimated to be 600-800 L a day.

- A program of six-monthly surface water and groundwater monitoring will be instigated when composting operations commence. Two locations for monitoring are proposed (see Figure 10 above):
    - SW1 is located at waterhole A
    - SW2 is located at a dam 250 m downstream from the proposed composting facility on the neighbouring property
- Wastewater treatment from the site office will be in accord with AS/NZS1547 *On-site domestic wastewater management* , and Code E23 *On-site Wastewater Management Code (or 2017 Director's Guidelines for On-site Wastewater Management Systems V2.0).*

7.2.3 Public and agency comment and responses

No comments were received.

7.2.4 Evaluation

Leachate management

Leachate must be adequately captured and contained to prevent offsite discharge and the proposed leachate management measures are considered adequate to minimise the risk of environmental harm.

The proposed measure to manage the level of Dam 1 by pumping leachate out and irrigating onto agricultural land will be required to ensure dam capacity is maintained and prevent accidental discharge of leachate to the environment. This will be most likely to occur in the winter months. Condition **OP3** prohibits discharge from the leachate dam, unless it is done in accordance with a Leachate Management Plan (LMP) approved by the Director. It also requires that the leachate dams are periodically cleaned out to ensure that the dam design capacity is maintained, and a visible marker must be established to indicate the required freeboard to maintain capacity for a 5% annual exceedance probability (AEP) event.

Condition **OP5** requires development of a Leachate Management Plan, which must include details of how any excess leachate generated at the activity that cannot be contained within site infrastructure will be disposed of off-site in an environmentally acceptable manner. The proposed irrigation to available land on 'Somerton' is an adequate way to manage this if appropriately controlled to prevent runoff to waterways.

The EIS states that significant failure of a dam wall at the facility is considered very unlikely, noting that the design and construction of dams will accord with engineering principles as required by the relevant works codes issued under the *Water Management Act 1999* (WMA), which prescribe minimum design, construction and environmental standards. Once the dams are operational, the proponent will be required to comply with the *Water Management (Safety of Dams) Regulations 2015*, which sets out the ongoing activities and reporting requirements for dam safety and ensures owners of existing dams meet their dam safety responsibilities. **LO2** describes the legal requirements of the WMA, and any terms and conditions required for dams under the WMA will be included in any permit issued by the Southern Midlands Council as the relevant permitting authority.

The layout of the proposed operations in the EIS shows intercept drains around all composting operations, directing any leachate to Dam 1. The separation of leachate generated in compost processing areas from other surface water is required to ensure that surface water is not contaminated. Condition **OP3** details leachate management system requirements, including limits to permeability and maintenance of design capacity to ensure leachate is contained within the intercept drains and Dam 1. The composting pad must have an appropriate hydraulic seal to prevent leachate seepage, as required by condition **CG1**. The composting pad and leachate dams must be inspected after construction under **OP4** to demonstrate that linings have been appropriately constructed and a Composting Pad and Leachate Dams Condition Report must be provided to the Director for approval.

CG2 restricts composting to the approved composting pad to ensure that leachate is contained and treated appropriately.

Stormwater management

Stormwater infrastructure must be sufficient at the facility to minimise contamination of 'clean' stormwater. It is considered that the proposed stormwater infrastructure design is likely to minimise the risk of stormwater contamination. Condition **SW1** requires perimeter cut-off drains, or bunds, to be constructed at strategic locations within the Activity Area to prevent surface run-off from entering the composting activity for 5% AEP rain event. The proposed bunding around the boundary of the composting facility reflects the requirements of this condition. Condition **SW2** requires that if stormwater is contaminated by leachate, it must be treated as leachate to ensure no offsite discharge.

Condition **SW3** requires that if stormwater is contaminated by sediment, oil or grease, it is treated appropriately in sediment settling ponds. Condition **SW4** will require that Dam 2 is cleaned to ensure pond design capacity is maintained.

Wastewater management

The management measures to treat the office wastewater as required by AS/NZS1547: 2012 *On-site domestic wastewater management* are appropriate to minimise the risk of release to the environment. No conditions are required.

Monitoring

The proposed surface water monitoring is supported to ensure management measures are effectively preventing discharge of any pollutants to the surrounding environment.

Condition **M2** requires the proponent to sample surface water every six months in the proposed waterbodies (see Figure 10 above) for a range of parameters (as outlined in Attachment 2 of PCE 10562), to demonstrate that management measures are working to prevent surface water discharge. In addition, **M2** requires leachate dam monitoring to provide baseline information for comparison with the other surface water monitoring points and inform the options for disposal in an environmentally acceptable manner. Condition **M3** details sample processing requirements. The monitoring results must be included in the Annual Environment Review.

Based on proposed management measures and conditions imposed, the risk of the Activity causing environmental harm is considered low.

7.2.5 Conditions

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

CG1 Design of composting pad

CG2 Composting pad boundary requirements

OP3 Leachate management system

OP4 Composting Pad and Leachate Dams Condition Report

OP5 Leachate Management Plan

SW1 Perimeter drains or bunds

SW2 Contamination of stormwater

SW3 Stormwater

SW4 Maintenance of settling ponds

M2 Water monitoring requirements

M3 Samples and measurements for monitoring purposes

LO2 Water Management Act 1999 requirements

7.3 Groundwater

7.3.1 Description

Contaminating scenarios

Leachate generated by the composting operation, as described in section 7.2 of this report, has the potential to pollute groundwater if not appropriately contained. Leachate may impact groundwater through infiltration into underlying soils if the structural integrity of the composting pad and the operational areas are inadequate. The EIS states that subsoils over the facility are dispersive, and have the potential to cause surface and tunnel erosion if inappropriately designed and managed.

Table 13 of the EIS identifies the following pathways for groundwater contamination via vertical infiltration to the water table from:

- on-site domestic wastewater from in-ground disposal of primary treated wastewater in absorption trench;
- compost leachate from the mixing area, floor of the facility, compost stockpiles and beneath windrows, on existing soil profile; and
- leachate/stormwater from dam inside facility.

Potential impacts to receiving environment

The EIS describes groundwater flow systems (see Figure 12 below) in the vicinity of the as Activity Area as:

- local flow (thin red arrows) is in small sub-subcatchments in all directions,
- intermediate flow (thicker red arrows) is interpreted as west southwest within the Quoin – Serpentine Valley Creek Subcatchment (110 km^2), and
- regional flow (thick, red-bordered arrows) is mostly westwards in the Jordan Catchment (1,250 km^2).

Groundwater flow rates are estimated to be a few centimetres a day for all groundwater flow systems. The EIS notes that there are no groundwater users within 2 km of the composting facility.

Groundwater monitoring has been conducted near the site in 2021(see Figure 10 above). The monitoring found the facility is likely to be a recharge zone, where water from the surface replenishes an aquifer.

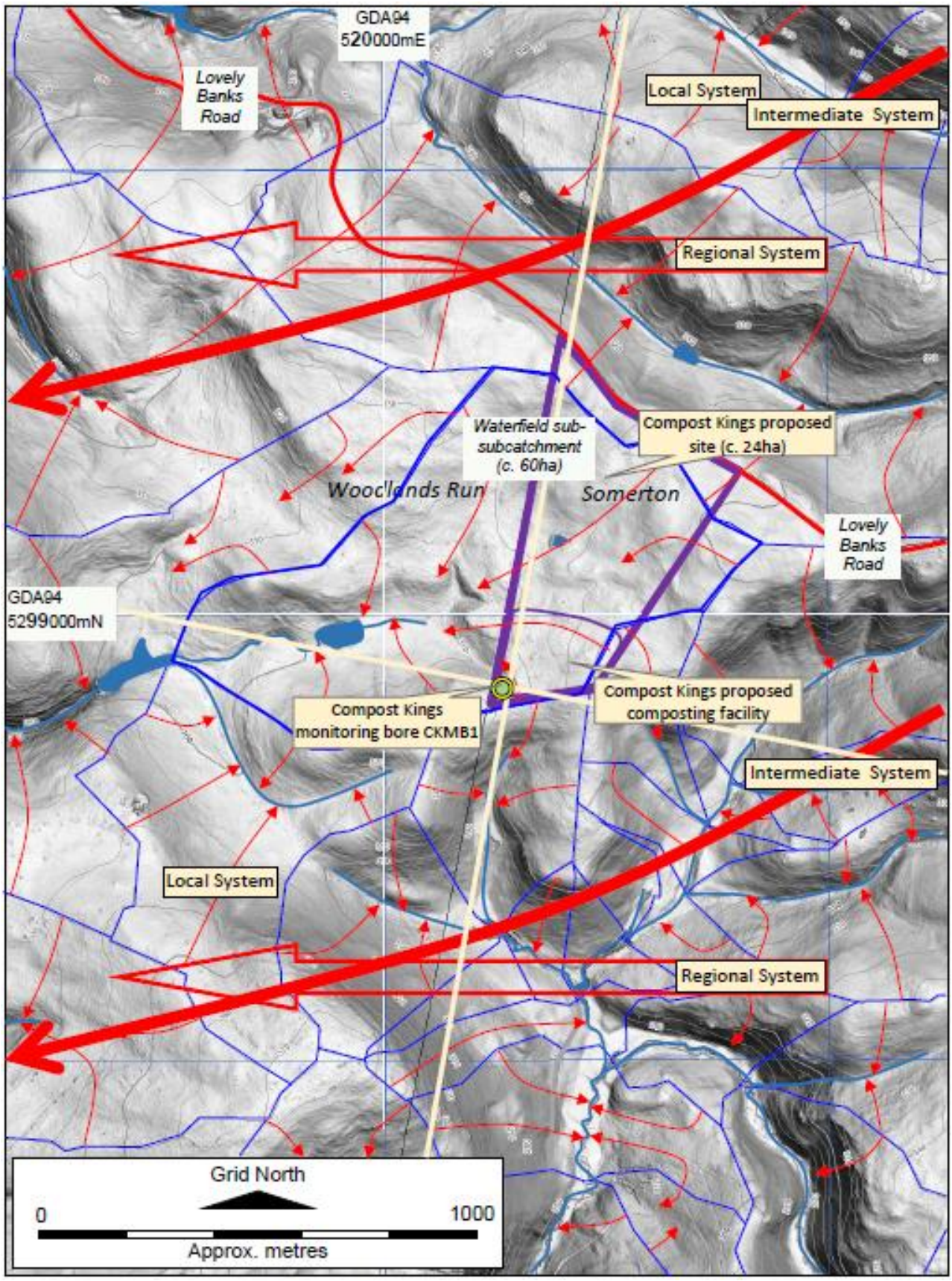


Figure 11: Inferred groundwater flow directions in vicinity of proposed composting facility (Figure 43 of EIS)

7.3.2 Management measures

Table 13 of the EIS outlines a number of proposed management measures for potential impacts to groundwater associated with the Activity:

- The construction measures for the mixing area, floor of facility, compost stockpiles and beneath windrows will remove topsoil, compact underlying subsoil with a vibrating roller to reduce permeability nominally to 1E-10m/s and replace topsoil with compacted road base.
- The construction measures for Dam 1 will remove topsoil, compact underlying subsoil with vibrating roller and line dams with suitable membrane (eg PVC, LDPE),
- Six-monthly groundwater monitoring will continue of bore CKMB1S and D (shown in Figure 10 above)
- Wastewater treatment from the site office will be in accordance with AS/NZS1547 *On-site domestic wastewater management*, and Code E23 *On-site Wastewater Management Code (or 2017 Director's Guidelines for On-site Wastewater Management Systems V2.0).*

7.3.3 Evaluation

Proposed construction measures to prevent infiltration to the water table are appropriate to minimise the risk of groundwater contamination. Condition **CG1,** and **OP3** specify design requirements of the composting pad and leachate management system to ensure permeability is appropriately low to prevent leachate infiltration to groundwater. Condition **OP4** requires Composting Pad and Leachate Dam Condition Reports are submitted to the Director for approval to demonstrate the condition of the composting pad and leachate dams is adequate. **CG2** restricts composting operations to the composting pad to ensure that leachate is contained and treated appropriately.

The proposed groundwater monitoring will detect any potential contamination from the composting operation and ensure that construction measures are effective, noting the facility is located within a recharge zone. Condition **M2** requires the proponent to sample the groundwater every 6 months to a year to identify if any infiltration is occurring. Condition **M3** details sample processing requirements and specifies that monitoring results must be included in the Annual Environment Review required by condition **G8**. Conditions **M4** and **M5** state groundwater monitoring bore installation and signage requirements. Based on proposed management measures and conditions imposed, the risk of the Activity causing environmental harm is considered low.

7.3.4 Conditions

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

CG1 Design of composting pad

OP3 Leachate management system

OP4 Composting Pad and Leachate Dam Condition Report

M2 Water monitoring requirements

M3 Samples and measurements for monitoring purposes

M4 Groundwater monitoring bore installation

M5 Signage of monitoring points

7.4 Natural values and weeds and diseases

7.4.1 Potential impacts

The operational footprint of the composting facility comprises 6.5 ha, located within the 22.6 ha Activity Area as shown in Figure 13. The Natural Values Assessment (NVA) conducted for the proposal (Appendix 5 of the EIS) found the Activity Area to be comprised of degraded grassland with a native component, including two threatened plant species. Compost facilities attract vertebrate and invertebrate pests, potentially acting as a food source and impacting native fauna populations. Vegetation clearance and disturbance during construction and operation has the potential to impact on nesting habitat for Tasmanian masked owls. Composting feedstock has the potential to introduce weeds and diseases if inappropriately managed.

Vegetation

The NVA conducted for the proposal found three vegetation communities in the 22.66 ha Activity Area (see Figure 13 below):

- DAS - *Eucalyptus amygdalina* forest and woodland on sandstone (1.29 ha)
- GCL - Lowland grassland complex (19.28 ha)
- GSL - Lowland grassy sedgeland (1.87 ha)

The DAS community is listed as threatened under the *Tasmanian Nature Conservation Act 2002* (NCA). This sits in the north of the Activity Area, outside the operational footprint. A cleared area (0.22 ha) in the south of the site was mapped as extra urban miscellaneous (FUM). The EIS states that the composting facility will affect 5.5ha of GCL and 1ha of GSL.

Threatened flora

The NVA conducted for the proposal recorded two threatened flora species listed under the *Threatened Species Protection Act 1995* (TSPA) within the operational footprint of composting facility (see Figure 13 below):

- *Leucopogon virgatus* var. *brevifolius* (shortleaf beardheath) (two)
- *Scleranthus fasciculatus* (spreading knawel) (four)

The proposal will directly impact these individuals through clearing and removal during construction of the operational area.

Additional specimens were found outside of the operational area, as shown in Figure 13 below. The proposed leachate irrigation detailed in section 7.2 of this report may impact threated flora if inappropriately applied, due to high levels of nutrients and other dissolved compounds which may be damaging to native vegetation.

Threatened fauna

Records exist within 5 km of the site for:

- *Aquila audax subsp. fleayi* (Tasmanian wedge-tailed eagle),
- *Tyto novaehollandiae subsp. Castanops* (Tasmanian masked owl),
- *Dasyurus maculatus* (spotted-tailed quoll), and
- *Sarcophilus harrisii* (Tasmanian devil)

Waste at the composting site may attract rodents or invertebrate pests, which may then be preyed on by these species. Increased numbers of both predators and scavengers to the compost facility may lead to increased risk of threatened fauna roadkill on nearby access roads, particularly at night. The traffic impact assessment indicates there will not be a 10% increase in night-time traffic. Single dose rat poisons (second-generation anticoagulant rodenticides) are known to cause secondary poisoning of predatory species and may present a risk if used for pest control.

The NVA that was conducted for the proposal records a single large tree that is suitable for Tasmanian masked owl nesting adjacent to the north-western boundary of the operational area (see Figure 13 below). Several *Eucalyptus ovata* trees are also present more than 200 m north of the operational area and these present potential *Lathamus discolor* (swift parrot) potential foraging habitat.

Weeds and diseases

Compost facilities present a high risk of introducing and spreading weeds to the surrounding land if not managed appropriately. Proposed feedstock includes green waste, which is likely to contain weeds, weed seeds or plant propagules. This can also present issues within the site if the organic waste has not been properly processed.

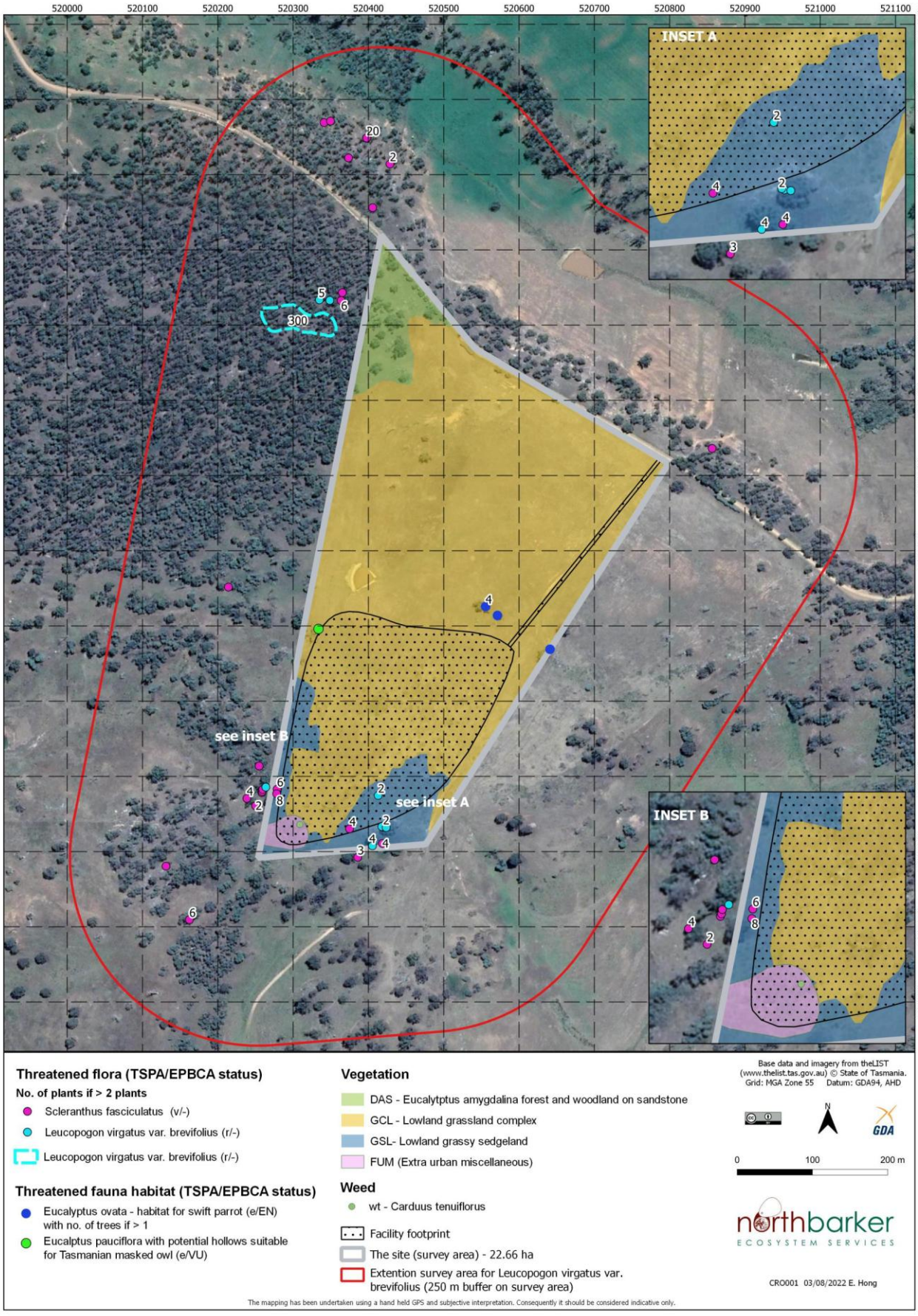


Figure 12: Natural values at the site (Figure 2 of Appendix 5 of the EIS)

7.4.2 Management measures proposed in EIS

The EIS outlines a number of proposed management measures for potential impacts to natural values associated with the Activity:

- The works area (including the access road) will be marked out in construction plans and on the ground, and works, vehicles and materials will be confined to the works area.
- The proponent will apply for a permit to take/relocate shortleaf beardheath and spreading knawel within the facility.
- To minimise impacts to shortleaf beardheath and spreading knawel outside the operational area but within the Activity Area:
    - An exclusion zone 15 m in radius will be created around each of two trees outside but near the southern boundary of the facility (see Figure 3 in Appendix 5 of the EIS), where small groups of shortleaf beardheath and spreading knawel occur. No development or ground disturbance will occur within the exclusion zones.
    - A 5 m radius exclusion zone (with the same development restrictions) will be created around small groups of shortleaf beardheath and spreading knawel near the western boundary of the facility (Figure 3 in in Appendix 5 of the EIS).
    - A drain will be installed around the outside base of the perimeter earthen wall of the facility to prevent damage to these two locations from surface drainage from the wall.
- Review whether the potential nesting tree for Tasmanian masked owl will be impacted by the proposed development. Where there is the potential for impacts, if it is, revise the operational area to create a 15 m exclusion zone around the potential nesting tree,
- Signage will be erected on Lovely Banks Road near the western and eastern extents of the Activity Area to reduce speed and raise awareness of drivers to native fauna crossing the road, and
- To manage pests:
    - Clean-up and storage of consumable wastes will be undertaken regularly before off-site removal,
    - Water will be prevented from pooling and stagnating,
    - Animals, insects and other carriers of pathogens will be prevented from accessing readily biodegradable materials through adequate storage and enclosure. Specifically, a suitable animal-proof fence will be built along the top of the earthen perimeter wall and the gate across the only entrance to the facility will be animal-proof, and locked at night and at all times the facility is not operating, and
    - The storage times of materials delivered to the mixing area will be minimised.
- To minimise the risk of weeds and plant diseases reporting to the finished product
    - All suppliers will be required to ensure wastes are free of weeds and plant diseases, and
    - Ideal composting conditions will be maintained (i.e. C/N ratio, temperature, moisture and aeration control of windrows).
    - Natural weedkiller will be applied to vegetated areas within the facility, including the earth walls.
    -

7.4.3 Public and agency comment

Conservation Assessments Section (CAS) at NRE Tas provided comment on natural values, which has been incorporated into the evaluation below.

7.4.4 Evaluation

Vegetation

No threatened vegetation communities exist within the operational area, and impacts are not anticipated. The proposed measures to confine the works area is supported.

Threatened flora

The NVA undertaken for the proposal indicates that several shortleaf beardheath and spreading knawel plants will be directly impacted. A permit to 'take' (destroy) these plants will be required under the TSPA. However, as surveys were conducted more than two years ago in 2021, there may have been changes to the flora species composition and extent of occurrence within the operational area. CAS advises that contemporary surveys will be required to inform the permit to take application. consistent with the *Guidelines for Natural Values Surveys - Terrestrial Development Proposals* (Natural and Cultural Heritage Division , 2015). **LO1** describes the legal requirements under the TSPA. Any permitting and associated survey requirements will be determined by CAS as the Department which administers the TSPA.

CAS supports the proponent's commitment to confine the works area to ensure there is no impact to threatened flora immediately outside of the operational footprint. Condition **OP8** restricts operations to the areas defined in the EIS and is considered appropriate to prevent additional impacts.

CAS recommended that leachate irrigation is managed appropriately, to ensure that threatened flora outside of the operational area and Activity Area are not adversely affected by exposure to leachate chemicals and nutrients. Leachate irrigation will occur outside of the Activity Area, however the Leachate Management Plan requires that it must be done by an environmentally acceptable manner under condition **OP5.**

Threatened fauna

CAS supports the findings of the NVA conducted for the proposal in relation to threatened fauna habitat, however the proposed management measure to create a 15 m exclusion zone around the single potential nesting tree (see Figure 13 below) is significantly less than the standard 150 m buffer recommended to prevent potential disturbance to nesting activity. CAS recommends further investigations to confirm whether the tree contains signs of nesting activity if it is not possible to establish a 150 m buffer. Therefore, condition **FF1** requires the proponent to do a survey for masked owl nests before construction commences within 150 m of the tree.

The composting facility is also likely to increase scavenging by native fauna at the site (including Tasmanian wedge-tailed eagles, Tasmanian masked owls, spotted-tailed quolls and Tasmanian devils) which in turn may lead to increased risk of roadkill on nearby access roads, particularly at night. Therefore, the proponent will be required to control pest animals to minimise scavenging, in addition to reducing potential roadkill risk. Proposed traffic management measures are appropriate and supported to minimise roadkill risk, and based on advice from CAS the proposal is unlikely to result in roadkill impacts.

CAS supports the proposed measures to manage impacts to threatened fauna attracted to the compost facility. Condition **FF2** requires an effective control program for pest animals, which will reduce potential roadkill impacts to threatened fauna attracted to the compost facility. The program must also address the potential for secondary poisoning of predatory and scavenging native species if any rodenticides are used. A summary of the program must be provided in the Annual Environmental Review required by condition **G9**.

Weeds and diseases

Green waste presents a high risk of importing weeds and diseases, and requiring suppliers to ensure green wastes are free of weeds and plant diseases is known to be logistically challenging for composting facilities. Condition **FF3** requires the proponent to control and prevent the spread of weeds within the facility. Proposed machinery washdown measures are appropriate to minimise spread of weeds within the Activity Area. The proposed measure to maintain ideal compost conditions is necessary to ensure pathogens and weed seeds through the pasteurisation process. Condition **OP7** requires effective management of compost, including regular testing for pasteurisation under the Australian Standard 4454 (AS 4454), which will demonstrate that processing has effectively occurred to prevent spread offsite in the final product.

7.4.5 Conditions

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

G9 Annual Environmental Review

FF1 *Tyto novaehollandiae* subsp. *castanops* (Tasmanian masked owl) pre-clearance survey

FF2 Pest control program

FF3 Weed management

OP7 Compost management and quality control

LO1 Threatened species requirements

8. Evaluation of other environmental issues

In addition to the key issues, the following environmental issues are considered relevant to the proposal and have been evaluated in this section:

1. Compost management
2. Dangerous goods and environmentally hazardous materials
3. Noise emissions
4. Waste management
5. Greenhouse gas emissions and climate change
6. Decommissioning and rehabilitation

8.1 Compost management

8.1.1 Potential impacts

Effective management of compost inputs and processing minimises the risk of offsite impacts, by creating a product suitable for safe application onto land and mitigating environmental issues such as odour (see section 7.1 of this report), or weeds (see section 7.4 of this report). Feedstock, or wastes received for composting, have the potential to significantly impact the composting process, and present varying risks. Proposed feedstock includes green wastes and untreated timber (which are considered lower risk than other feedstock) Class 1 and Class 2 biosolids, and aged cattle manure.

Biosolids is the term used to describe sewage sludge that has been sufficiently stabilised and can be beneficially used for its nutrient, soil conditioning, and/or energy qualities. As municipal wastewater comprises a range of domestic, commercial and industrial sources, various pathogenic organisms, and organic and inorganic contaminants may be found in biosolids. These constituents, if not appropriately monitored and managed, may pose a potential risk to humans, animals, plants, soil health and/or the environment.

Plastic contamination of feedstock and output material can also pose risks of harm to human health and the environment.

8.1.1 Management measures proposed in EIS

Table 16 of the EIS recommends the following measures and monitoring of raw materials and compost:

- All incoming waste will be monitored for weeds and foreign matter using visual inspection. Where required, material may be refused, or contaminants may be removed by hand, and suppliers notified.
- All incoming waste will be monitored quarterly for PFAS. Where required, supplier and regulators will be notified.
- All incoming biosolids waste will be monitored for odour, moisture content and pH. Where required, material may be refused and suppliers notified.
- Compost will be monitored daily for pH, moisture, temperature, potentially O_2 and CO_2. If non-compliant, the C:N ratio, watering and turning regime will be adjusted.
- Final compost product will be sampled and monitored as required by AS 4454 every 250 m^3 of final product for the first 6 months of operation and subsequently every 500 m^3 of final product. If non-compliant, the product will be resampled, and inputs and processing will be reviewed.

8.1.2 Public and agency comment and response

No comment received.

8.1.3 Evaluation

Managing physical contamination is more efficient when dealt with earlier in the composting process. The proposed monitoring and management for contaminants in incoming wastes is supported. Condition **OP6** specifies allowable wastes to be used as feedstock for the composting operation, as these wastes are expected to present a low risk of introducing physical contaminants.

The product testing and monitoring proposed in the EIS is supported. Monitoring required by **M6** is to be included in a Compost Management Plan, with the aim of demonstrating that the final products from the composting process, as classified under AS 4454-2012, are fit for purpose. AS 4454-2012 is a manufacturing standard that establishes minimum requirements for composts for sale in Australia. Testing against AS 4454-2012 provides information on the physical, biological and chemical properties of the final product. The reporting program required by the Compost Management Plan will provide evidence that the contaminant levels and properties of the final product are being managed effectively as part of the composting process and will inform management actions to prevent offsite impacts.

Condition **OP7** also specifies composting management requirements to ensure best practice measures are in place and minimise offsite impacts.

Where biosolids are received for composting, the *EPA Tasmanian Biosolids Guidelines* (the Biosolids Guidelines) will apply. The Biosolids Guidelines inform regulatory settings for biosolids re-use, including composted biosolid products to be generated by the proposed operation. Where biosolids are to be accepted as feedstock, application of the Biosolids Guidelines will ensure their environmentally sustainable and safe use, detailed in **OI1**. Condition **FF2** requires that livestock are fenced out of the operational area, consistent with requirements of the Biosolids Guidelines and other composting operations.

8.1.4 Conditions

OP6 Permitted feedstock.

OP7 Compost management

M6 Compost Management Plan

OI1 Tasmanian Biosolids Reuse Guidelines

8.2 Dangerous goods and environmentally hazardous materials

8.2.1 Potential impacts

Accumulation of waste materials, and spills of fuel or environmentally hazardous material have the potential to contaminate soil and water if not adequately contained. The proposed composting facility will use diesel to operate plant and equipment. Waste oil will also be generated from servicing equipment.

8.2.2 Management measures proposed in EIS

The proponent has committed to storing diesel fuel for plant and equipment in tanks on light vehicles which will be driven to each plant for refuelling as required. As the light vehicles will leave the facility each day, no diesel will be stored at the facility. Waste oil will also be collected by a mechanic and taken off site for recycling.

8.2.3 Public and agency comment

No comments were received.

8.2.4 Evaluation

Condition **H1** requires hazardous materials to be contained and managed to prevent contamination of soil, groundwater, waterways or any other medium, and condition **H2** requires spill kits to be kept in appropriate locations.

8.2.5 Conditions

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

H1 Handling of hazardous materials - mobile

H2 Spill kits

8.3 Noise emissions

8.3.1 Potential impacts

Vehicle and machinery use during construction and operation of the proposed composting facility has the potential to cause noise emissions.

Proposed noise generating equipment used during construction includes:

- 1 x D7 bulldozer
- 1 x 7t excavator
- 1 x 18t front end loader
- 1 x diesel-operated vibrating roller
- trucks delivering road base of the hardstand
- 1 x generator
- Light vehicles exit and entry

Proposed noise generating equipment used during operation includes:

- 1 x 7t excavator
- 1 x 18t wheel loader
- trucks delivering raw materials
- 1 x over-row compost windrow turner
- 1 x generator and high pressure washdown hose
- 2 x diesel pumps
- Light vehicles exit and entry
- Small chipper

8.3.2 Management measures proposed in EIS

Operating hours are proposed 0700-1700 with the first delivery of waste proposed at 0800.

8.3.1 Public and agency comment and responses

No comments were received.

8.3.2 Evaluation

Noise emissions during construction and operation are not expected to cause significant impacts on sensitive receptors, given the separation distances (1.27 km at the closest receptor). Condition **OP1** limits the operating hours of the Activity to 0700 hours to 1700 hours on weekdays as proposed which is expected to further minimise any risk of nuisance noise.

8.3.3 Conditions

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

OP1 Hours of operation

8.4 Waste management

8.4.1 Potential impacts

The EIS states that that most materials delivered to the facility will be transformed into compost, however small volumes of recyclable and nonrecyclable waste will be generated. These include oversize feedstock from compost screening, washdown solids and rejected raw materials such as plastic and other foreign materials.

8.4.2 Management measures proposed in EIS

The proponent has outlined the following management measures to minimise potential impacts from waste generated by the Activity:

- Oversize feedstock at the end of composting will be chipped smaller and returned to the mixing area to introduce micro-organisms. Oversize feedstock is expected to be less than 5% of composted material.
- Organic washdown solids will be collected and added to mixing stockpiles. Gravel solids from washdown and rumble grids will be temporarily stockpiled for recycling to internal access roads. Other non-usable solids from the washdown area will be temporarily stockpiled on site before off-site transport to an approved waste facility.
- Deliveries with unacceptably high levels of foreign materials will be rejected at entry. For other deliveries with acceptably low levels of extraneous waste, plastic and all other foreign material will be hand-picked out and held in on-site covered bins for off-site recycling.

8.4.3 Public and agency comment

No comments were received.

8.4.4 Evaluation

Proposed management measures are supported to minimise production of waste and potential compost contamination.

Condition **M1** requires a report to the Director detailing the quantity (in tonnes) of waste materials associated with the Activity is submitted for every financial year.

It is proposed that compost which does not meet pasteurisation standards of the AS 4454: 2012 will be reprocessed, however if it is disposed of to landfill condition **M1** requires this is reported.

8.4.5 Conditions

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

M1 Waste data reporting

8.5 Decommissioning and rehabilitation

8.5.1 Potential impacts

Temporary or permanent cessation of the composting operation has the potential to cause ongoing impacts to the environment if rehabilitation is not managed appropriately. Rehabilitation is necessary to ensure the long-term stability of the site and provide native flora and fauna habitat, and minimise the potential for establishment of weeds.

8.5.2 Management measures proposed in EIS

According to the EIS, on cessation of operations, the facility will be decommissioned in the following steps:

- Mixing of Dam 1 water (and if required, Dam 2 water) with imported water from other dams on 'Somerton', and emptying both dams via irrigation to surrounding paddocks,
- Filling-in of Dams 1 and 2 using material from the immediately-adjacent perimeter wall,
- Removal of all hardstand material and stockpiling it in a secure, bunded location on 'Somerton' until testing indicates it is suitable for re-use (e.g. internal vehicle accesses),
- Reinstatement of soil from the perimeter wall over the former hardstand area, and
- Removal of all infrastructure from the facility

8.5.3 Evaluation

The proposed decommissioning process and management measures are supported. Condition **DC3** requires the proponent to notify the Director in writing of the decision to temporary cease the Activity, and condition **DC1** requires notification in the case of permanent cessation of the Activity. Condition **DC2** requires the proponent to rehabilitate the Activity Area following permanent cessation of the Activity Area. The Activity will not be permitted to recommence after rehabilitation under condition **DC4**.

8.5.4 Conditions

DC1 Notification of cessation

DC2 Rehabilitation following cessation

DC3 Temporary suspension of activity

DC4 Activity to cease following decommissioning and rehabilitation

10. Report conclusions

This assessment has been based on the information provided by the proponent, Seaton Edward Clarence Waterfield, trading as Compost Kings Tasmania, in the permit application and the case for assessment (the EIS).

This report incorporates specialist advice provided by EPA scientific and regulatory staff, and NRE Tas.

It is concluded that:

1. The RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal; and
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. 10562 appended to this report are imposed and duly complied with.

11. Report approval

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

Amanda Locatelli

DIRECTOR, ENVIRONMENTAL ASSESSMENTS

Acting under delegation from the Board of the Environment Protection Authority

Date: 28 November 2025

12. References

Cromer, W. C. (2025). *Environmental Impact Statement - Compost Kings Proposed Composting Facility, Lovely Banks Road, Melton Mowbray, 12 February 2025, Revision 7.*

Environment Division. (2002). *Environmental Guidelines for the use of recycled water in Tasmania.* Hobart: Department of Primary Industries, Water and Environment.

Environment Division. (2004). *Environment Protection Policy (Air Quality).* Hobart: Department of Tourism. Arts and the Environment.

Environment Protection Authority Victoria . (2025, June 25). *Industrial composting of organic waste*. Retrieved from EPA Victoria: https://www.epa.vic.gov.au/industrial-composting-organic-waste

Environment Protection Authority Victoria. (2017). *Designing, constructing and operating composting facilities.* Carlton: Environment Protection Authority Victoria.

Natural and Cultural Heritage Division . (2015). *Guidelines for Natural Values Surveys - Terrestrial Development Proposals.* Hobart: Department of Primary Industries, Parks, Water and Environment .

Standards Australia. (2012). *Australian Standard - Compost, soil conditioners and mulches (AS 4454-2012).*

13. Appendices

Appendix 1 Summary of agency submissions

Appendix 2 Permit Conditions Environmental No. 10562

Appendix 1: Summary of agency submissions

Table 1: Matters raised by agencies during public consultation period

Agency	Comments and Issues	Further Information Requested	EPA Comments
Waste Levy and Data team, NRE Tasmania	• The proposed composting facility would be considered a Class A Resource Recovery Facility under the *Waste and Resource Recovery Act 2022* and will be responsible for meeting relevant reporting and compliance obligations under the legislation. • When making any changes to the operations, it is recommended that the proponent contact the Waste Levy and Data team (wastelevy@nre.tas.gov.au) to ensure their recording and reporting arrangements remain up to date, as the monthly waste data reported to NRE may change	No	The proponent has been advised of their obligations under the *Waste and Resource Recovery Act 2022*
Conservation Assessments (CAS), NRE Tasmania	• A permit to take will be required for two threatened flora species recorded within the development impact area; *Leucopogon virgatus* var. *brevifolius* (shortleaf beardheath) and *Scleranthus fasciculatus* (spreading knawel), both listed under the TSPA in accordance with the TSPA. The processing of permit applications may take up to four weeks. Information on applying for a permit, including application forms, can be found on the NRE Tas website: Permits for Threatened Species, Wildlife and/or Products of Wildlife (for Consultants &Development-related Activities) | Department of Natural Resources and Environment Tasmania. • CAS recommends that further investigations are undertaken to confirm whether the single large tree suitable for masked owl nesting shows signs of nesting activity, if not possible to establish 150 m boundary. • An increase in numbers of both predator and scavenging threatened fauna to the compost facility may lead to increased risk of roadkill on nearby access roads, particularly at night. CAS supports the recommendations in Section 5.4 - Scavenging of the Report to reduce potential roadkill impacts to threatened fauna attracted to the compost facility. • It is recommended that the proponent develops a plan to control the spread of weeds and ensure that weeds present at the impact site are properly managed. Information about controlling the introduction and spread of weeds and about developing a weed and disease management plan can be found in Section 4 of the NRE Tas Weed and Disease Planning and Hygiene Guidelines.	No	The proponent has been advised of their obligations under the *Threatened Species Protection Act 1995*. Measures to Masked owls, scavenging fauna, and weeds and diseases have been included in the PCE.

Appendix 2: Permit Conditions Environmental No. 10562

PERMIT PART B
PERMIT CONDITIONS - ENVIRONMENTAL No. 10562

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

Activity: **The operation of a compost facility (ACTIVITY TYPE: Resource Recovery)**
SOMERTON, LOVELY BANKS ROAD
MELTON MOWBRAY 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: **SOUTHERN MIDLANDS**
Permit Application Reference: **DA2500091**
EPA file reference: **262140**

Date conditions approved: 28 November 2025

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.

Table Of Contents

Attachments

Schedule 1: Definitions

In this Permit Part B:-

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.

Activity Area means the area to be used for the Activity when these conditions take effect, as depicted in Attachment 1.

Annual Exceedence Probability (AEP) means the probability that a given rainfall total accumulated over a given duration will be exceeded in any one year.

AS 4454 means the *Australian Standard - Compost, soil conditioners and mulches* (AS 4454-2012), dated 2012, by Standards Australia and includes any subsequent amendments and versions of this document.

Authorized Officer means an authorized officer under section 20 of EMPCA.

Best Practice Erosion and Sediment Control means the document with this title by the International Erosion Control Association, dated November 2008, and any amendment to or substitution of this document.

Composting means the process whereby organic materials are microbiologically transformed under controlled aerobic conditions to achieve pasteurization and a specified level of maturity.

Composting Pad means a defined area of demonstrated low-permeability land 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 delegate or person authorised in writing by the Director to exercise a power or function on the Director's behalf.

DRP means Decommissioning and Rehabilitation Plan.

EIS means the document titled *Environmental Impact Statement Proposed Composting Facility, Lovely Banks Road, Melton Mowbray,* prepared for Compost Kings Tasmania by William C. Cromer Pty. Ltd., 12 February 2025. Revision 7.

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 has the meanings ascribed to it 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.

EPA Board means the Board of the Environment Protection Authority established under section 13 of EMPCA and includes a delegate or person authorised in writing by the EPA Board to exercise a power or function on the EPA Board's behalf.

Feedstock the raw organic materials that are used as the input for the composting process.

Guidelines for Natural Values Surveys - Terrestrial Development Proposals means the documents titled *Guidelines for Natural Values Surveys - Terrestrial Development Proposals*, dated 2015, by Natural and Cultural Heritage Division, Department of Primary Industries, Parks, Water and Environment and includes subsequent versions of this document.

Leachate means any liquid that is contaminated with organic matter from the composting process.

Leachate Dam means any dam constructed within the Activity Area with the purpose of containing leachate generated by the Activity.

Non-Trivial Environmental Incidents means an incident requiring the person responsible to implement actions to control or respond to the incident to minimise environmental harm and/or nuisance.

Odour Management Plan means the document titled *Odour Management Plan, proposed composting facility, Lovely Banks Road, Melton Mowbray*, prepared for Compost Kings Tasmania by William C. Cromer Pty. Ltd., 12 February 2025, or any substitutions or amendments to this document, approved by the Director, by notice in writing.

Operational Area is an area within the Activity Are where operations will be restricted to minimise the footprint and limit additional impacts to threatened flora within the site.

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.

Pest Animals means any animal that by its presence or activity may cause environmental harm or nuisance.

Planning Authority means the Council(s) for the municipal area(s) in which the Activity Area is situated.

Pollutant has the meaning ascribed to it in section 3 of EMPCA.

Q20 Flood Level means the flood level of a 1 in 20 year or 5% AEP flood

Reporting Period means the financial year.

Stormwater means water runoff as a consequence of a rainfall event, whether surface flow, piped flow, or flow within conduits, including any contaminants collected by the water during its passage.

Suitably Qualified Person means a person approved in writing by the Director as having professional qualifications, training, skills and/or experience related to the nominated subject matter and who can give authoritative independent assessment, advice and analysis relative to the subject matter using the relevant protocols, standards, methods and/or literature.

Tasmanian Biosolids Reuse Guidelines means the document of this title published by the Environment Protection Authority in June 2020, and includes any subsequent versions of this document.

Threatened Species has the meaning ascribed in the *Threatened Species Protection Act 1995.*

Waste has the meaning ascribed to it in section 3 of EMPCA.

Weed means a plant species that has, or is likely to have, an adverse impact on the environment because of the introduction, spread or increase in population size of the species in an area; and includes a declared weed as defined in the *Biosecurity Act 2019* and subordinate regulations.

Schedule 2: Conditions

Maximum Quantities

Q1 Regulatory limits

1 The activity must not exceed the following limits :

1.1 10,000 tonnes per year of production of compost or mushroom substrate.

General

G1 Activity Area

The activity must be confined to the Activity Area.

G2 Access to and awareness of conditions and associated documents

A copy of these conditions and any associated documents referred to in these conditions must 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 within the Activity Area, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

G3 Incident response

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

G4 Proposed change to activity

1 The person responsible must notify the Director in writing prior to implementing any change to the activity authorised by this document that may cause or increase the emission of a pollutant or which may result in environmental harm or environmental nuisance (even temporarily). A change includes, but is not limited to, any of the following:

1.1 an increase in the discharge of a pollutant, or the location of its discharge.

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

1.3 any clearance of native vegetation or earthworks.

1.4 a change in the quantity or characteristics of materials used in carrying out the activity.

2 The notification must be in an approved form and include the following:

2.1 details of the proposed change;

2.2 an assessment of the environmental impacts that may result from the change;

2.3 any relevant approvals held by the person responsible; and

2.4 any advice from the relevant planning authority to the effect that approval is not required.

3 The person responsible must provide additional information as requested by an Authorized Officer.

4 The proposed change must not be implemented until the Director has confirmed in writing that they are satisfied that no other approval or variation of this document is required.

5 For the avoidance of doubt, a notification of a proposed change under this provision is not required if the proposed change is part of a referral to the EPA Board for assessment under sections 24, 25, 27 or 27AA of EMPCA.

G5 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 who will become the person responsible for the activity, before such cessation.

G6 Change of ownership

If the owner of the Activity Area 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 Activity Area, the person responsible must notify the Director in writing of the change or intended change of ownership.

G7 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 retained for a period of at least 3 years.

G8 Annual Environmental Review

1 Unless otherwise specified in writing by the Director, a publicly available Annual Environmental Review for the activity must be submitted to the Director each year within three months of the end of the reporting period. Without limitation, each Annual Environmental Review must include the following information:

1.1 a statement by the General Manager, Chief Executive Officer or equivalent for the activity acknowledging the contents of the Annual Environmental Review;

1.2 subject to the *Personal Information Protection Act 2004*, a list of all complaints received from the public during the reporting period concerning actual or potential environmental harm or environmental nuisance caused by the activity and a description of any actions taken as a result of those complaints;

1.3 details of environment-related procedural or process changes that have been implemented during the reporting period;

1.4 a summary of the amounts (tonnes or litres) of both solid and liquid wastes produced and treatment methods implemented during the reporting period. Initiatives or programs planned to avoid, minimise, re-use, or recycle such wastes over the next reporting period should be detailed;

1.5 details of all non-trivial environmental incidents and/or incidents of non compliance with these conditions that occurred during the reporting period, and any mitigative or preventative actions that have resulted from such incidents;

1.6 a summary of the monitoring data and record keeping required by these conditions. This information should be presented in graphical form where possible, including comparison with the results of at least the preceding reporting period. Special causes and system changes that have impacted on the parameters monitored must be noted. Explanation of significant deviations between actual results and any predictions made in previous reports must be provided;

1.7 identification of breaches of limits specified in these conditions and significant variations from predicted results contained in any relevant EIS or EMP, an explanation of why each identified breach of specified limits or variation from predictions occurred and details of the actions taken in response to each identified breach of limits or variance from predictions;

1.8 a list of any issues, not discussed elsewhere in the report, that must be addressed to improve compliance with these conditions, and the actions that are proposed to address any such issues;

1.9 a summary of fulfilment of environmental commitments made for the reporting period. This summary must include indication of results of the actions implemented and explanation of any failures to achieve such commitments; and

1.10 a summary of any community consultation and communication undertaken during the reporting period.

G9 Amendment of required plans and reports

1 The plans and reports required by these conditions must be amended to address any matter required by the Director, as advised by notice in writing.

2 Amended plans and reports must be resubmitted within the timeframe that the Director specifies.

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 Activity Area.

A2 Odour Management Plan

1 Unless otherwise approved by the Director in writing, activity must be managed in accordance with the Odour Management Plan.

2 Upon written request by the Director, the Odour Management Plan must be updated to reflect changes in operation and accurately represent the current operational conditions, including but not limited to:

2.1 all known potential odour sources,

2.2 factors that influence production of odour emissions from these sources, and

2.3 management measures to effectively reduce emissions.

3 Any updated Odour Management Plan requested by the Director in writing must be submitted to the Director for approval within the timeframe the Director specifies. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of this condition.

4 Notwithstanding the above, the person responsible may apply to the Director to vary or substitute the Odour Management Plan.

5 Any updated, varied or substituted Odour Management Plan approved by the Director via written notice, replaces any earlier approval with effect from the date specified in the notice.

A3 Odour inspections

1 Unless otherwise approved in writing by the Director, a daily odour inspection of the facility perimeter and internal processing areas must be undertaken to detect the presence and intensity of odours.

2 The results of each inspection, including odour intensity, wind direction, and any corrective actions taken, must be recorded and retained for a minimum of 12 months and made available to the EPA upon request.

3 A summary of daily odour inspections must be provided in the Annual Environmental Review.

A4 Covering of vehicles

Vehicles carrying loads containing material which may blow or spill must be equipped with effective control measure to prevent the escape of the materials from the vehicles when they leave the Activity Area or travel on public roads.

A5 Control of dust emissions

Dust emissions from within the Activity Area must be controlled to the extent necessary to prevent environmental nuisance beyond the boundary of the Activity Area.

Composting

CG1 Design of composting pad

1 The composting pad must have a minimum 2% drainage gradient, and direct all potentially contaminated runoff and leachate into a leachate management system.

2 The composting pad must be designed to provide a stable base allowing all-weather access by vehicles and machinery.

3 The sealing layer of the composting pad must be minimum of 300 mm thick compacted clay with a measured permeability of $K<1x10^{-9}$ m/s, or with minimum 95% Proctor compaction, or have equivalent performance.

4 The sealing layer must be covered with a suitable material for physical protection from composting activities, vehicle movements and removal (scraping) of compost mass during or after processing.

5 The composting pad must be located in a flood-free area above Q20 flood level.

CG2 Composting pad boundary requirements

1 Unless otherwise approved in writing by the Director

1.1 The person responsible must provide the Director with GPS coordinates and a digital shapefile defining the outer edge of the composting pad. The GPS coordinates and digital shape file must be generally consistent with the description of the hardstand in the EIS

1.2 The boundaries of the composting pad must be clearly marked (for example with fence posts, survey posts or similar) and evidence of this marking provided to the Director. The boundary marking required by this condition must be maintained for the duration of the Activity.

1.3 The person responsible must not receive any waste or feedstock for the Activity on the Activity Area until the requirements of this condition have been fulfilled.

2 Composting must not occur outside the approved composting pad.

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 Rehabilitation following cessation

1 Following permanent cessation of the activity, and unless otherwise approved in writing by the Director, the Activity Area 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 ongoing 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.

3 The person responsible may apply to the Director to vary or substitute the DRP. Any variation or substitution of the plan approved by the Director, by notice in writing, replaces the earlier approval with effect from the date specified in the notice.

DC3 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 the Activity Area must be managed and monitored by the person responsible for the activity to ensure that emissions from the Activity Area do not cause serious environmental harm, material environmental harm or environmental nuisance.

3 If required by the Director, a Care and Maintenance Plan for the activity must be submitted to the Director for approval, by a date specified in writing by the Director. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of this condition.

3.1 The plan must be prepared in accordance with any guidelines provided by the Director.

3.2 Once approved the person responsible must act in accordance with the approved Care and Maintenance Plan.

3.3 The person responsible may apply to the Director to vary or substitute the Care and Maintenance Plan. Any variation or substitution of the plan approved by the Director, by notice in writing, replaces the earlier approval with effect from the date specified in the notice.

4 Unless otherwise approved in writing by the Director, if the activity on the Activity Area has substantially ceased for 2 years, decommissioning of the activity and rehabilitation of the Activity Area must be carried out in accordance with the requirements of these conditions as if the activity has permanently ceased.

DC4 Activity to cease following decommissioning and rehabilitation

1 Following written notification by the Director confirming the completion of decommissioning of the Activity and rehabilitation of the Activity Area in accordance with these conditions:

1.1 the Activity must not recommence; and

1.2 the Person Responsible is not required to undertake monitoring, reporting and/or notification condition requirements relating to the activity, unless otherwise specified in writing by the Director.

Flora And Fauna

FF1 Tyto novaehollandiae subsp. castanops (Tasmanian masked owl) nest survey

1 Unless otherwise approved in writing by the Director, clearing or construction must not occur within 150 m of any potential Tasmanian masked owl nesting tree:

1.1 Until the results of a pre-clearance survey undertaken by a Suitably Qualified Person have been provided to the Director; and

1.2 Without the written approval of the Director.

2 The pre-clearance survey must be undertaken:

2.1 At least 30 days prior to construction and clearance occurring within 150 m of any potential Tasmanian masked owl nesting tree.

2.2 In accordance with the hierarchy of assessment methods described in Attachment 3.

3 Clearing or construction within 150 m of any potential Tasmanian masked owl nesting tree must occur as soon as reasonably practicable after written approval is given by the Director in accordance with this condition.

FF2 Pest control program

1 An effective control program to minimise and control disease vectors, such as pest animals must be implemented. The program must be designed to prevent roadkill and secondary poisoning of predatory and scavenging native species.

2 Livestock must be fenced out of the Operational Area.

3 A summary of the pest control program must be included in the Annual Environment Review.

FF3 Weed management

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

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 within the Activity Area, all reasonable measures must be implemented to prevent unauthorised discharge, emission or deposition of pollutants:

1.1 to soils within the boundary of the Activity Area 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 Activity Area.

2 Reasonable measures may include spill kits, spill trays/bunds or absorbent pads, and automatic cut-offs on any pumping equipment.

H2 Spill kits

Spill kits appropriate for the types and volumes of materials handled within the Activity Area must be kept in appropriate locations and maintained in a functional condition to assist with the containment of spilt environmentally hazardous materials.

Monitoring

M1 Waste data reporting

1 The person responsible must record the quantity (in tonnes) of waste produced associated with the Activity which is disposed of to landfill during each financial year.

2 The waste data reporting required by this condition must be included in the Annual Environment Review.

M2 Water monitoring requirements

1 Unless otherwise approved in writing by the Director;

1.1 Locations SW1 and SW2 as detailed in Attachment 1 must sampled in accordance with Attachment 2, Table 1 "Surface water monitoring";

1.2 Leachate dam and groundwater bores MB1D and MB1S as detailed in Attachment 1 must be sampled in accordance with Attachment 2, Table 2 "Groundwater and leachate dam monitoring".

2 The results of all monitoring must be included in the Annual Environment Review.

M3 Samples and measurements for monitoring purposes

1 Any sample or measurement required under these conditions must be taken and processed in accordance with the following:

1.1 sampling and measuring must be undertaken by a person with training, experience, and knowledge of the appropriate procedure;

1.2 the integrity of samples must be maintained prior to delivery to a testing facility;

1.3 sample analysis must be conducted by a testing facility accredited by the National Association of Testing Authorities (NATA), or a testing facility approved in writing by the Director, for the specified test;

1.4 details of methods employed in taking samples and measurements and results of sample analysis, and measurements must be retained for at least three (3) years after the date of collection; and

1.5 sampling and measurement equipment must be maintained and operated in accordance with manufacturer's specifications and records of maintenance must be retained for at least three (3) years.

M4 Groundwater monitoring bore installation

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

1.1 a description of the materials used for construction;

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

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

1.4 depth of gravel packing;

1.5 depth of the bentonite cap;

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

1.7 results of pump tests;

1.8 aquifer levels; and

1.9 a detailed geological log.

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

2.1 standing water level;

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

2.3 time of purging;

2.4 sampling time and number; and

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

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

M5 Signage of monitoring points

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

1.1 The location of monitoring points external to the Activity Area must be recorded with sufficient accuracy to ensure that monitoring can be undertaken at the same location repeatedly and in accordance with these conditions.

M6 Compost Management Plan

1 Unless otherwise approved by the Director in writing, a Compost Management Plan (CMP) must be submitted to the Director for approval. The CMP is to have the aim of demonstrating that any final product of the composting process, classified as Pastuerized Product, Composted Product and Mature Compost, is compliant under AS 4454.

1.1 The CMP must be consistent with Section 6 (Table 16) of the EIS and in accordance with any guidelines provided by the Director.

1.2 The CMP must include:

1.2.1 details of representative sampling of every 250 m^3 of final product during the first 6 months of operation;

1.2.2 details of representative sampling of every 500 m^3 of final product after the first 6 months of operation, or as approved by the Director in writing;

1.2.3 monitoring parameters as specified in AS 4454 Tables 3.1(A), 3.1(B), 3.1(C); and

1.2.4 a reporting program to regularly provide the Director with a summary of the monitoring results.

2 The CMP must be approved by the Director in writing. Once approved the person responsible must implement and act in accordance with the approved CMP.

3 The person responsible may apply to the Director to vary or substitute the CMP. Any variation or substitution of the plan approved by the Director, by notice in writing, replaces the earlier approval with effect from the date specified in the notice.

Operations

OP1 Hours of operation

1 Unless otherwise approved in writing by the Director, operations, including windrow turning and receipt of feedstock and delivery of products must not be undertaken outside the hours of 0700 hours to 1700 hours on weekdays,

2 Notwithstanding the above, activities must not be carried out on public holidays that are observed Statewide (Easter Tuesday excepted).

OP2 Site staff

While the Activity Area is open for receipt of feedstock, it must be attended by a person or persons whose duties must include supervising the management of waste and feedstock receival and ensuring compliance with these conditions.

OP3 Leachate management system

1 Unless otherwise approved by the Director in writing , leachate may only be discharged from the leachate dam or the Activity Area in accordance with an approved Leachate Management Plan.

2 Leachate dams and leachate intercept drains must be lined with a suitable material, such as compacted clay, with a permeability of less than 10-9 m/s.

3 Leachate dams must be periodically cleaned out to ensure that the dam design capacity is maintained.

4 Unless otherwise approved by the Director in writing, sludge removed from the leachate dam must either be:

4.1 Incorporated into compost rows; or

4.2 Removed to a facility authorised to receive the material for disposal.

5 A visible marker must be established to indicate the required freeboard to maintain capacity for a 5% annual exceedance probability (AEP) event.

OP4 Composting Pad and Leachate Dam Condition Report

1 Unless otherwise approved in writing by the Director, a Composting Pad and Leachate Dams Condition Report, prepared by a Suitably Qualified Person, must be submitted to the Director for approval:

1.1 within six (6) months of the date on which these conditions take effect; and

1.2 otherwise, on request of the Director.

2 Unless otherwise approved in writing by the Director the Composting Pad and Leachate Dams Condition Report must contain;

2.1 Details of the methodology used to inspect the composting pad and leachate dams;

2.2 Details of the condition and integrity of the composting pad, including a map delineating any areas that are unsuitable for composting such as;

2.2.1 areas of exposed bedrock;

2.2.2 areas of inadequate coverage or where hydraulic sealing may be compromised; and

2.2.3 areas with poor drainage.

2.3 Details of the condition of leachate dams.

2.4 On written request of the Director, a timetable and program of works to restore the integrity of the composting pad and repair any failures identified Composting Pad and Leachate Dams Condition Report.

3 Unless otherwise approved in writing by the Director, all repair and restoration works must be completed within six (6) months of the date on which the Director approves the approval of the Composting Pad and Leachate Dams Condition Report.

4 Unless otherwise specified by the Director in writing, the boundary of any areas of the composting pad identified as unsuitable must be identified and marked and composting activities excluded from them until the restoration and repair worked required by these conditions have been undertaken to the satisfaction of the Director and appropriate geotechnical properties verified

OP5 Leachate Management Plan

1 Unless otherwise approved by the Director in writing, within six (6) months of these conditions coming into effect, a Leachate Management Plan must be submitted to the Director for approval. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of this condition.

2 The plan is to have the aim of providing details of how any excess leachate generated at the activity that cannot be contained within site infrastructure will be disposed of off-site in an environmentally acceptable manner.

3 The plan must be prepared in accordance with any reasonable guidelines provided by the Director.

4 Unless otherwise approved by the Director in writing, the plan must include details of the following:

4.1 management measures that will be implemented to ensure the leachate dam will be maintained to ensure sufficient capacity to contain the potential leachate and stormwater runoff generated at the Activity, including rainfall directly on the leachate dam, with additional capacity to contain rainfall that would result from a 5% annual exceedance probability (AEP) event;

4.2 management measures for disposal of excess leachate that cannot be contained in the leachate dam, such as irrigation to land, relevant approvals and any contingency measures;

4.3 a table containing all of the major commitments made in the plan;

4.4 an implementation timetable for key aspects of the plan; and

4.5 a reporting program to regularly advise the Director of the results of the plan.

5 Once approved, the person responsible must implement, and act in accordance with, the approved plan.

6 The activity must not commence the receival of waste until the Leachate Management Plan has been approved in writing by the Director.

7 The person responsible may apply to the Director to vary or substitute the Leachate Management Plan. Any variation or substitution of the plan approved by the Director, by notice in writing, replaces the earlier approval with effect from the date specified in the notice.

OP6 Permitted feedstock

1 Unless otherwise approved in writing by the Director, only the following materials may be received, stored or used in composting on the Activity Area:

1.1 Green wastes, including garden organics, municipal sourced garden and landscapng supplies, crop residuals;

1.2 Class 1 and Class 2 biosolids;

1.3 Untreated timber, including sawdust, woodchips and pinebark; and

1.4 Aged cattle manure.

OP7 Compost management

1 Unless otherwise approved in writing by the Director:

1.1 Temperatures of windrows during the thermophilic stage of the composting operation must be monitored and recorded.

1.2 Final product must meet pasteurization requirements of AS 4454. Records demonstrating compliance must be made available on request to an Authorised Officer.

1.3 Final product must meet contaminant requirements of Tables 3.1(A) of AS 4454 . Records demonstrating compliance must be made available on request to an Authorised Officer.

1.4 Any medium or high-odour feedstock must be immediately mixed with high-carbon, low-odour feedstock and incorporated into the windrows on the day of arrival.

1.5 A reserve of high-carbon, low-odour feedstock equivalent to at least 10% of the facility's average weekly intake (by weight) must be maintained in designated stockpiles and be continuously available for mixing with or capping odorous windrows.

1.6 Machinery and an appropriately trained operator must be available to process compost as required to meet pasteurization requirements of AS 4454.

2 Records of windrow temperatures must be maintained for a period of 3 years.

OP8 Operational Area

1 Unless otherwise approved in writing by the Director, before construction commences, the person responsible must provide the Director with GPS coordinates and a digital shapefile defining the outer edge of the Operational Area of the Activity, shown as the composting facility in the EIS (including existing, future and ultimate development areas).

1.1 This requirement is not considered to be met until written acceptance of the provided GPS coordinates and shapefile of the Operational Area is issued by the Director.

2 Unless otherwise approved in writing by the Director clearing must be confined to the Operational Area as approved in writing under Condition OP8(1.1).

3 Unless otherwise approved in writing by the Director, within six (6) months of these conditions taking effect, the boundaries of the Operational Area as approved in writing under OP8(1.1) must be delineated with fence posts, star pickets, tree markers or similar. Boundary marking must be undertaken by a suitably qualified person.

3.1 Boundary marking required by this condition must be maintained.

Stormwater Management

SW1 Perimeter drains or bunds

1 Perimeter cut-off drains, or bunds, must be constructed at strategic locations within the Activity Area 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 within the Activity Area. 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 *Best Practice Erosion and Sediment Control* or similar.

2 Drains, or bunds, must have sufficient capacity to contain run-off that could reasonably be expected to arise during a 5% Annual Exceedence Probability (AEP) event. Maintenance activities must be undertaken regularly to ensure that this capacity does not diminish.

SW2 Contamination of stormwater

1 Unless otherwise approved by the Director, stormwater contaminated by leachate must be:

1.1 transferred to the leachate collection system;

1.2 used for irrigation in accordance with the requirements of these conditions; or

1.3 transported for disposal at a facility approved to receive the contaminated stormwater.

2 Records of irrigated leachate must be maintained for a period of 3 years.

SW3 Stormwater

1 Polluted stormwater that will be discharged from the Activity Area 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 Activity Area 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 Activity Area.

3 All reasonable measures must be implemented to ensure that solids entrained in stormwater are retained within the Activity Area. Such measures may include appropriately sized and maintained sediment settling ponds or detention basins.

SW4 Maintenance of settling ponds

Sediment settling ponds must be periodically cleaned out to ensure that the pond design capacity is maintained. Sediment removed during this cleaning must be securely deposited such that sediment will not be transported off the Activity Area by surface run-off.

Schedule 3: Information

Legal Obligations

LO1 Threatened species requirements

1 Threatened species in Tasmania are protected under the *Threatened Species Protection Act* 1995 (TSPA)

2 If any threatened species will be adversely impacted by the activity, this must be brought to the attention of the Department which administers the TSPA prior to such impact occurring.

LO2 Water Management Act 1999 requirements

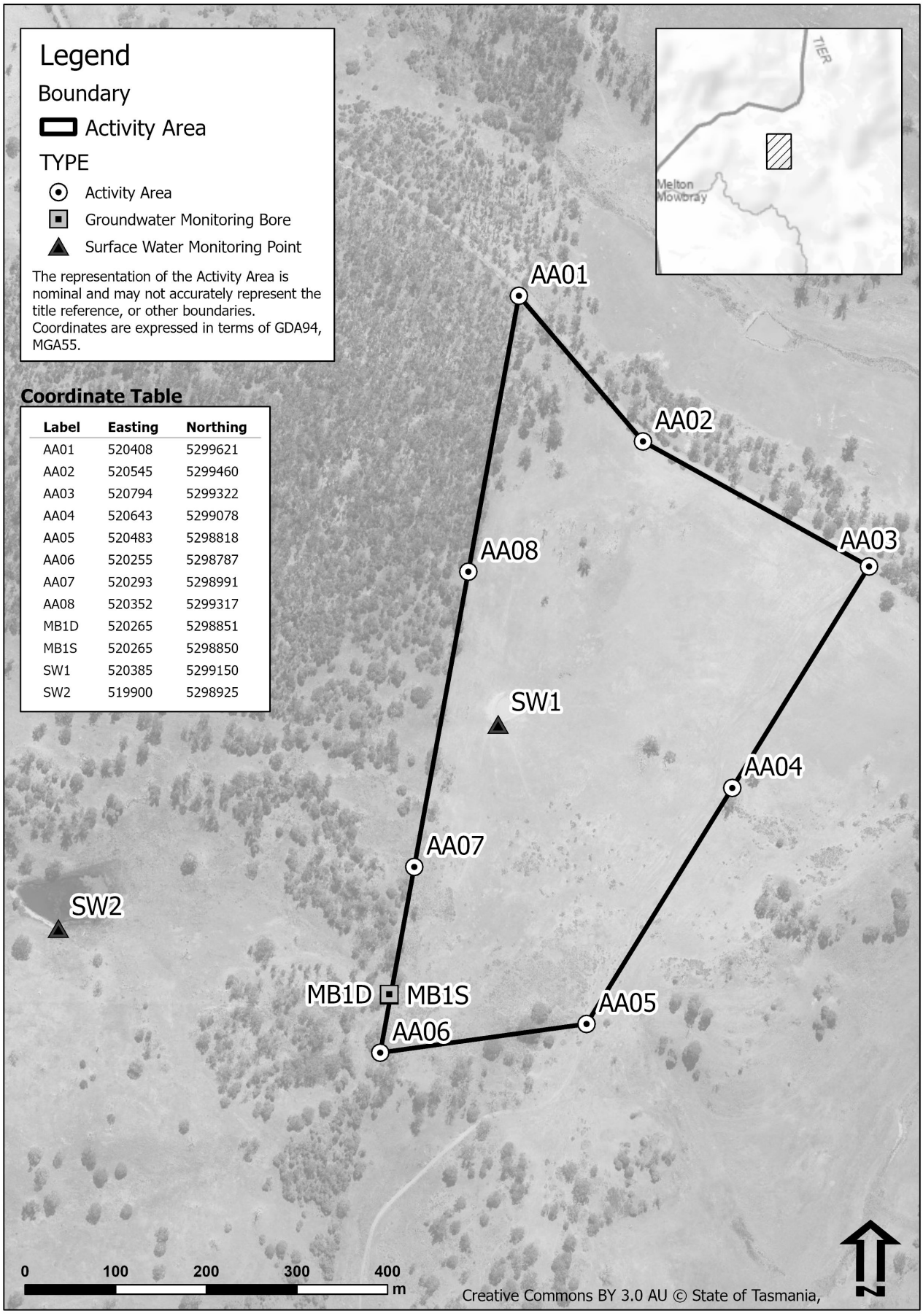
Dams, including levees and weirs, are regulated in Tasmania under the *Water Management Act 1999* and the Water Management (Safety of Dams) Regulations 2015, and must comply with reporting and obligations under that legislation.

Other Information

OI1 Tasmanian Biosolids Reuse Guidelines

Information to assist in managing environmental risks associated with biosolids reuse, along with other information related to environmental regulation is available in the Tasmanian Biosolids Reuse Guidelines.

Attachment 1: Activity Area



Coordinate Table

Label	Easting	Northing
AA01	520408	5299621
AA02	520545	5299460
AA03	520794	5299322
AA04	520643	5299078
AA05	520483	5298818
AA06	520255	5298787
AA07	520293	5298991
AA08	520352	5299317
MB1D	520265	5298851
MB1S	520265	5298850
SW1	520385	5299150
SW2	519900	5298925

Attachment 2: Monitoring tables

ATTACHMENT 2:

	MONITORING PARAMETERS	SAMPLING FREQUENCY
Group 1	pH	Six monthly
	Conductivity	Six monthly
	Total Dissolved Solids	Six monthly
	Total Suspended Solids	Six monthly
	Alkalinity (as $CaCO_3$)	Six monthly
	Total Nitrogen	Six monthly
	Ammonia	Six monthly
	Nitrate	Six monthly
	Nitrite	Six monthly
	Total phosphorous	Six monthly
	Dissolved reactive phosphorous	Six monthly
	Biochemical Oxygen Demand	Six monthly
	PFAS	Yearly or as required

Table 1: Surface Water Monitoring

	MONITORING PARAMETERS	SAMPLING FREQUENCY
	Ground Water Depth	
Group 1	pH	Six monthly
	Conductivity	Six monthly
	Total Dissolved Solids	Six monthly
	Redox potential (Eh)	Six monthly
	Total Nitrogen	Six monthly
	Ammonia	Six monthly
	Nitrate	Six monthly
	Total phosphorous	Six monthly
	Orthophosphate	Six monthly
	Dissolved Organic Carbon	Six monthly
	Biochemical Oxygen Demand	Six monthly
	Total CN (as CN)	Six monthly
Group 2	Total Iron and dissolved (Fe)	Six monthly
	Copper (Cu)	Six monthly
	Zinc (Zn)	Six monthly
	Chromium (Cr)	Six monthly
	Manganese (Mn)	Six monthly
	Nickel (Ni)	Six monthly
	Lead (Pb)	Six monthly
	Cadmium (Cd)	Six monthly
Other	PFAS	12 monthly or as required

Table 2: Groundwater and Leachate Dam Monitoring

Attachment 3: The hierarchy of assessment method for Tasmanian masked owl

Attachment 3: The hierarchy of assessment method for Tasmanian masked owl (*Tyto novaehollandiae subsp. castanops*)

The check of potential Tasmanian masked owl nest trees must be in accordance with the following, and any amendment to or substitution of this document as provided by the EPA:

Initial inspection: Inspect trees for any signs of nesting or roosting, such as regurgitated pellets, whitewash or feathers at the base of the tree within the tree's dripline. The absence of these signs does not rule out the presence of a nest, but the presence of these signs can strongly indicate nesting activity. Ground-based and aerial (drone) inspection methods may be used to determine whether a tree contains hollows with an entrance hole of greater than or equal to 15 cm, though ground based and aerial (drone) inspection methods are not suitable for conducting hollow inspections; and

Observation of hollows: Where a tree contains hollows with an entrance of greater than or equal to 15cm diameter, the hollow must be observed from sunset to several hours after sunset to detect Tasmanian masked owls exiting from hollows. A camera with night vision or heat detection capabilities must be used to record the hollow during the observations to minimise observer error; and

Hollow Inspection: Use an action camera on a pole to inspect inside the hollow to determine if the hollow has been used as either a nest or roost; and

Invasive Methods: If the above, less-invasive methods are inconclusive, trees should be tapped firmly using a hammer or heavy stick etc. to see if a Tasmanian masked owl is flushed from the hollow.

ENVIRONMENT PROTECTION AUTHORITY