# Document Control

| | |
|---|---|
| **Project Name** | EGSC Composting Facility |
| **Document Name** | GHG Emissions Assessment |

| Version No. | Date | Updated By (Name) | Reviewed By (name) | Comment/Key Changes |
|---|---|---|---|---|
| 1 | 25/11/2024 | Hayden Voss | Saeid Charani | Calculation sheet created |
| 2 | 9/01/2025 | Hayden Voss | Saeid Charani | Updated to consider Power Purchase Agreement (PPA) |
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# GHG Assessment - Compost Facility

| Emissions Summary | t CO2-e / year |
|---|---|
| **EGSC Compost Facility** | |
| Scope 1 - Direct GHG Emissions | 331 |
| Scope 1 - Composting (decomposition of waste) | 1,150 |
| Scope 2 - Indirect GHG Emissions | - |
| **Total** | **1,481** |

**Notes:**
- Emission factors sourced from National Greenhouse Authority (NGA) Emissions Factors 2024.
- East Gippsland Shire Council have an active Power Purchase Agreement (PPA), with 100% of purchased electricity sourced from renewable energy.
- Hours of operation per day provided by design team.
- Facility operates 7 day a week, 7am - 5pm.

**Scope 1: Direct Emissions**

| Emission Source | Fuel Type | Quantity | Fuel Efficiency | Hours of Operation per day | Days Per Year | Annual Operating Hrs | Total Fuel Use (kL) | Total Energy over lifetime (GJ) | Scope 1 Emission Factor (kgCO2-e/GJ) | Total Emissions (Scope 1) kg CO2-e | Total Emissions (Scope 1) t CO2-e | Comment/Assumptions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mobile Plant** | | | L/hr | | | | | | | | | |
| Front End Loader | Diesel (Transport) | 1 | 16.6 | 10 | 365 | 3,650 | 60.590 | 2,339 | 70.4 | 164,650 | 165 | Assume 1 loader onsite. Fuel Efficiency assumed as CAT 966M, Medium Loading, CAT Performance Handbook. Conservative asumption for operation hours/days. |
| Tractor/Windrow Turner | Diesel (Transport) | 1 | 16.6 | 10 | 365 | 3,650 | 60.590 | 2,339 | 70.4 | 164,650 | 165 | Assume 1 tractor operating daily. Fuel efficiency assumed as per Loader (conservative assumption). Conservative asumption for operation hours/days. |
| **Vehicles** | | | L/day | | | | | | | | | |
| Ute | Diesel (Transport) | 1 | 1.6 | - | 365 | - | 0.584 | 23 | 70.4 | 1,587 | 2 | Assume maximum of 20km/day and fuel efficiency 8L/100km, resulting in fuel usage of 1.6L/day. |
| **Total** | | | | | | | **122** | **4,700** | | **330,886** | **331** | |

**Scope 1: Direct Emissions - Composting (decomposition of waste)**

| Waste Type | Quantity (tpa) | Scope 1 Emission Factor (t CO2-e/t) | Total Emissions (Scope 1) t CO2-e | Comment |
|---|---|---|---|---|
| Combined Feedstock | 25000 | 0.046 | 1,150 | NGA Emission Factors 2024 includes single emission factor for compost. Not feedstock dependent. |
| **Total** | | | **1,150** | |

**Scope 2: Indirect Emissions**

| Emission Source | Fuel Type | Quantity | Power (kW) | Hrs of Operation per day | Days Per Year | Annual Operating Hrs | Annual Energy use (kWh) | Total Energy over lifetime (GJ) | Scope 2 Emission Factor (kgCO2-e/kWh) | Total Emissions (Scope 2) kg CO2-e | Total Emissions (Scope 2) t CO2-e | Comment/Assumptions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Equipment** | | | | | | | | | | | | |
| Electrical Shredder | Renewable | 1 | 200 | 2.5 | 260 | 650 | 130,000 | 468 | 0 | - | - | Assumed to operate 25% of day, 5 days per week. Electricity emissions factor is assumed zero due to PPA. |
| CASP Blower Unit | Renewable | 1 | 60 | 10 | 365 | 3,650 | 219,000 | 788 | 0 | - | - | Assume to 10 hours per day, 7 days per week. Electricity emissions factor is assumed zero due to PPA. |
| Screen Unit | Renewable | 1 | 22 | 2.5 | 260 | 650 | 14,300 | 51 | 0 | - | - | Assumed to operate 25% of day, 5 days per week. Electricity emissions factor is assumed zero due to PPA. |
| Water Pumps | Renewable | 4 | 4 | 5 | 365 | 1,825 | 29,200 | 105 | 0 | - | - | Assumed to operate 50% of day, 7 days per week. |
| Office Load | Renewable | 1 | 35 | 10 | 365 | 3,650 | 127,750 | 460 | 0 | - | - | 7am - 5pm, 7 days a week. Electricity emissions factor is assumed zero due to |
| Lighting and Distribution | Renewable | 1 | 55 | 10 | 365 | 3,650 | 200,750 | 723 | 0 | - | - | Assumed 10 hours per day, 7 days per week. Electricity emissions factor is assumed zero due to PPA. |
| **Total** | | | | | | | **721,000** | **2,596** | | **-** | **-** | |

# GHG Assessment - Landfill Comparison

| Emissions Summary | t CO2-e |
|---|---|
| Composting | 1,150 |
| Landfilling | 41,950 |
| **Emissions Savings** | **40,800** |

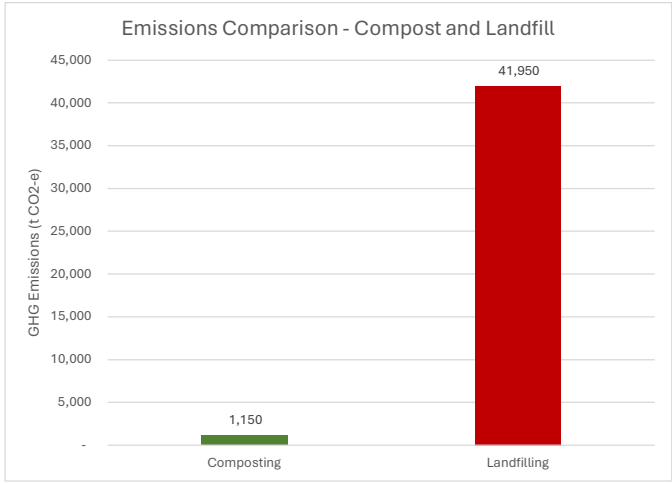
**Notes:**
- Emission factors sourced from National Greenhouse Authority (NGA) Emissions Factors 2024.
- Comparison only assesses GHG emissions related to waste decomposition.

**Scope 1: Direct Emissions - Composting (decomposition of waste)**

| Waste Type | Quantity (tpa) | Emission Factor (Scope 1) | Unit | Total Emissions (Scope 1) t CO2-e | Comment |
|---|---|---|---|---|---|
| Combined Feedstock | 25000 | 0.046 | t CO2-e/t | 1150 | NGA Emission Factors 2024 includes single emission factor for compost. Not feedstock dependent. |
| **Total** | | | | **1150** | |

**Emissions Comparison - Landfilling (decomposition of waste)**

| Waste Type | Quantity (tpa) | Emission Factor (Scope 3) | Unit | Total Emissions (Scope 3) t CO2-e | Comment |
|---|---|---|---|---|---|
| FOGO | 9,000 | 1.65 | t CO2-e/t | 14,850 | Emission factor based on assumption of 90% GO, 10% FO in FOGO feedstock stream. |
| GO | 13,000 | 1.6 | t CO2-e/t | 20,800 | NGA Emission Factors 2024 includes emission factors for |
| FO | 3,000 | 2.1 | t CO2-e/t | 6,300 | |
| **Total** | | | | **41,950** | |



# Emissions Factors

**Source:** Australian National Greenhouse Accounts Factors (Department of Climate Change, Energy, the Environment and Water, 2024)

*Table 1 Indirect (Scope 2 and Scope 3) emissions from consumption of purchased electricity from a grid*

| State, Territory or grid description | Scope 2 Emission Factors (kg $CO_2$-e/kWh) | Scope 3 Emission Factors (kg $CO_2$-e/kWh) |
|---|---|---|
| New South Wales and Australian Capital Territory | 0.66 | 0.04 |
| Victoria | 0.77 | 0.09 |
| Queensland | 0.71 | 0.1 |
| South Australia | 0.23 | 0.05 |
| Western Australia - South West Interconnected System (SWIS) | 0.51 | 0.06 |
| Western Australia - North Western Interconnected System (NWIS) | 0.61 | 0.09 |
| Tasmania | 0.15 | 0.03 |
| Northern territory - Darwin Katherine Interconnected System (DKIS) | 0.56 | 0.07 |
| National | 0.63 | 0.07 |

*Table 9 Direct (scope 1) and indirect (scope 3) emission factors for the consumption of transport fuels in different transport equipment*

| Transport type | Fuel combusted | Energy Content factor (GJ per unit of fuel) | Scope 1 Emission Factor (kg $CO_2$-e/GJ) $CO_2$ | Scope 1 Emission Factor (kg $CO_2$-e/GJ) $CH_4$ | Scope 1 Emission Factor (kg $CO_2$-e/GJ) $N_2O$ | Scope 1 Emission Factor (kg $CO_2$-e/GJ) Combined gases | Scope 3 Emission Factor (kg $CO_2$-e /GJ) |
|---|---|---|---|---|---|---|---|
| Cars and light commercial vehicles | Gasoline | 34.2 | 67.4 | 0.02* | 0.2* | 67.62 | 17.2 |
| Cars and light commercial vehicles | Diesel oil | 38.6 | 69.9 | 0.01* | 0.5* | 70.41 | 17.3 |
| Cars and light commercial vehicles | Liquefied petroleum gas (LPG) | 26.2 | 60.2 | 0.5* | 0.3* | 61 | 20.2 |
| Cars and light commercial vehicles | Fuel oil | 39.7 | 73.6 | 0.08 | 0.5 | 74.18 | 18 |
| Cars and light commercial vehicles | Ethanol | 23.4 | 0 | 0.2* | 0.2* | 0.4 | NE |
| Cars and light commercial vehicles | Biodiesel | 34.6 | 0 | 0.8 | 1.7 | 2.5 | NE |
| Cars and light commercial vehicles | Renewable diesel | 38.6 | 0 | 0.01* | 0.5* | 0.51 | NE |
| Cars and light commercial vehicles | Other biofuels | 23.4 | 0 | 0.8 | 1.7 | 2.5 | NE |
| Light duty vehicles | Compressed natural gas | 0.0393 GJ/$m^3$ | 51.4 | 7.3 | 0.3 | 59 | 18 |
| Light duty vehicles | Liquefied natural gas | 25.3 | 51.4 | 7.3 | 0.3 | 59 | 18 |
| Heavy duty vehicles | Compressed natural gas | 0.0393 GJ/$m^3$ | 51.4 | 2.8 | 0.3 | 54.5 | 18 |
| Heavy duty vehicles | Liquefied natural gas | 25.3 | 51.4 | 2.8 | 0.3 | 54.5 | 18 |
| Heavy duty vehicles | Diesel oil - Euro iv or higher | 38.6 | 69.9 | 0.07 | 0.4 | 70.37 | 17.3 |
| Heavy duty vehicles | Diesel oil - Euro iii | 38.6 | 69.9 | 0.1 | 0.4 | 70.4 | 17.3 |
| Heavy duty vehicles | Diesel oil - Euro i | 38.6 | 69.9 | 0.2 | 0.4 | 70.5 | 17.3 |
| Heavy duty vehicles | Renewable diesel – Euro iv or higher | 38.6 | 0 | 0.07 | 0.4 | 0.47 | NE |
| Heavy duty vehicles | Renewable diesel – Euro iii | 38.6 | 0 | 0.1 | 0.4 | 0.5 | NE |
| Heavy duty vehicles | Renewable diesel – Euro i | 38.6 | 0 | 0.2 | 0.4 | 0.6 | NE |
| Aviation | Gasoline for use as fuel in an aircraft | 33.1 | 67 | 0.06 | 0.6 | 67.66 | 18 |
| Aviation | Kerosene for use as fuel in an aircraft | 36.8 | 69.6 | 0.01 | 0.6 | 70.21 | 18 |

*Table 15 Waste mix methane conversion factors and emission factors*

| Waste types | Scope 3 emission factor (t $CO_2$-e/t) | Volume to mass conversion factor (t/$m^3$) |
|---|---|---|
| Food | 2.1 | 0.5 |
| Paper and cardboard | 3.3 | 0.09 |
| Garden and green | 1.6 | 0.24 |
| Wood | 0.7 | 0.15 |
| Textiles | 2 | 0.14 |
| Sludge | 0.4 | 0.72 |
| Nappies | 2 | 0.39 |
| Rubber and leather | 3.3 | 0.14 |
| Inert waste (including concrete/metal/plastics/glass) | - | 0.42 |

*Table 19 Direct emission factors (scope 1) for biological treatment of waste*

| Waste treatment type | Scope 1 emission factors (t $CO_2$-e/t) |
|---|---|
| Composting | 0.046 |
| Anaerobic digestion | 0.028 |

East Gippsland Shire Council

# Fire Risk Management and Monitoring Plan (FRMMP)

Proposed Bairnsdale Composting Facility

200 Johnstons Road, Forge Creek

**October 2025**

**Version 2.0 (Final)**

**IMPORTANT:**

Ensure you refresh this document as your operation changes. Regularly consult EPA Victoria's website to ensure this document is reviewed and up to date to the legal requirements.

CRA
CIRCULAR RESOURCES AUSTRALIA

**Disclaimer:** This document has been prepared for East Gippsland Shire Council by Circular Resources Australia (CRA) for the purpose of providing guidance on how to manage the risks of fire relating to the operation of the proposed Bairnsdale Composting Facility. Information has been guided by EPA Publications 1322.9, "Guidelines" *Licence Management*, but also rely upon a range of publications reflecting the changes in the EP Act 2017, including CRWM management.

CRA cannot be held liable for information not available, withheld or not supplied that may influence the assessment. This assessment and recommendations have been made based on CRA's interpretation of Victoria's *Environment Protection Act* 2017 and associated legislation and other EPA publications.

# Table of Contents

## Table of Figures

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## Glossary / Abbreviations

This document uses a range of terminology that may not be immediately known to all who read it. The following list of abbreviations and terminologies should be consulted if unsure of its meaning.

| Term | Description |
|---|---|
| CFA | Country Fire Authority |
| DG | Dangerous Goods |
| ECO | Emergency Control Organisation |
| EP Act | Environment Protection Act 2017 |
| EPA | Environmental Protection Authority of Victoria |
| ERA | Environmental Risk Assessment |
| ERMMP | Environmental Risk Monitoring Management Plan |
| Firefighting water | Water generated from firefighting activities (often contaminated) |
| FRV | Fire Rescue Victoria |
| FRA | Fire Risk Assessment |
| FRMMP | Fire Risk Management and Monitoring Plan |
| GED | General Environmental Duty |
| Groundwater | Water beneath the earth's surface (not drainage) |
| IW | Industrial Waste |
| JSEA | Job Safety Environmental Analysis |
| OHS | Occupational Health and Safety |
| PPE | Personal Protection Equipment |
| PW | Priority Waste |
| RPW | Reportable Priority Waste |
| SDS | Safety Data Sheet (sometimes referred to as an MSDS) |
| Sensitive Receptor | Residential dwelling, school, hospital |
| SMP | Stockpile Management Plan |
| SOP | Standard Operating Procedure |
| Stormwater | Surface water from rain (typical, uncontaminated drain contents) |
| SWMS | Safe Work Method Statement |
| Trade Waste | System allowing permitted discharge to the town sewer |
| WEMP | Workplace Emergency Management Plan |

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Management take responsibility for the accuracy of all documentation and will take reasonably practicable approaches to update and implement plans as required.

**This document is part of a wider fire management system and should be read in conjunction with the site fire risk assessment and other associated documents.**

## Document revision

Changes to this document are to be recorded here to ensure all changes are accurately captured and demonstrate the continual improvement of systems on site.

Amendment Register:

| Version Number | Approval Date | Approved by | Amendment |
|---|---|---|---|
| 1.0 | March 2024 | Allan Cummins | Draft submitted for client to review |
| 1.1 | 20 July 2024 | Allan Cummins | Include updated site plans and detail adjustments |
| 1.1 | 21 November 2024 | Milena Beames | Finalise document at request of Client |
| 2.0 | 31 October 2025 | Emily McAsey | Updated site plans included and minor changes to suit |

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# 1. Introduction

This Fire Risk Management and Monitoring Plan (FRMMP) has been prepared for East Gippsland Shire Council (EGSC), to identify and manage the potential for fire, including impacts associated with the proposed operation of a composting facility.

The East Gippsland Shire Council (ESCG) is proposing to construct a composting facility to compost up to 25,000 tonnes per annum (tpa) of both green waste and FOGO waste in support of legislation changes requiring Local Government Authorities to provide food organics services by 2030. As a key requirement to the State's environmental regulator, the risk and control of risks around fire are critical to ensure on-going compliance and prevent harm to human health and the environment.

The FRMMP covers the following areas;

- Site details;
- Fire Risk;
- Fire preparedness
- Fire prevention
- Firefighting
- Environmental protections
- Duties to notify; and,
- Clean-up
- Monitoring, recording and reviewing.

Meeting the list of obligations outlined within this document will help the risk of fire and the hazardous impacts of fire, including to that of harm to human health and the environment.

This document is part of a greater fire risk reduction program and is informed by the fire risk assessment for the activities proposed for the site.

This fire risk management and monitoring plan has been developed in advance of the finalisation of the site layout, operating model (managed by Council or contracted out), and prior to specifics of machinery/equipment to be used on site has been finalised.

However, this document will inform the management, employees and contractors working at the site on the expectations around fire risk management and how compliance to the requirements of both this document and the law will be completed.

East Gippsland Shire Council will develop systems and processes on site to ensure the site operation runs efficiently and in line with environmental laws reduce fire risks on site. Council recognises that both the training of staff and the ongoing maintenance of equipment at the site are critical actions to ensure the operation abides by the General Environmental Duty (GED) administered by the Victorian EPA.

The above considerations listed above are addressed in this FRMMP and include monitoring suggestions to be implemented.

Monitoring systems are critical in ensuring the risks of fire on site are reduced. The monitoring systems have been suggested based on fire risks identified in the FRA and are designed to prevent the risks reaching a point where they become an incident.

The fire risk assessment will directly inform this FRMMP. Should any activity on site change, the risk of fire must be reassessed and this document updated (if required).

It is recommended upon the conclusion of development of the facility, this document be read, reviewed and updated accordingly to capture the final fit out. This should be an ongoing review to ensure that the sites activities are always monitored to minimise the risk of harm to the environment as activities change or as new activities are introduced.

This document should be made available to all relevant members of staff. Additionally, suggestions for improvement or updating of processes from staff should be sought and considered if they can provide a practical and workable solution that results in greater protection of the environment or offer a reduction in harm to human health from the processes on site.

EGSC understands the value of this FRMMP will be greatly enhanced with the development of procedures and training for staff and applicable contractors on site.

This FRMMP is a working document, and the best care and attention has been provided for its creation.

The document will require regular review and updating to remain an accurate reflection of operations conducted on site.

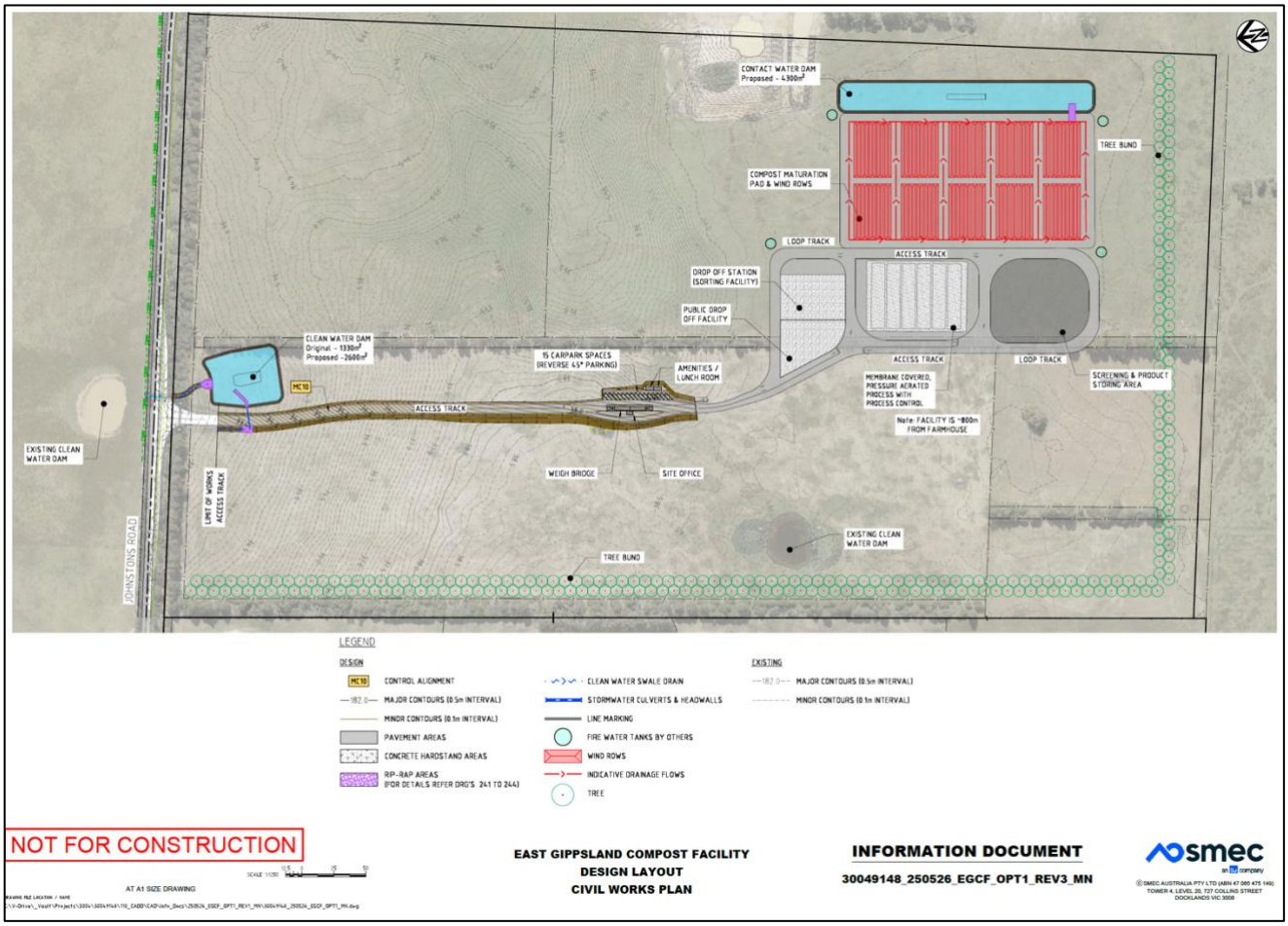



*Figure 1: The finalised site plan, (Source: East Gippsland Shire Council plans, completed by SMEC)*

Authority

Site / Operations Manager:

I have reviewed this FRMMP with the project staff and am satisfied that the hazards associated with the operational activities conducted on site have been identified and that adequate controls have been proposed to enable the works to be undertaken safely.

Name: _____

Signed: _____

Date: _____

Director:

I have reviewed this FRMMP with the project staff and am satisfied that the hazards associated with the operational activities conducted on site have been identified and that adequate controls have been proposed to enable the works to be undertaken safely.

Name: _____

Signed: _____

Date: _____

## 2. Aim

This document outlines the way in which EGSC will reduce and manage the risk of fire occurring on site at its proposed compost site located at 200 Johnstons Road, Forge Creek.

The aim of this FRMMP is to provide the management of the composting facility a tool in developing fire avoidance strategies, using these strategies to assist in procedure development for the site.

The aim of the FRMMP is to:

- Provide an fire prevention and management framework for the site;
- Provide a dynamic working document that can be used and referenced by all levels of staff;
- Reduce the operations impact on the environment by identifying and mitigating fire risks;
- Clearly describe duties to notify authorities of particular events;
- Understand disposal pathways of wastes generated from a fire on site ensuring lawful disposal of all materials;
- Facilitate the implementation of further fire prevention and management practices at the site;
- Provide a framework for ongoing review and continual improvement of fire prevention and management practices at the site.

Note: This plan does not contain procedures, registers or forms in regard to its operation, however the plan does layout what is required for the sites responsibilities, on which the relevant documents are produced.

The following list covers the key areas of the FRMMP;

- Zoning and overlays;
- Sensitive receptors;
- Topography of the area;
- Climate of the area;
- Firefighting wastes generated;
- Risk assessment;
- Duties to notify;
- Control and monitoring; and
- Review.

## 3. Site Details

The proposed composting site is located at 200 Johnstons Road, Forge Creek. It is located in a Farming zone (figure below). The parcel of land is part of a wider, Council owned property on which is shared with the Bairnsdale Regional Landfill. The proposed site is currently empty (greenfield).

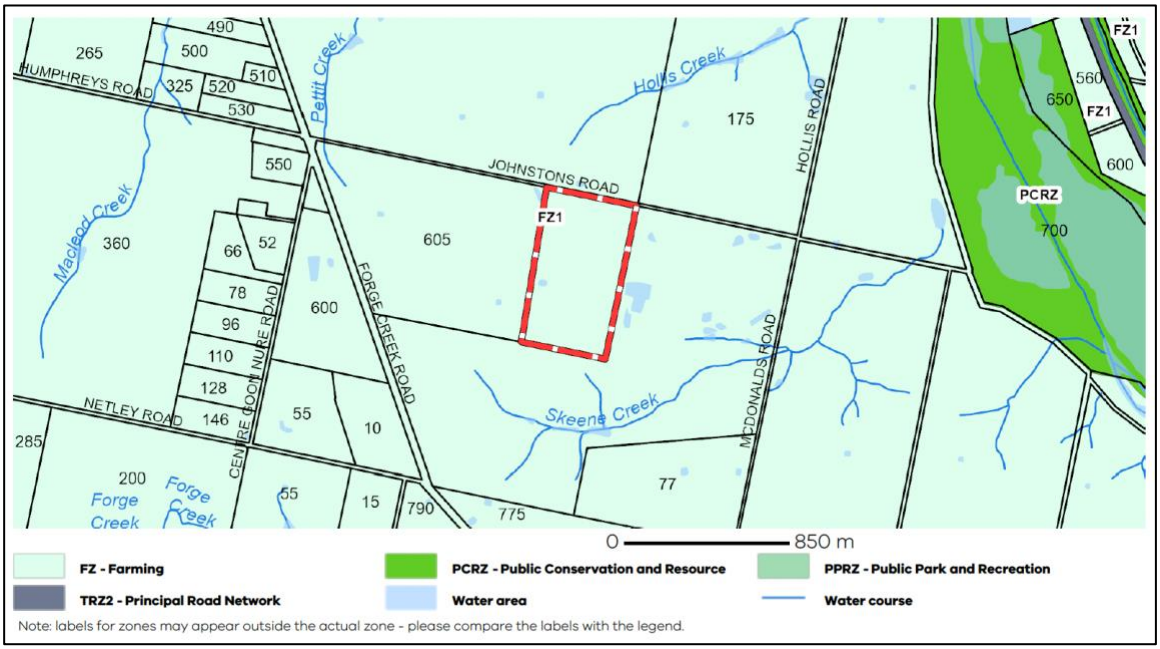



*Figure 2: Site map showing site boundaries in red and white, and surrounding, farm zoned areas. (Image sourced from www.planning.vic.gov.au at 25 March 2024 06:54 PM).*

A preliminary site plan has been included below:

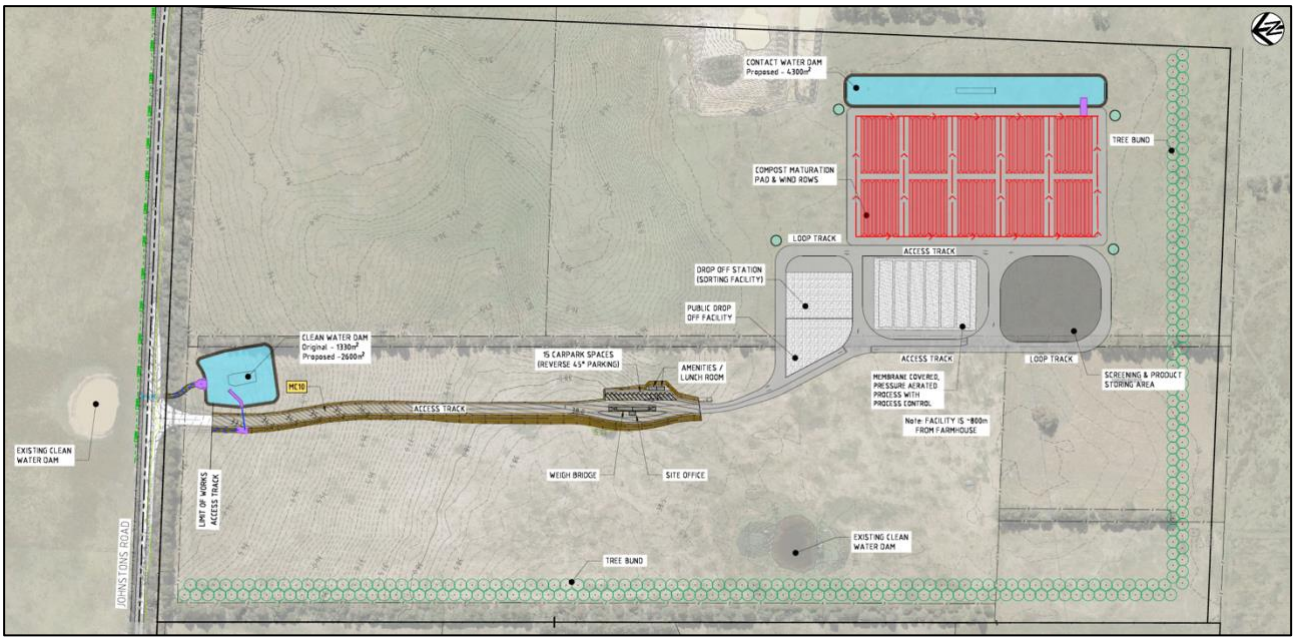



*Figure 3: Finalised site plan for the facility (Source: East Gippsland Shire Council plans, completed by SMEC)*

## Key features

The site has the following (proposed) key featues:

- Site office (and weighbridge);
- Vehicle parking areas;
- Drop-off station / sorting facility;
- Covered aeration system (compost pasteurisation pad);
- Compost maturation pad (open air windrows);
- Screening and stockpile storage area;
- Contact water dam (draining from maturation pad);
- Clean water dam (existing);
- Clean water dam (proposed);
- Main drainage culvert running along boundary (North to South);
- Fire fighting water tanks for sprinklers;
- Hardstand driveway;
- Mobile plant and equipment (excavator(s), wheel loader(s), windrow turner, screen(s)).

## Neighbouring land uses

The site neighbours include:

**North** (over Johnstons Road): Farmland (pastures)

**South:** Farmland (pastures), Skeene Creek and farm dams (500m – 550m)

**East:** Farmland (pastures), Farmhouse (600m – 650m)

**West:** Grassland, Bairnsdale Regional Landfill (280m – 300m)

## Zoning and overlays

The site is located 200 Johnstons Road, Forge Creek with the main access available from Johnstons Road.

The site is located within a Farming Zone (FZ) which is appropriate for this type of activity.

The site is located within a designated bushfire prone area, however the area has not seen a bushfire since 1978 (See Figure 5)

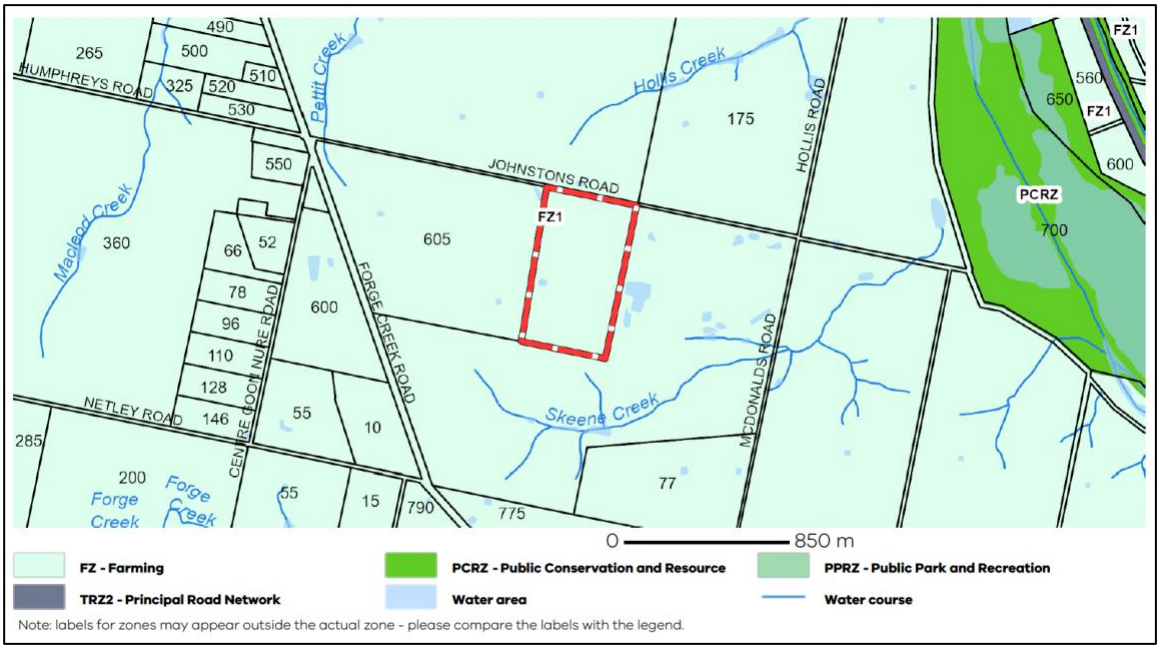



*Figure 4: Site map showing site boundaries in red and white, and surrounding, farm zoned areas. (Image sourced from www.planning.vic.gov.au at 25 March 2024 06:54 PM).*

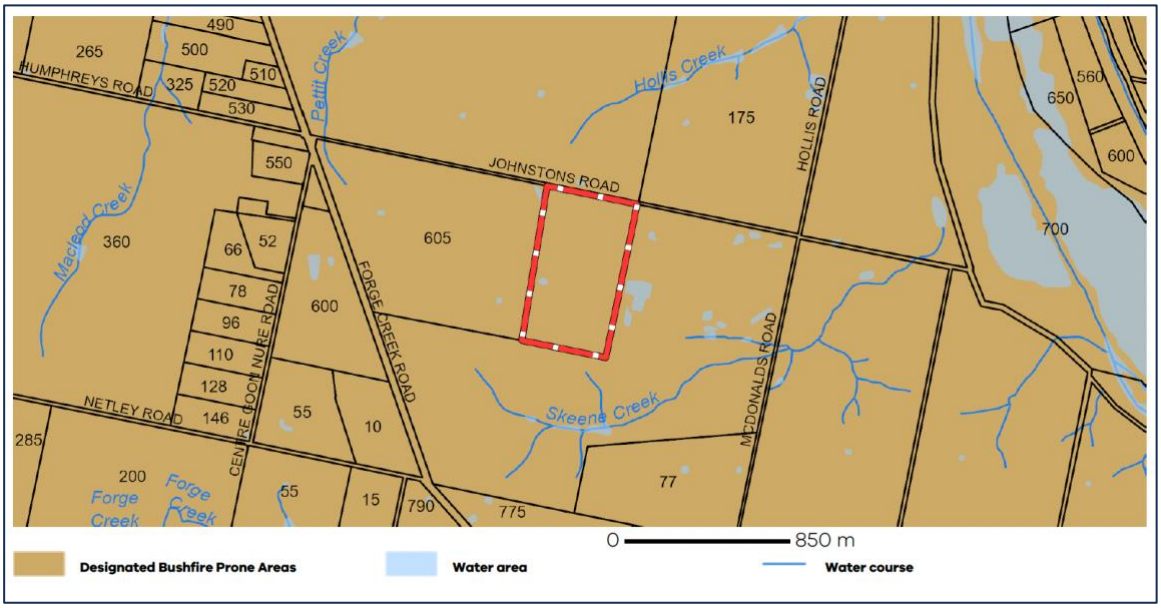



*Figure 5: Site map, demonstrating the site being within a designated bushfire prone area. (Source:* www.planning.vic.gov.au at *25 March 2024 06:54 PM)*

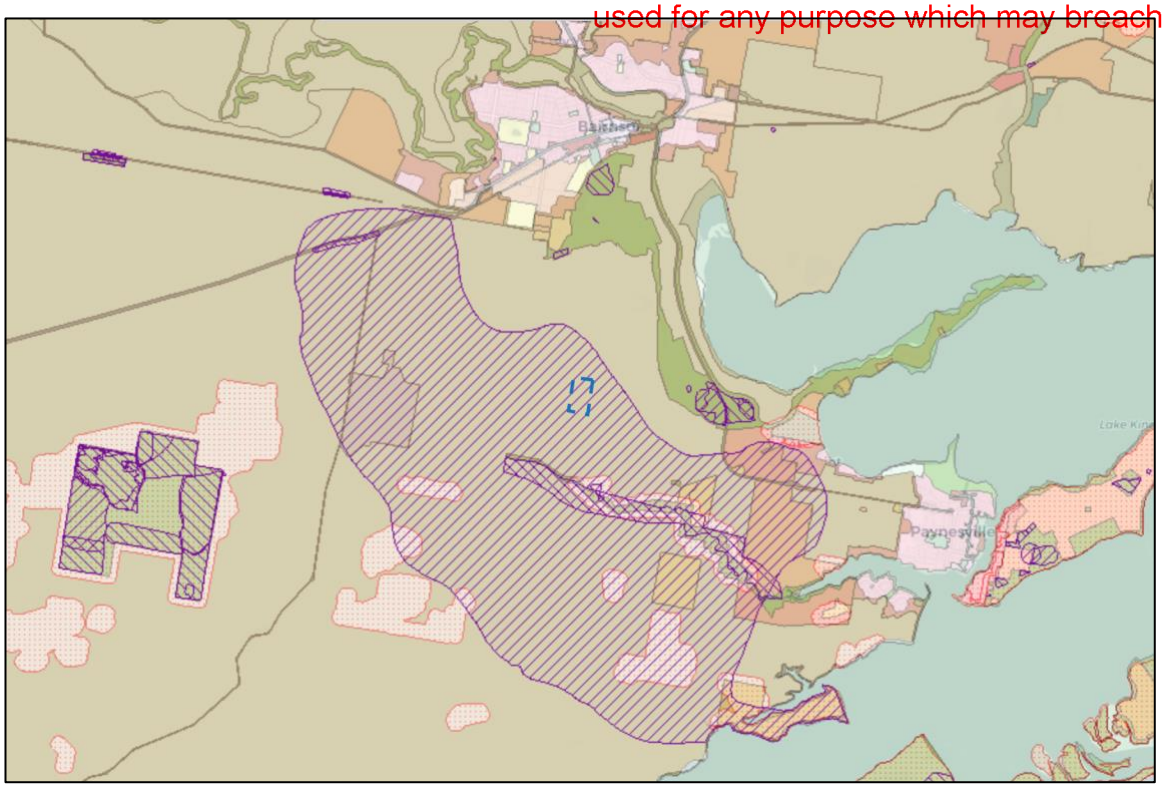


*Figure 6: Area map showing the bushfire affected areas in relation to the site (blue lines, centre of image). The area in which the site is located was burnt in 1978. (Source: www.mapshare.vic.gov.au, accessed 25 March, 2024)*

## Nearby Sensitive Receptors

The immediate surrounding area is farmland. However there are farm houses in the area and these should be considered in the event of a fire to alert them.

A register of neighbours and their contact details should be maintained on site to make contacting them easier. These details should be managed as part of the Workplace Emergency Management Plan (WEMP) document and reviewed in line with the site's document review triggers and timeframes.

Neighbouring properties (farmhouses and businesses) have been pointed out in the area map below (*Figure 7*).

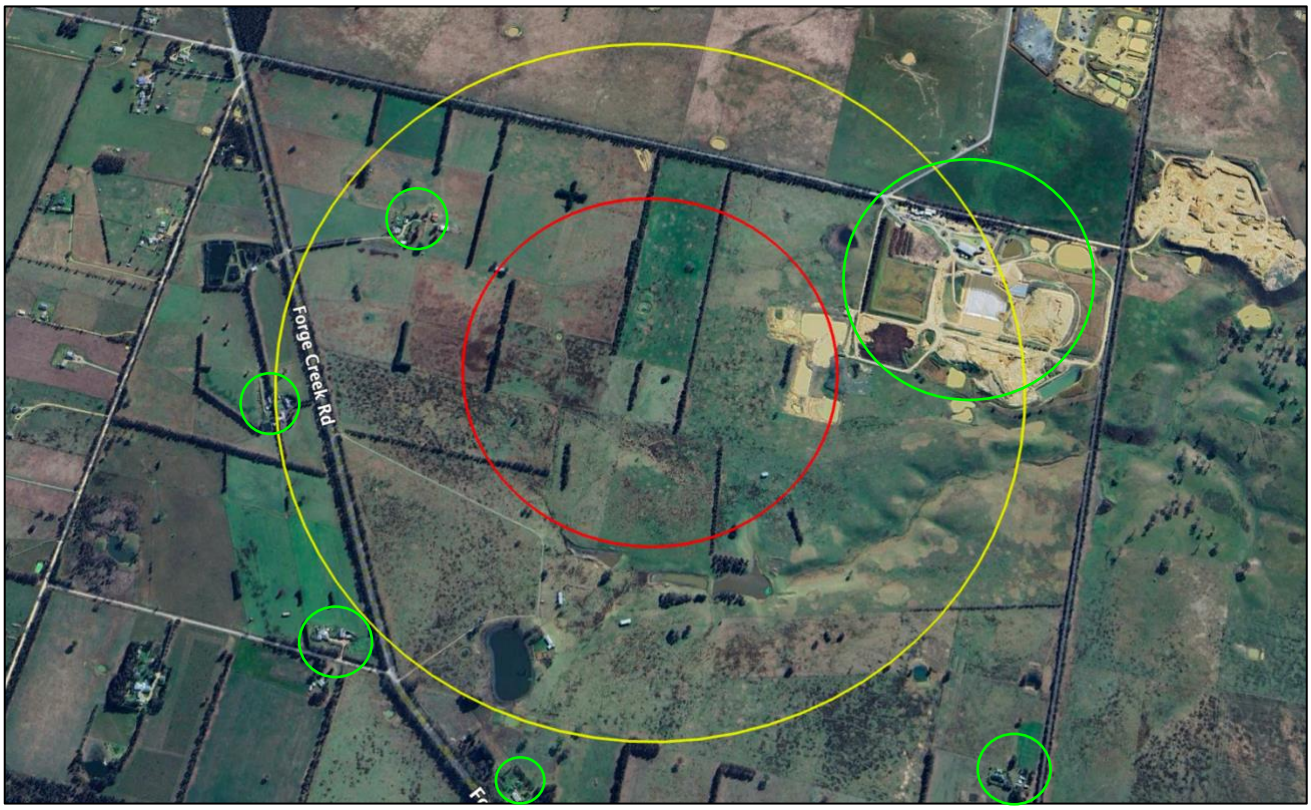



*Figure 7: Map showing the location of the site and nearby neighbours (farmhouses and businesses). A 500m radius (in red) and 1km radius (in yellow), indicates the proximity to the site. (Image sourced from Google Earth Pro and modified by CRA on 26 March, 2024).*

## Topography of the area

It is important to be familiar with the topography of the site to understand where water flows. This will be particularly important in the event of a fire to prevent firefighting waters escaping site and (potentially) impacting nearby waterway, Skeene Creek.

The site is relatively flat with operational areas draining to the site contact water dam to the South-East of the maturation pad. From the rear of the site, the topography has an approximate 1m fall for around 250m, where it then steepens as it descends towards the dams that exist at the base of the hill (Skeene Creek).

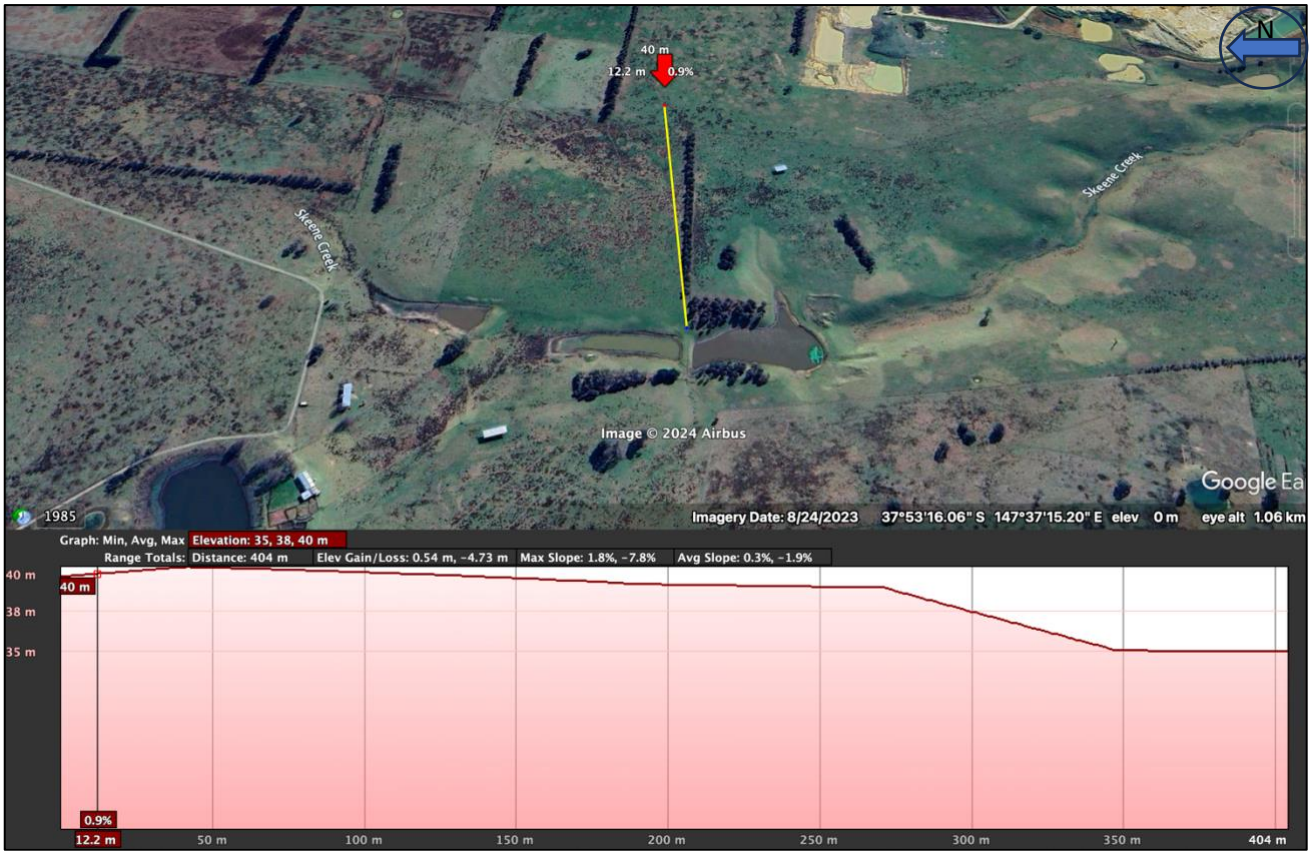



*Figure 8: Elevation profile sourced from Google Earth Pro 26 March 2024.*

## Nearby waterways

The nearest waterway to the site is Skeene Creek, sitting approximately 400m South of the site. This creek is dammed in 3 places along its length.

## Climate of the area

Climate Data was obtained from the Australian Bureau of Meteorology for the Bairnsdale Airport, approximately 3.9km East of the site. The mean maximum temperature is 20.2°C and the annual mean rainfall is 646mm. Neither of these conditions would compromise activities being performed at the site as part of its normal operation.

Windrose data figures below are for the Bairnsdale Airport, accessed from the Bureau of Meteorology website.

- Predominant winds at 9am are from the West for approximately 25% of the time.
- Predominant winds at 3pm are from the South-East, approximately 23% of the time.

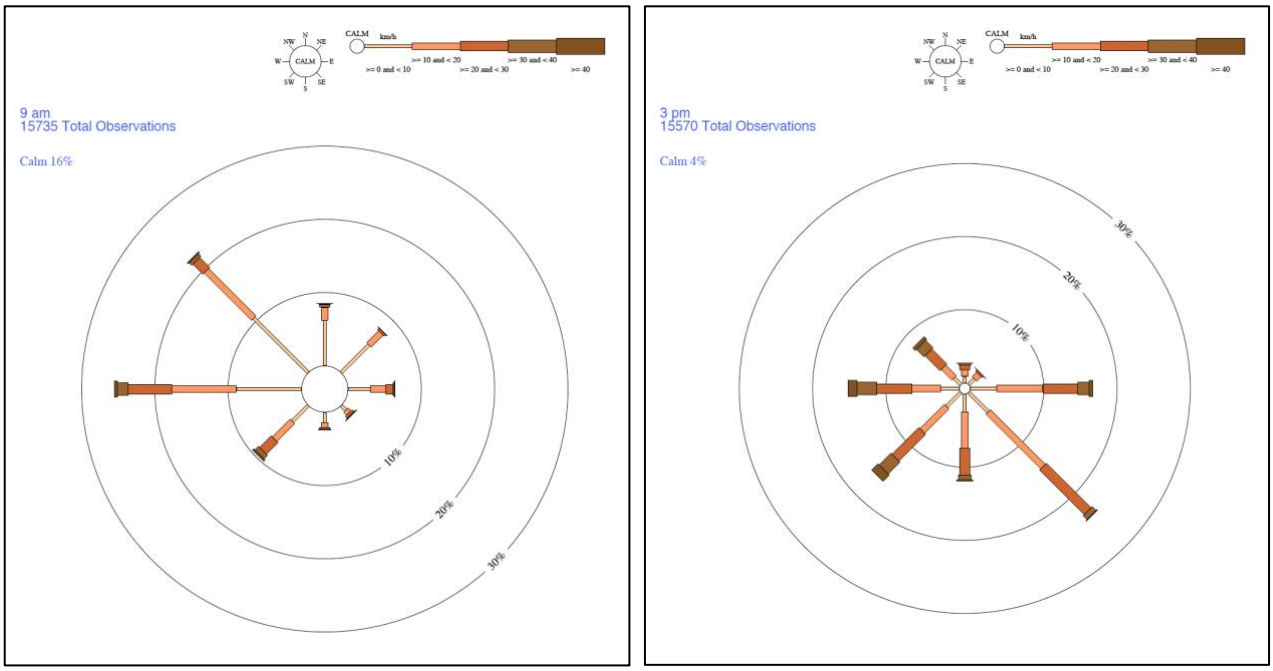



*Figure 9: Windrose data as acquired from the BOM from the Bairnsdale Airport.*

*(Image sourced from http://www.bom.gov.au/climate/averages/tables/cw_085279.shtml Accessed 26-03-24)*

## 4. EPA Permissions

The site is required to hold an A07a (Organic waste processing – Large) Operating Licence, issued by EPA Victoria.

The facility cannot accept and process material without this permission.

Standard Operating Licence conditions relating to fire and general risk management on a licenced site include:

| | |
|---|---|
| OL_WM04 | You must ensure that waste does not burn at the premises. |
| OL_G02 | You must immediately notify the Authority by calling 1300 EPA VIC (1300 372 842) in the event of:<br>(a) A discharge, emission or deposit which gives rise to, or may give rise to, actual or potential harm to human health or the environment;<br>(b) A malfunction, breakdown or failure of risk control measures at the activity site which could reasonably be expected to give rise to actual or potential harm to human health or the environment; or<br>(c) Any breach of the licence. |
| OL_G04b | Information and monitoring records used for the preparation of, inclusion in, or support of, any reporting or notification that is required of you by the Authority (including data reporting, performance reporting, documents evidencing any risk and monitoring program) must be:<br>(a) retained for five years; and<br>(b) made available to the Authority on request. |
| OL_G05 | 1. You must develop a risk management and monitoring program for your activities which:<br>(a) identifies all the risks of harm to human health and the environment which may arise from the activities you are engaging in at your activity site;<br>(b) clearly defines your environmental performance objectives;<br>(c) clearly defines your risk control performance objectives;<br>(d) describes how the environmental and risk control performance objectives are being achieved;<br>(e) identifies and describes how you will continue to eliminate or minimise the risks in 1(a) (above) so far as reasonably practicable (SFARP); and<br>(f) describes how the information collated in compliance with this clause, is or will be disseminated, used or otherwise considered by you or any other entity.<br>2. The risk management and monitoring program must be:<br>(a) documented in writing;<br>(b) signed by a duly authorised officer of the licensed entity; and<br>(c) made available to the Authority on request. |
| OL_WM14 | All plant and equipment must be maintained and operated in proper working condition, in accordance with the manufacturer's specifications |

**NOTE:** These are not specific licence conditions. There will be specific licence conditions attached to an approved Operating Licence also.

# 5. Roles and responsibilities

The roles and responsibilities relating to the environment on site are outlined below.

Any training required to be undertaken by employees should be entered into the site skills matrix, where appropriate, to satisfy operational requirements.

**GENERAL ENVIRONMENTAL DUTY**
The general environmental duty (GED) is central to the Environment Protection Act and applies to all Victorians. You must reduce the risk of any activities which may harm the environment or human health through pollution or waste.

**Note: It is everyone's responsibility to comply with their general environmental duty.**

## Roles and responsibilities to be provided

Job titles and the roles and responsibilities of specific titles are not available at the time of writing. These should be included in future updates of this document as the site is established and becomes operational.

## All Employees

Every employee on site has responsibilities with respect to this plan. This extends to all subcontractors and their employees. Responsibilities shall include:

- Performing all duties in a manner, which ensures the Environment, themselves and other personnel on site are unharmed;
- Observing all rules, regulations and work procedures for which they have been fully informed of, and instructed in (i.e. reporting spills);
- Assisting in the identification, elimination and control of on-site hazards, non-conformances and corrective actions;
- Assisting in designating/consigning reportable priority wastes (RPW) generated in the course of their duties;
- Immediate reporting of any injury, hazard or defective tools, equipment or machinery to their supervisor or responsible person;
- Assisting in site meetings and programs as required;
- Participating and co-operating in inspection, testing and audits.

## Sub-Contractors (approved suppliers)

Sub-Contractors are defined as any company, which through a contractual arrangement with the Client performs work on the site. Subcontractors shall ensure:

- Compliance with all legal and statutory requirements.
- All sub-contractors are responsible for their waste generated on site (unless otherwise agreed by site management) and are therefore responsible for the lawful disposal of the waste they generate.
- Must report any spills to management, sub-contractor must attempt to prevent or contain spills.
- That their workers and subcontractors also work in a safe and planned manner and that the area in which they work is safe.
- Demonstrate commitment to participate in site management meetings.
- Ensure that their staff adopts similar responsibilities as the staff of EGSC and report to the Site Supervisor on all matters relevant to the site.
- Submit and or be involved with the development and review of site procedures and job Environmental analysis plans (i.e. inspections, audits, investigations etc…) as determined in consultation with the Site Manager / Supervisor.
- Participate in audits while working on site.
- Submit reports on their own Environmental activities and accident and injury statistics.
- Nominate a liaison officer to ensure communication on site matters is maintained between the subcontractor and the Site Supervisor.

## WHS/Environmental Management Committee

EGSC propose to have a WHSE Committee. The Committee will address the following:

- Investigation of all incidents and complaints logged/received;
- To consider all ideas for continual environmental improvements provided by internal staff and external affiliates;
- To review all existing environmental issues, controls and checklists associated with these issues and controls;
- To review the need for additional environmental controls; and
- To assist in the annual review and update of the FRMMP.

## FRMMP Implementation responsibilities

In accordance with the roles and responsibilities outlined in this FRMMP, it is the responsibility of EGSC's Senior Management to ensure the implementation of the councils environmental procedures and policies.

It is the responsibility of the Environmental Representative / Manager to implement the FRMMP into the day to-day workings of the business. It is paramount to the success of the FRMMP that implementation is conducted with the close support of all levels of EGSC staff, employees and contractors working on site.

The Environment Representative / Manager must ensure that the environmental controls are in place to satisfy the environmental regulations and requirements of this plan for the monitoring and recording measures are implemented in a timely fashion.

## 6. Common fire risks: Organics

FOGO material and GO materials are considered combustible recyclable waste materials and must be handled and stored in an appropriate manner, in accordance with EPA Victoria guidelines. (EPA Publication 1667.3 - Management and Storage Combustible Recyclable and Waste Materials Guideline).

The site will contain various degrees of organic material onsite, at various stages of processing. In summary, these include:

- Food Organics Garden Organics (FOGO) material received directly from trucks
- Garden Organics (GO), received from the adjoining transfer station
- Grinded/shredded organic material (prior to pasteurisation process)
- Covered, forced aerated material (as part of pasteurisation process)
- Open windrowed material (maturation)
- Stockpiles of matured windrow material - Compost (awaiting screening)
- Screened compost (for sale/use)
- Oversize fractions (to be reprocessed)

It is important to understand the various types of material held on site as factors such as particle sizes, moisture content and ignition temperatures can influence the potential for spontaneous combustion.

Food organics and garden organics (FOGO) decompose through microbial and chemical action, which can generate considerable heat. They will spontaneously combust when the heat generated is higher than that lost to the surrounding environment.

Allowing a pile to get to an internal temperature of over 90°C can trigger rapid self-heating and eventual combustion. **FOGO undergoing composting typically ignite between 150°C and 200°C**.

Moisture content will also influence spontaneous combustion - low moisture levels will stop biological activity (stopping self-heating), and high moisture levels will allow for evaporative cooling of the pile. To reduce the risk of spontaneous combustion, organics storage (that is, any FOGO not being otherwise actively managed) should be kept **below 70°C** and moisture content should be maintained at either **less than 20 per cent OR more than 45 per cent** (Rynk, 2000).

*Figure 10: Storing organic CRWM material information as provided by EPA Victoria (Source EPA Publication 1667.3 Management and storage of combustible recyclable and waste materials - guideline, pg. 49)*

While all material handled at the site will be combustible, there are some stages that will present higher risks than others.

As an example, the grinded organic material that will be processed at the site will have a smaller particle size higher surface area, than the delivered product and as a result, is more likely to self-heat and potentially ignite. This material will require active and regular management to ensure it is handled in such a way to minimise stockpile sizes and storage times.

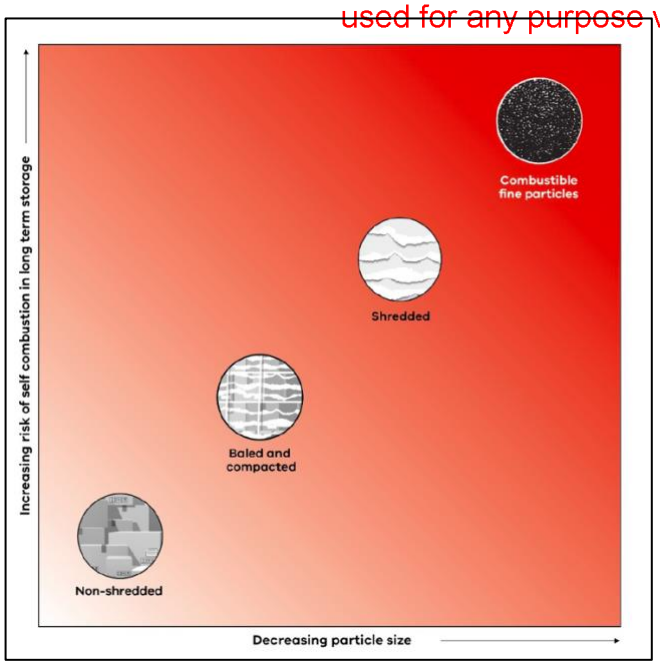



*Figure 11: Illustration demonstrating the increasing risk of combustion based on stage of processing as provided by EPA Victoria (Source EPA Publication 1667.3 Management and storage of combustible recyclable and waste materials - guideline, pg. 48)*

## Ignition points

The term "Ignition point" refers to the temperature that material must reach before it ignites and burns.

The materials received at site (not considering contamination) will most likely be classified under the broad categories of wood material or compost material.

The figure below lists general ignition points for various CRWM. As outlined in the EPA publication from which this was sourced, the ranges may depend on the type of CRWM (e.g. the type of wood or organic matter) and the range of real world measurement techniques available. As such, the below figures should be treated as approximate only and not definitive values.

| Material | Ignition point (°C) | Material | Ignition point (°C) |
|---|---|---|---|
| Compost | 150-200 | Nylon | 424-532 |
| Wood | 190-260 | Polyester | 432-488 |
| Paper | 218-246 | Polystyrene | 488-496 |
| Rubber | 260-316 | Acrylic plastic | 560 |

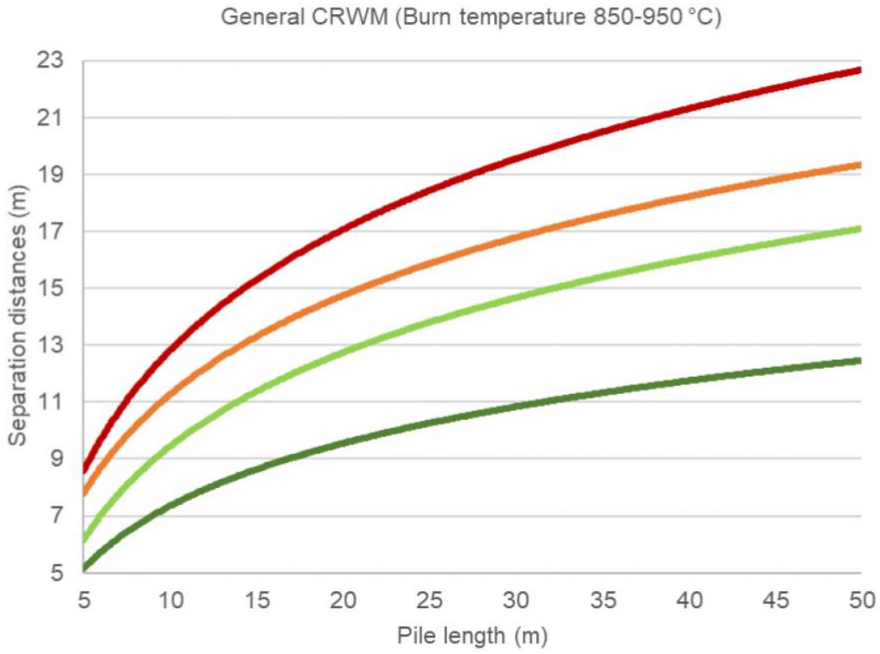
*Figure 12: Ignition points of different materials as provided by EPA Victoria (Source EPA Publication 1667.3 Management and storage of combustible recyclable and waste materials - guideline, pg. 47)*

## Burn temperatures and the effect on stockpile construction

Organic material is generally regarded to have a burn temperature of less than 950°C. When related to EPA CRWM guidelines, this falls under "General CRWM" (Plastics and rubber being the separated, higher, burn temperatures).

The burn temperature of material directly effects the separation distances between stockpiles required on site. Further to this, the size of each stockpile (length, width and height) and the construction method also influence compliant stockpile placement.

It is important to ensure that stockpiles of CRWM are adequately separated to prevent transfer of heat (and fire) between them.




| | | Storage type | | | |
|---|---|---|---|---|---|
| | | Loose pile to loose pile | Loose pile to building | Baled pile to baled pile | Baled pile to building |
| | | Separation distance (m) | | | |
| Pile length (m) | 5 | 5 | 7 | 9 | 8 |
| | 10 | 7 | 9 | 13 | 11 |
| | 15 | 9 | 11 | 15 | 13 |
| | 20 | 10 | 13 | 17 | 15 |
| | 30 | 11 | 15 | 20 | 17 |
| | 50 | 12 | 17 | 23 | 20 |

*Figure 13:Separation distances for storage of general CRWM types (including organic materials) provided by EPA Victoria (Source EPA Publication 1667.3 Management and storage of combustible recyclable and waste materials - guideline, pg. 59)*

## Indoor versus outdoor storage

Storage of CRWM materials inside buildings in general, limits the volume of material that can be stored when compared to outdoor storage.

At the time of writing, CRA presumed that indoor storage of CRWM material would not occur.

The receival shed will contain CRWM at times, however it is presumed that this material will be in short term transit (while being received, sorted and shredded), before being moved outside for distribution into the forced aeration (covered) bunkers.

Outdoor storage is the preferred method for organic processing facilities due to the greater storage space available at greatly reduced expense.

## Contamination

Contamination can take many forms, including all matter of materials. Unfortunately, contamination in FOGO material received at processing sites is a common and can present fire risks to the facility.

While litter and similar contamination presents a material quality problem, contamination with the potential to start fires is of greater concern in the context of this report.

A high degree of importance must be placed on removing contamination from incoming material.

Contamination of concern includes (but is not limited to):

- Lithium-ion and other batteries
- Aerosol cans
- Flammable liquids
- Chemicals
- Metals
- Glass

Contamination of varying types can cause issues in different parts of the process.

For example, grinding of materials can cause sparks, leading to ignition of dangerous materials, breaking batteries open can cause fires, incompatible chemicals mixing can generate heat/ignite etc. Further into the process, the presence of glass can also cause problems by focussing heat (similar to a magnifying glass) and igniting combustible material.

## Firefighting authority proximity

The availability and proximity of local firefighting authorities is an important consideration when determining emergency response capabilities.

The Bairnsdale CFA is located at 19 Gordon Street in Bairnsdale. Travel time from CFA to the proposed site is approximately 8 minutes.

Preparation time should be added to this timeframe to allow for the gathering of personnel.

# 7. Fire Risk Assessment

The FRMMP incorporates identification, assessment and subsequent control methods for potential fire hazards associated with the proposed activities of the facility.

A risk analysis process is used to assist in the identification and satisfactory control of fire hazards and risks. This analysis may also inform relevant procedures or forms as they are developed.

Sub-contractors who perform work on the proposed EGSC Bairnsdale Composting site will be required to participate and complete a site induction before commencing work. The induction process outlines Council's expectations, including environmental procedures, site environmental forms/checklists, safe work management system planning (SWMS) and fire risks.

## Risk Assessment Methodology

A desktop risk assessment of proposed activities was conducted in March 2024 to identify the potential **fire risks** associated with the management of organics at the proposed facility and reviewed for final site layout in October 2025. This assessment was based on a combination of the information received from Council and using CRA's knowledge, compliance knowledge and prior operational experience managing commercial organics recycling facilities.

Fire risks relating to the proposed operation of the Bairnsdale Composting Facility have been identified and assessed using the method outlined in EPA publication 1695.1 "Assessing and controlling risk: A guide for business" (published August 2018).

Summary of the risk assessment method used:

1. Identify potential fire risks related to the operation of the activity;
2. Assess the likelihood of an uncontrolled event occurring and the consequence of the impact and then assign a risk rating to the risk;
3. Identify existing controls that may reduce the likelihood and consequence of the risk;
4. Reassess the rating for each risk, taking into account the existing controls; and
5. Identify opportunities for improvement for addressing medium, high and extreme risks of fire.

The risk assessment assesses the aspects and impacts, evaluating the likelihood and consequence of the impacts occurring and then assigning a risk category to each impact. Both the inherent risk (with no controls in place) and residual risk (after the current controls are taken into account) were assessed as part of the activity.

The assessment process was completed by environmental advisory firm, Circular Resources Australia (CRA), and discussed with the East Gippsland Shire Council project manager, Milena Beames.

Table *1* (Risk Matrix) shows the risk matrix and contains definitions for both likelihood and consequence categories.

Table 2 (Risk Levels) describes the risk levels and provides brief instruction on priorities of risks.

*Table 1: Risk Matrix: Likelihood & Consequence*

| | | | | | | |
|---|---|---|---|---|---|---|
| Permanent or long term serious environmental harm / life threatening or long-term harm to health and wellbeing. | CONSEQUENCE | Severe | Medium (High) | High | Very High | Extreme | Extreme |
| Serious environmental harm / high level harm to health and wellbeing. | | Major | Medium | Medium (High) | High | Very High | Extreme |
| Medium level of harm to health and wellbeing or the environment over an extended period of time. | | Moderate | Low | Medium | Medium (High) | High | Very High |
| Low environmental impact / low potential for health and wellbeing impacts. | | Minor | Very Low | Low | Medium | Medium (High) | High |
| No or minimal environmental impact, or no health and wellbeing impacts. | | Low | Very Low | Very Low | Low | Medium | Medium (High) |
| | | | Rare | Unlikely | Possible | Likely | Almost Certain |
| | | | LIKELIHOOD | | | | |
| | | | Could happen but probably never will | Not likely to happen in normal circumstances | May happen at some time | Expected to happen at some time | Expected to happen regularly under normal circumstances |

*Table 2: Risk Levels*

| RISK LEVEL | DESCRIPTION |
|---|---|
| **Extreme** | Totally unacceptable level of risk. Stop work and/or take action immediately. |
| **High & Very High** | Unacceptable levels of risk. Controls must be put in place to reduce risk to lower levels. |
| **Medium & Medium (High)** | Can be acceptable if significant controls are in place. Attempt to reduce to low. |
| **Low** | Acceptable level of risk. Attempt to lower risk to very low but higher risk levels should take priority. |
| **Very Low** | Acceptable level of risk. |

A rating of very low, low, medium, medium (high), high, very high and extreme level of risk is applied to each identified impact (refer Risk assessment).

In general, impacts defined as being either **high, very high or extreme** risk present **unacceptable levels of risk** and must be acted on immediately to mitigate these risks.

Impacts identified as having a low or medium risk are acceptable, however existing control measures must continue to be implemented, and further long-term controls are to be developed for the impacts with a medium risk to reduce the risk level to low.

## Risk control methods

It is important that East Gippsland Shire Council (EGSC) understands and recognises that controls vary in effectiveness. Therefore, it is recommended EGSC utilises the hierarchy of controls when considering risk control methods (see figure below). Where practical, the higher level of control is employed.

The proposed controls in use can be found by referring to the environmental risk assessment.

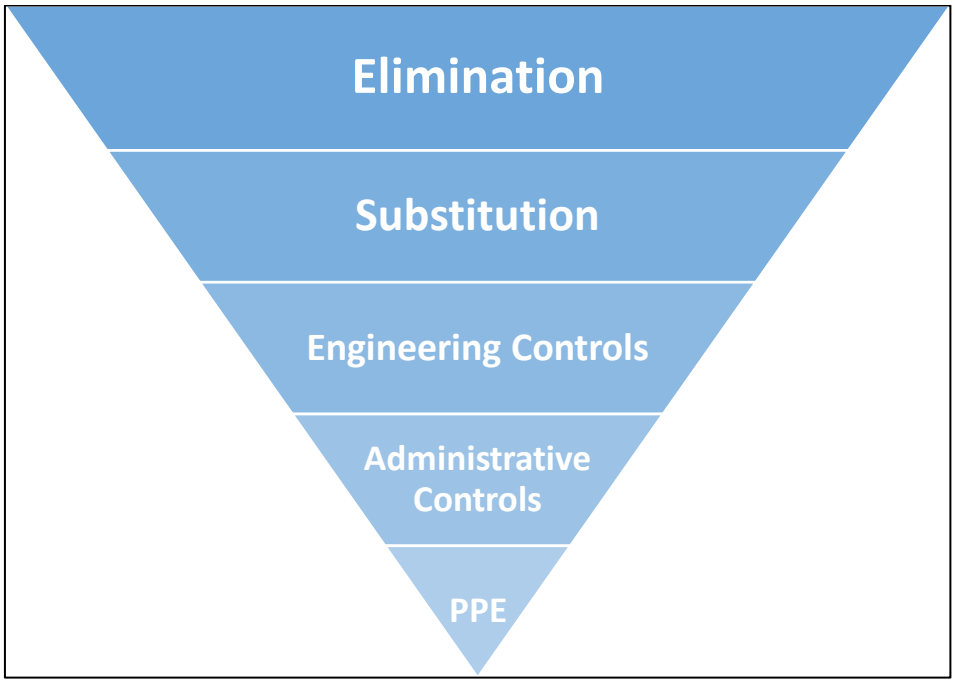



*Figure 14: Example diagram depicting the hierarchy of controls*

## Significant risks identified

The risk assessment involved the assessment of 38 aspects of the operation identified by CRA that may have the potential to result in a fire under particular circumstances.

Of the 38 aspects assessed, the breakdown of potential risks (post-controlled risks) were assessed as:

- 9 x Very Low (23.5%)
- 15 x Low (39.5%)
- 14 x Medium (37%)
- 0 x Medium (High)
- 0 x High
- 0 x Very High
- 0 x Extreme

Significant risks are considered to be residual risks (post-control) rated Medium (High) and higher that require additional controls in place to reduce the risk of that activity.

Medium risks should also be addressed in an attempt to reduce the risk to low, however Medium risks can be acceptable if appropriate controls are in place.

Based on the proposed controls to be implemented (i.e. stockpile management plan, appropriate staff training etc), there are no residual risks that rate higher than a “Medium” at the time of assessing the proposed facility.

Further detail on the risks considered and assessed, including descriptions of the potential environmental and human health impacts, current controls and additional controls scheduled are supplied in the site Fire Risk Assessment (FRA).

# 8. Fire Preparedness

Preparation for a fire event is a key aspect in minimising the risk of fire occurring and reducing the severity of a fire on site.

There are several reasons why being prepared for a fire in a composting facility is crucial:

- **Safety:** Compost fires can burn for days and reach very high temperatures, posing a serious threat to firefighters and anyone nearby. Having a fire plan and equipment readily available allows for a quicker response and minimises risk.
- **Environmental impact:** Large-scale compost fires can generate thick smoke, polluting the air and potentially harming human health and the environment. Quick intervention can limit the fire's size and spread, reducing its severity.
- **Economic impact:** Compost fires can damage structures and equipment at the facility, leading to costly repairs and downtime. Being prepared can potentially extinguish the fire before significant damage occurs.
- **Material loss:** Compost is a valuable product, and a fire can destroy a significant amount of finished or in-process compost. Fire prevention and suppression efforts can help minimise this loss.

By being prepared for fire and having the necessary equipment on-site, composting facilities can significantly reduce the risks and consequences of a fire.

## Emergency Control Organisation (ECO)

The site will maintain an Emergency Control Organisation (ECO).

An Emergency Control Organisation (ECO) is a team of people within a workplace who are responsible for managing emergencies. Their main focus is ensuring the safety and well-being of everyone in the facility during an emergency situation.

Having a well-functioning ECO is crucial for ensuring a safe and coordinated response during emergencies. By planning and practicing beforehand, the ECO can minimize confusion, panic, and potential injuries in the event of an emergency.

Listed below is a breakdown of how an ECO can help prepare a site for an emergency situation:

Preparation:

- Implement and review the Workplace Emergency Management Plan (WEMP) for the site.
- Conduct regular training drills to ensure everyone understands their roles and responsibilities in an emergency.

Response:

- Take charge during an emergency situation.
- Oversee the evacuation of occupants from the building, following designated procedures.
- Account for all occupants to ensure no one is left behind.
- Contact emergency services like the CFA or Ambulance when necessary.
- Provide first aid or other assistance as needed.

**Structure of an ECO:**

An ECO is typically a structured group with designated roles, which can vary depending on the size and complexity of the building. Some common roles include:

- **Chief Warden:** Overall leader of the ECO, responsible for the entire emergency response.
- **Wardens (Fire Wardens, Area Wardens):** Assist with evacuation procedures in designated areas.
- **Communications Officer:** Ensures clear communication during the emergency, relaying information and instructions.

## Workplace Emergency Management Plan (WEMP)

The site will maintain a Workplace Emergency Management Plan, or "WEMP". This is a document that specifically provides information on what to do in the event of an emergency on site, including fire.

The WEMP will form a key component of the site environmental management system, which includes fire.

It considers emergency events and the actions to be taken before, during and afterwards.

The aim of the WEMP is to outline the systems and resources required to be in place such as:

- Preventative measures
- Emergency response equipment locations
- Emergency Contacts
- Roles and responsibilities (including Emergency Control Organisation details)
- Procedures in certain emergencies
- Regulatory compliance, including notification requirements
- Record keeping

The WEMP, like other site management plans, must be reviewed at a minimum of annually or when there is any significant change to process or activities at site.

## Emergency Response Drills

Regular emergency response drills will be conducted at site to ensure staff and contractors are aware of what needs to be done in the event of a site emergency.

These will be scheduled to occur at a minimum of quarterly and must include (at minimum) two emergency response drills per annum that relate to fire.

Records of emergency response drills must completed and maintained at site.

## Firefighting equipment

A specialist fire equipment contractor will be appointed to provide firefighting equipment recommendations once the final site design is confirmed.

Firefighting equipment will be determined in line with the **Building Codes of Australia/National Construction Codes (BCA/NCC).** These codes set out the construction requirements for buildings in Australia, which includes specifying the types of fire protection equipment required in different types of buildings [Australian Fire Regulations].

Firefighting equipment will be maintained in line with Australian Standard **AS 1851: Maintenance of Fire Protection Systems and Equipment.** This standard outlines the requirements for maintaining a wide range of fire protection equipment, including portable fire extinguishers, hose reels, fire blankets, sprinkler systems, and alarms [Australian Fire Control]. This standard specifies regular testing, inspection and maintenance schedules to ensure the equipment is functional.

Emergency response equipment (or resources) on site require regular inspection and maintenance to ensure they are operational and effective in times of emergency.

An inspection and maintenance log should be maintained on site and at the Council office.

The following inspection, testing or maintenance regimes should be followed to ensure compliance:

**Fire extinguishers:**

- All fire extinguishers must be inspected every 6 months. This must be completed by an appropriately qualified fire safety professional. Note: Some types of extinguishers may also require additional servicing.
- Advice should be sought from a qualified fire safety professional regarding additional servicing requirements and recorded to ensure compliance and effectiveness is maintained.
- Fire extinguisher testing intervals are to be recorded on a metal tag attached to the unit.
- If a fire extinguisher has been used (even if only partially), it must be checked by a qualified fire safety professional and recharged or replaced.
- Regular (weekly at minimum), visual inspections of fire extinguishers on site should be undertaken by staff as part of a standard site inspection. These inspections should look for any visible evidence of tampering with the device and to ensure it is in its proper location. Should any evidence of its use or tampering is noted, a hazard report should be completed, and a qualified fire safety professional engaged to inspect and/or replace the unit.

**Hose Reel (if applicable):**

- If the site has a fire hose available, it must be inspected every 6 months. This must be completed by an appropriately qualified fire safety professional. Note: It is recommended this be conducted at the same time as fire extinguisher checks.
- Regular (weekly at a suggested minimum), visual inspections of fire extinguishers on site should be undertaken by staff as part of a standard site inspection. These inspections should look for any visible evidence of tampering with the device and to ensure it is in its proper location. Should any evidence of its use or tampering is noted, a hazard report should be completed, and a qualified fire safety professional engaged to inspect and/or replace the unit.

**Communications equipment:**

- Mobile phones should be charged daily and recharged throughout the day if necessary.
- Two-way radios should be charged daily and recharged throughout the day if necessary.
- In the event that no mobile phone coverage is available (from any carrier), alternative communication methods should be considered, such as satellite phones.

## Clean water supply

Important to site firefighting preparedness is a supply of clean water, for fire authorities to access in the event of a fire on site.

The site will maintain firefighting water supply separate to water designated for operational use. This will maintain a back-up supply of water for use in an emergency. This will be in the form of 4 x fire water tanks located on each corner of the maturation pad. Firefighting water tanks will have appropriate valves fitted to enable firefighters to connect to the supply using standard firefighting fittings. The correct fittings will be chosen in based on recommendations from the local CFA.

Regular inspections of water levels will be conducted to ensure water designated for firefighting purposes is available. These will occur on a weekly basis or after an event where firewater is accessed.

If additional water is required to top up firefighting water supplies, clean water can be purchased to help refill the tank.

As a back-up to the firefighting water supply, clean water can be accessed via the clean water dams on site and nearby.

## Site accessibility

The site will maintain appropriately sized access pathways around site infrastructure and stockpiles to enable clear firefighting access. These are required to be accessible all-year, even in wet conditions.

At minimum, access to three sides of each stockpile is required.

Good separation distances, allowing clear access will also help satisfy CRWM storage requirements on site.

Accessibility will be inspected daily as part of the site inspection checklist.

## Housekeeping

Poor housekeeping provides fuel and pathways for fire to spread to (and from) site in the event of a fire.

The risk of grass fire is heightened in times of dry weather, where grass has dried enough to enable easy ignition.

The site manager will ensure the following:

- Regular site inspections are undertaken with housekeeping, vegetation management and pest control being important aspects.
- Landscaping, shrubbery and other obstructions are to be regularly cleaned up/maintained to reduce pathways and fuel load for fire
- Keep combustible materials in areas of public access to a minimum. Keep waste bins in secure areas away from vegetation and buildings.
- Regular emptying of waste receptacles to minimise fuel load and potential for litter.
- Signs of pest infiltration are acted upon. An incident report should be completed and reported to the site manager. The solution may include the engagement of a pest control contractor.

## Vegetation management

Overgrown vegetation (grass and trees), provide a pathway

The site will maintain vegetation on site (grass and trees) at all times to minimise this risk.

Daily site inspections will be conducted that include vegetation checks.

## Hazard reporting system

The site will maintain a hazard reporting system to identify potential hazards on site.

Staff will be educated in the hazard identification process as part of their onboarding training.

## Incident reporting system

The site will maintain an incident reporting system to ensure any incidents on site are appropriately investigated to reduce the risk of them happening again.

The incident investigation process will be completed in line with existing Council methods.

Staff will be educated in the incident reporting process as part of their onboarding training.

## Site Induction

All employees and contractors will be expected to complete a site induction prior to beginning work on site.

The site induction will identify site safety and environmental risks (including fire) and outline Councils expectations around performance and behaviours on site.

The site induction will require a refresher every two (2) years.

## Fire authority familiarisation visits

It is recommended that an invite be extended to the local fire authority (Bairnsdale CFA), to attend site to familiarise themselves with the layout, material locations and facilities on site.

This will build a CFA familiarity with the site which may help in the event of an emergency.

It is recommended that an invite be extended every 6 months. Attendance will be subject to CFA availability.

# 9. Fire prevention activities

This section touches on fire prevention actions to be undertaken at site.

Fire presents a risk on site at many waste and recycling facilities. Organics recycling activities are no exception.

Given the nature of the activities conducted on site, including the receival and storage of organic wastes, being combustible recyclables and waste materials (CRWM), fire is an inherent risk.

As a summary, key fire prevention activities include:

- Stockpile management: Includes size, location and separation distances between site boundaries and other stockpiles/materials.
- Waste acceptance criteria: Supervision of all incoming materials to site to ensure only permitted wastes are received and deposited in the appropriate area. Note: The facility will accept material from the general public, municipal collection trucks, contractors and green organics delivered from the nearby transfer station. These will all be completed under supervision of facility staff.
- Waste storage methods: CRWM waste types require specific storage requirements to remain compliant and reduce the risk of ignition and spread of fire.
- Regular inspections/monitoring: Along with supervision of incoming materials to site, regular walk-arounds and closer inspections help identify incorrectly deposited wastes and incorrect storage methods that could prevent a fire risk.
- Regular monitoring of materials on site: Regular temperature monitoring of stockpiles on site will reduce the likelihood of uncontrolled internal heating occurring in stockpiles which can result in spontaneous combustion. Temperature monitoring will inform stockpile turning requirements.
- Regular processing of material on site: Regular processing of material on site reduces the fuel load on site and keeps space available in storage areas (enabling compliant stockpile storage).
- Regular maintenance of equipment: The operation of equipment on site is a potential fire risk if not maintained correctly. Fire can start in many ways including, material build-up (causing friction and heat), spark generation, heat from engines or spill of fluid such as fuel.
- Regular vegetation maintenance: Ensure site vegetation is kept down and clear access is maintained around site. Long grass and other vegetation can provide a pathway for fire, helping it spread and making the situation worse.
- Monitoring of weather and fire conditions: Monitoring the weather helps planning on site. For example, grinding green waste or mowing on high or extreme fire risk days can cause spark and lead to an out-of-control fire. Similarly, monitoring the risk of fire from offsite can influence activities on site or evacuation pathways.
- Site security: Arson is a potential risk on site due to the combustible nature of material received and stored. Ensuring the site is secured reduces the risk of unauthorised access.
- No smoking on site or other ignition sources on site: Reduces opportunity for ignition of materials on site.

## Preventing spontaneous combustion

The site will receive CRWM materials in the form of FOGO (from incoming municipal collection vehicles) and loose green organics (from the transfer station and the general public) during its normal day-to-day operations. During, and post processing, these materials remain a potential to burn.

Under the correct conditions, these CRWM materials handled at site can heat up and ignite themselves, causing an unexpected fire.

To reduce the likelihood of spontaneous combustion occurring in storage areas on site, management and employees shall:

- Ensure the site and material volumes are inspected regularly.
- Ensure that waste is regularly removed from site and stockpiles/volumes are not allowed to accumulate
- Ensure that stockpiles of material on site do not exceed limits outlined in the site stockpile management plan (SMP) for that material type.
- Ensure that stockpiles are only located in pre-designated, approved storage areas in accordance with the stockpile management plan (SMP), noting separation distances from buildings and other stockpiles.
- Ensure materials are adequately separated in line with EPA CRWM requirements.

## Bushfire

The site is located in a bushfire prone zone, although fire has not impacted the site since 1978.

To reduce the risk of offsite fires impacting site, management and employees shall:

- Conduct periodic inspections of the site (including boundaries) to ensure adequate fire breaks are cut around the property to reduce the likelihood of offsite fires impacting site and vice versa.
- Inspections should extend to vegetation within the site boundaries to ensure it is adequately maintained.
- Stockpiles must be located and managed in accordance with the stockpile management plan (SMP)
- Monitor weather and fires in the area.
- Close the site on days of extreme and catastrophic fire danger

## Electrical fire

Electrical system failures and the misuse of electrical equipment are a leading causes of workplace fires. Fires can result from loose ground connections, wiring with damaged insulation and overloading of breakers, circuits motors and outlets.

To prevent electrical fires, management and employees shall:

- Use only electrical equipment that has been tested and tagged.
- Ensure that all work to the electrical system has been performed by a suitably qualified electrician and that a Certificate of Compliance is provided on completion of any electrical works.

- Do not over load circuits or force electrical circuit breakers.
- Ensure that all electrical equipment used on site complies with the relevant standards and is in good operable condition.
- Report any electrical equipment that is broken or triggers the site safety switch and not use the equipment until repaired by an appropriately qualified and competent person or replaced.

## Office fire hazards

Fire Risks are not limited to outdoor, operational activities at the site. Fires in offices have become more frequent due to the increased use of electrical equipment such as computers, heaters, equipment charging etc.

To prevent office fires employees shall:

- Avoid using portable heaters.
- Avoid overloading circuits or power boards with office equipment.
- Only power boards fitted with surge protectors should be used.
- Turn off nonessential electrical equipment at the end of each workday.
- Ensure mobile equipment chargers are switched off and unplugged when device is removed.
- Do not leave equipment charging when the site is unattended.
- Keep storage areas clear of rubbish.
- Ensure that all electrical leads are in good condition and are tested and tagged.
- Ensure that all electrical leads are not placed under carpets or mats.
- Ensure that rubbish and waste paper are sorted for recycling and not allowed to accumulate.
- Ensure that electrical appliances such as kettles, toasters etc are in good working order and are turned off at the outlet when not in use.

## Hot works (i.e. welding, grinding etc)

Hot works are activities that have potential to cause spark, flames or excessive heat. Common hot works include welding, grinding but can also include other activities such as heating, soldering, cutting etc.

Any hot works on site must be authorised by the site manager in line with the site hot works procedure (to be developed).

- No hot works will occur without a hot work permit being completed and work authorised.
- Cutting and welding is only performed by authorized personnel in pre-designated areas in line with the completed hot work permit.
- Adequate ventilation is provided.
- Torches regulators, pressure regulators and manifolds are maintained to the appropriate codes.
- Oxygen-fuel gas systems are equipped with approved backflow valves and pressure relief devices.
- Cutters, welders and helpers are wearing eye protection and protective clothing as appropriate.
- Smoke detection systems must be isolated when cutting or welding is taking place. Ensure that the smoke detection system is returned to online/operable status after the works are completed and any smoke has dissipated.
- Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapours or dusts could develop from residues or accumulations in confined spaces.

- Cutting or welding is prohibited on metal walls, ceilings or roofs built from sandwich type polystyrene panel construction or having a combustible covering.
- Confined spaces such as tanks are tested to ensure that the atmosphere is not over ten percent of the lower flammable limit before cutting or welding in or on the tank.
- Small tanks, pipes and containers that cannot be entered are cleaned, purged and tested before cutting or welding begins.
- Fire watch has been established.

## Flammable and incompatible materials

Certain types of substances and materials can ignite at relatively low temperatures or pose a risk of catastrophic explosion if ignited. Such substances obviously require special care and handling.

While the site does not accept flammable liquids or gas bottles, there may be a requirement to store these items on site for operational use.

Potential exists for the receival of flammable materials as contamination in incoming loads. (i.e. flammable paint tins, petrol, thinners etc) and/or the disposal of materials that may cause a fire if damaged (i.e. lithium-ion batteries) or a chemical reaction if mixed with incompatible material types

The site manager will ensure the following:

- Thorough checks of received loads are undertaken to reduce the likelihood of non-permitted materials being received at site.
- Ensure regular site inspections are undertaken to identify any non-permitted materials
- In the event that non-permitted materials are found, if safe to do so, they are to be moved to a safe location and isolated (with clear signage in place) and removed within 21 days from site, to a lawful disposal location. It is important that materials are kept separated from each other to prevent a chemical reaction between incompatible types. An incident report must be completed.
- Ensure any flammable consumables or chemicals stored on site are minimised to immediate use only and stored in a safe, well-ventilated area, away from any potential ignition sources and in an appropriate container.
- Ensure no hot works or ignition sources occur near flammable materials on site.

## Vehicle fire

A range of vehicles are expected to visit the site during opening hours and potential exists for a vehicle fire to occur.

The site manager will ensure:

- Site firefighting equipment is available to assist in fighting the fire (if safe to do so).
- Vehicle access to areas of combustible materials are minimised by supervising drop-offs and ensuring vehicles remain a safe distance from larger stockpiles on site.
- Ensure vehicles only operate in designated areas as per the site traffic management plan (TMP).
- Ensure site housekeeping is maintained at the highest level.

## Arson

Arson is a major threat to any premises.

As standard practice that will help reduce the impact of any fire on site, material must be stored away from vegetation and site buildings to minimise the spread of fire, in line with EPA CRWM requirements.

The site manager will ensure the following:

- Visitor/customer management:
  - All visitors and customers must report to the site reception building upon arrival.
  - All visitors and customer arrivals are to be recorded.
  - Visitors and customers must be accounted for, evacuated and remain at the assembly area in an emergency situation.
  - Drop off areas are to be located in such a way to enable oversight of the area and site site staff are to supervise material delivery.
- Suspicious behaviour: Site and Council staff are to be vigilant and report suspicious behaviour of individuals to the site manager for action.
- Site security:
  - All gates and external doors are to be locked out of hours.
  - Regular inspections of the site boundaries to identify any damage or areas of break-ins.
  - Complete an incident report for any break-in or fence damage and submit to Council for repair or further action.
  - Ensure CCTV system is operational and reviewed in the event of any site security breaches.
  - Ideally, CCTV should be installed with a back to base intruder alarm system.

## Smoking

Smoking is prohibited in operational areas on site. No Smoking signs must be displayed.

A designated smoking area for site employee(s) and contractors could be considered if required. Should this be considered, its placement must be away from any waste storage areas and distanced from any combustible material and vegetation.

## 10. Responding to a fire

In the event of a fire on site, emergency services should be contacted immediately on “000”.

Firefighting is a specialist skill and requires extensive training and experience. It is dangerous.

Firefighting equipment is supplied on site and should only be used if safe to do so and for small, easily extinguishable fires.

Council does not expect employees to fight fire, however, will provide training for employees in the use of firefighting equipment supplied on site.

The following information is general only and does not constitute training or a procedure. It is sourced from the Workplace Emergency Management Plan (WEMP) for the site:

Outlined below is a general description of how to respond in the event of a fire. Refer to the WEMP for the detailed process to be followed in the event of a fire.

- If safe to do so, assist any person in immediate danger;
- If safe to do so, extinguish the fire using the appropriate equipment;
- Call Fire Rescue Victoria (FRV), also known as the Country Fire Authority (CFA) if it is not safe to extinguish the fire with the equipment available;
- Contact site management as soon as possible
- Take immediate action to prevent a re-occurrence of such a fire;
- Report the fire by notifying the appropriate manager and recording the incident in the Council incident reporting system;
- Appropriate people to conduct further investigations and recommend or implement corrective actions to prevent another fire; and
- Submit to EPA within 14 days of the event, a written report detailing the date, time, location, and suspected cause of the fire and when it was extinguished.

## Extinguisher use

The acronym **PASS** is used to describe these four basic steps.

- **Pull (Pin)**

Pull pin at the top of the extinguisher, breaking the seal. When in place, the pin keeps the handle from being pressed and accidentally operating the extinguisher. Immediately test the extinguisher. (Aiming away from the operator) This is to ensure the extinguisher works and also shows the operator how far the stream travels

- **Aim**

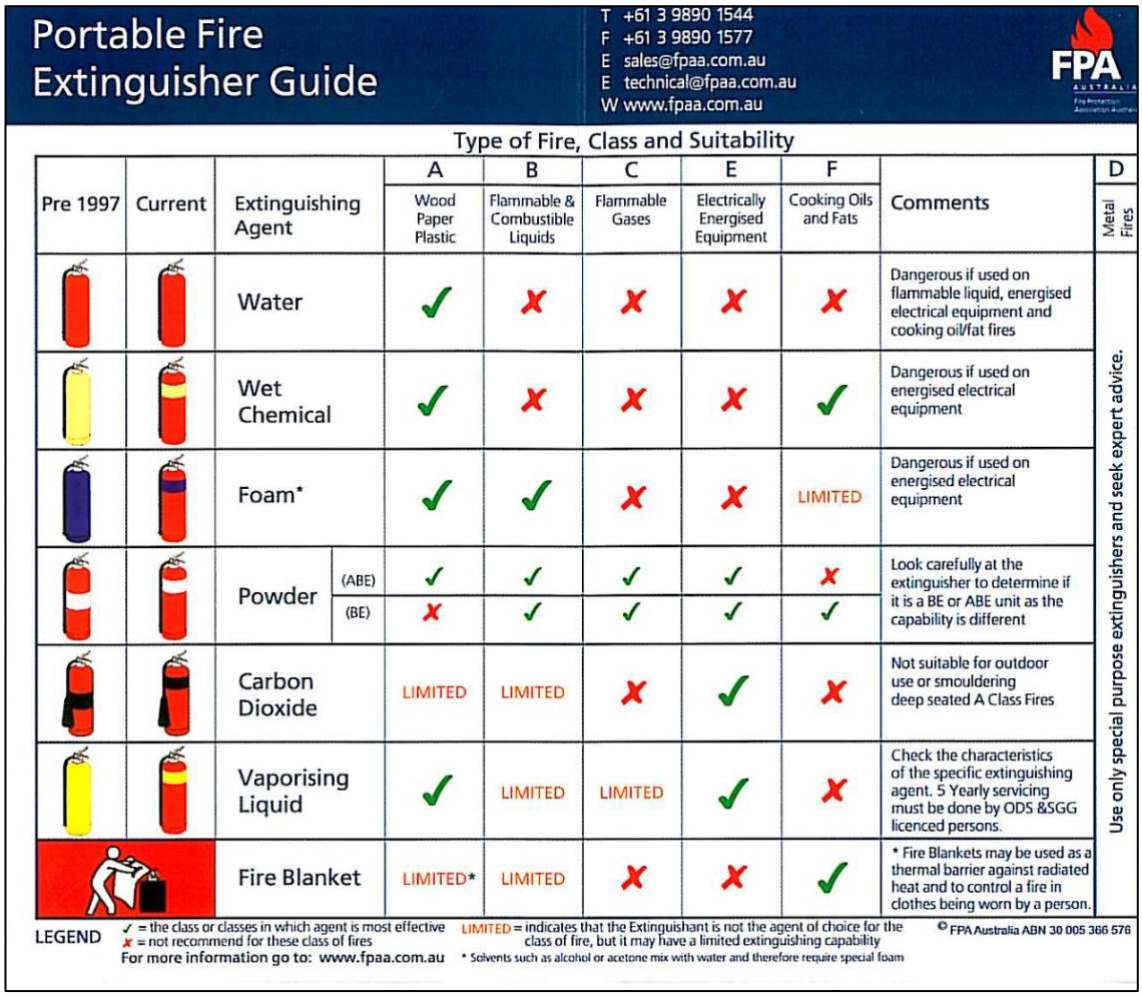
Approach the fire standing at a safe distance. Aim the nozzle or outlet towards the base of the fire.

- **Squeeze**

Squeeze the handles together to discharge the extinguishing agent inside. To stop discharge, release the handles.

- **Sweep**

Sweep the nozzle from side to side as you approach the fire, directing the extinguishing agent at the base of the flames. After an A Class fire is extinguished, probe for smouldering hot spots that could reignite the fuel.



Portable Fire Extinguisher Guide

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FPA AUSTRALIA

Type of Fire, Class and Suitability

| Pre 1997 | Current | Extinguishing Agent | | A Wood Paper Plastic | B Flammable & Combustible Liquids | C Flammable Gases | E Electrically Energised Equipment | F Cooking Oils and Fats | Comments | D Metal Fires |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Water | | ✓ | ✗ | ✗ | ✗ | ✗ | Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires | Use only special purpose extinguishers and seek expert advice. |
| | | Wet Chemical | | ✓ | ✗ | ✗ | ✗ | ✓ | Dangerous if used on energised electrical equipment | |
| | | Foam* | | ✓ | ✓ | ✗ | ✗ | LIMITED | Dangerous if used on energised electrical equipment | |
| | | Powder | (ABE) | ✓ | ✓ | ✓ | ✓ | ✗ | Look carefully at the extinguisher to determine if it is a BE or ABE unit as the capability is different | |
| | | | (BE) | ✗ | ✓ | ✓ | ✓ | ✓ | | |
| | | Carbon Dioxide | | LIMITED | LIMITED | ✗ | ✓ | ✗ | Not suitable for outdoor use or smouldering deep seated A Class Fires | |
| | | Vaporising Liquid | | ✓ | LIMITED | LIMITED | ✓ | ✗ | Check the characteristics of the specific extinguishing agent. 5 Yearly servicing must be done by ODS &SGG licenced persons. | |
| | | Fire Blanket | | LIMITED* | LIMITED | ✗ | ✗ | ✓ | * Fire Blankets may be used as a thermal barrier against radiated heat and to control a fire in clothes being worn by a person. | |

LEGEND ✓ = the class or classes in which agent is most effective ✗ = not recommend for these class of fires
For more information go to: www.fpaa.com.au
LIMITED = indicates that the Extinguishant is not the agent of choice for the class of fire, but it may have a limited extinguishing capability
* Solvents such as alcohol or acetone mix with water and therefore require special foam



*Figure 15: An example of the types of fire extinguishers available and their suitable uses (Source www.fpaa.com.au)*

## Fire Hose use

**Fire hoses** are **only** to be used on fires that fuel is **wood, paper or plastic.**

**Not to be used on: Flammable Liquids, Flammable Gases, Energised equipment or Cooking oils and fats**


- Turn on the stop valve
- Run out the length of the hose as required
- Turn on the water at the nozzle, direct the stream at base of fire
- Ensure you leave a direct egress path between you and the nearest exit door/ egress route

## Incident classification (guide)

Any incidents and emergencies are dealt with in accordance with the plans set out in this section. Such events may include (but are not limited to) emissions of dust, odour, noise, fuel or chemical spill, or fire and have been classified as a minor incident, major incident or emergency as defined in the table below.

*Table 3: Incident and Emergency Definitions*

| | Minor incident | Major Incident | Emergency |
|---|---|---|---|
| **Liquid Waste / Chemical Spill** | <200L spill | 200-1000L spill | >1000L spill |
| **Fire (waste/product)** | Small, contained fire readily extinguishable | Small to medium contained fire, readily extinguishable | Large fire that requires attendance by FRV |

## Incident Reporting and Investigation

It is important that incidents are managed within the FRMMP or for wider environmental issues, the FRMMP, however incidents are also a valuable measure of the performance of each risk management plan. A reduction in incidents and an improvement in handling of incidents is an indicator that the RMMP's are being implemented effectively.

Incidents will be reported through the EGSC incident reporting system (referred below as a logbook).

Examples of incidents to be reported include:

- Spills
- Leaks
- Fires
- Accidents
- Off-site odour
- Dust issues
- Noise issues.
- Air contaminant releases
- Near Misses for incidents with potential to result in all of the above.

The details of an incident report are to include:

- Name of the person reporting the incident;
- Time and date of the incident;
- The location of the incident;
- Description of the incident;
- An estimate of the total effect or damage of the incident;
- Measures taken to prevent a re-occurrence of the incident;
- Details of persons involved (including any witnesses); and
- Sign off by the responsible employee or manager.

Following reporting of the incident, and acknowledgement by the appropriate manager, further investigations or preventative actions are to be taken by the responsible manager.

Incident logbooks are reviewed at the management team meetings to ensure that each reported incident has in fact been dealt with appropriately. If it is deemed that an unacceptable risk of reoccurrence exists then the responsibility to remediate the issue is delegated by the meeting committee.

Incident logbooks will be made available for viewing by staff and government regulators, and reviewed each year during the ERMMP and FRMMP audits.

# 11. Environmental protections

In the event of a fire on site, it is important that the appropriate environmental protections are considered.

Potential for harm to the environment is likely to be from one of the following aspects:

- Failure to containment firefighting water (impacting Skeene Creek)
- Spread of fire to surrounding areas
- Smoke from fire impacting the community

This section focuses on how the environment can be protected from the above aspects.

## Firefighting water containment

Firefighting water can include a host of contaminants that can be harmful to the environment.

It is essential that firefighting water be contained to site and disposed of lawfully.

The sites stormwater system is the most likely route for water to escape to the environment. This means that management of the sites stormwater system is of critical importance.

The maturation pad area on site is engineered in such a way that contact water drains to the site contact water dam.

Additionally, the maturation pad is surrounded by a low bund to contain water in the area, while it drains to the contact water dam.

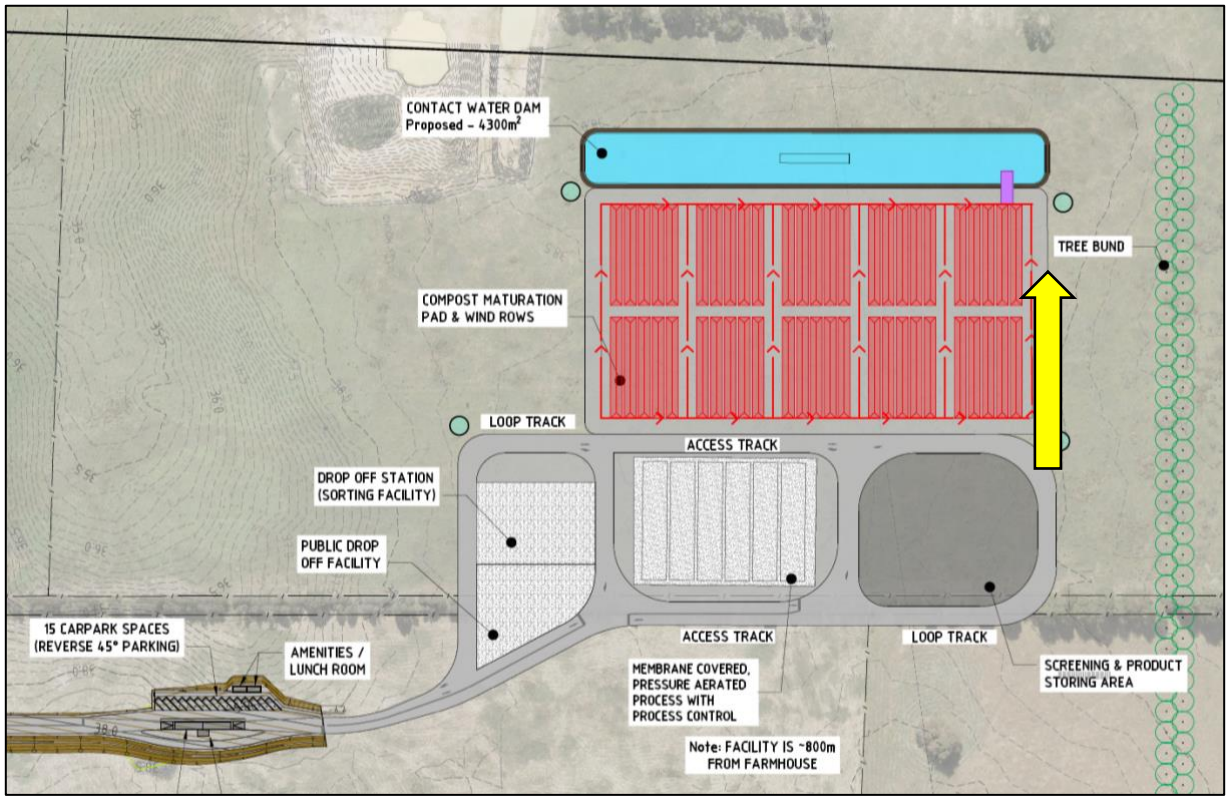


*Figure 16: Finalised site plan of the premises, showing the water flow direction towards the site contact water dam (Source: SMEC, via EGSC)*

The site uses a range of heavy equipment that may also be of assistance in the event of a fire. These include:

- Wheel loader(s)
- Excavator(s)
- Water truck

Earthmoving equipment such as excavators and wheel loaders can assist in protecting water escaping from site by building bunds to contain liquid (like a dam) or blocking drains to prevent water escaping.

Cost of clean-up: In the event of a loss of containment, EPA Victoria, has historically made the generator of the waste pay for clean-up costs, which, if not covered by insurance can cost in the hundreds of thousands to millions of dollars, depending on the size and materials involved in the event.

## Spread of fire

In the event that fire from site was unable to be contained, significant harm could occur to staff and contractors on site and also damage to site infrastructure if the fire were to spread.

The site design and operation will focus on fire prevention above all else.

Extinguishing any fire quickly and efficiently is the overarching requirement of any firefighting strategy. Emergency services will be contacted immediately in the event of a fire on site while measures are taken on site to reduce the spread and impact of any fire.

The next priority will be containment of fire. Travel time from the local CFA in Bairnsdale is approximately 9 minutes, not including the time to organise crews. This period has potential to allow a fire to spread. This is why fire containment becomes the next most important task.

The design of the site, including the stockpile layout plan (SMP) is structured in such a way to prevent the spread of fire from one area to another. This will be supported by operational activities such as a regular vegetation inspection and management program to reduce the pathways and opportunities for fire to spread.

It is imperative that any fire response procedure developed by Council includes the training of all relevant people in this FRMMP, how (and when) to use firefighting equipment and to ensure an understanding of what to do in the event of a fire.

## Smoke

Fire in organics processing facilities generally create a lot of smoke. Smoke from an organics fire is unlikely to contain hazardous fumes, however smoke can be a nuisance to health people's health and for people suffering from respiratory illnesses such as asthma, smoke can be dangerous.

The site concentrates its efforts on fire prevention and containment.

In the event that a fire did start on site, the location of the facility will help minimise the impact on neighbours with the closest residential home (a farmhouse) being located around 700m West-North-West of the operational areas of the site.

In accordance with the site's Workplace Emergency Management Plan(WEMP), neighbours will be contacted in the event of a fire to alert them of the incident and what is happening.

## 12. Duties to Notify

The facility will hold an EPA Issued Operating Licence. There are two standard conditions on A07a licences that specifically refer to fire. These are:

| | |
|---|---|
| OL_WM04 | You must ensure that waste does not burn at the premises. |
| OL_G02 | You must immediately notify the Authority by calling 1300 EPA VIC (1300 372 842) in the event of:<br>(a) A discharge, emission or deposit which gives rise to, or may give rise to, actual or potential harm to human health or the environment;<br>(b) A malfunction, breakdown or failure of risk control measures at the activity site which could reasonably be expected to give rise to actual or potential harm to human health or the environment; or<br>(c) Any breach of the licence. |

You must report a pollution incident to EPA Victoria if it breaches an EPA licence condition or causes or threatens 'material harm'. This means:

- There is an adverse effect on human health or the environment
- There is an adverse effect on an area of high conservation value or of special significance
- The clean-up or management of the pollution or cost of restoration would cost $10,000 or more.

Your obligation to report applies even where the incident is contained to your site.

Actual harm does not need to have occurred for you to report the incident. It also applies where harm is threatened by the event.

Examples of the types of incidents to report include:

- Any breach of the GED
- A fire
- A release of a substance that is uncontrolled or unplanned and could cause material harm
- If released substances are harmful to water or land in any quantity, such as final product and or ingredients
- A clean-up that would be expensive (over $10,000)
- Release of any substance that is considered a ‘substance of concern’ in the Environment Protection Regulations 2021
- Release of any substances that are dangerous or toxic and threaten the environment or people. An example being your safety data sheet (SDS) indicates risk to the environment or to people.

**Important:**

A fire on site is a notifiable incident under the site Operating Licence conditions.

If there is a fire on site, it must be reported to the EPA.

EPA VICTORIA: 1300 372 842

## How to notify EPA of an incident

As soon as practicable after you're aware there is a notifiable incident, you must report it. Follow the steps below to report the notifiable incident.

**STEP 1**

Call EPA on 1300 372 842 (within 24 hours). You'll be asked for the following information:

- Your contact information
- Your business name and address
- The time, date and location of the notifiable incident
- Type of incident it was, such as a spill, leak, escape or fire
- What caused the incident, or you suspect caused it
- Estimate of volumes released
- What you think the impact may be on human health and the environment
- How you're managing the incident.

**Important:** You must report a notifiable incident even if it puts your business at risk of legal action. You may receive a penalty if you don't.

**STEP 2**

EPA Victoria will email you a notification form after you've reported the incident. Complete the form and return it to EPA Victoria within five business days. Note: Your report of a notifiable incident isn't complete until you return the form to EPA.

If an environment protection officer needs to attend your site, you may be asked to assist during the inspection.

**Note:** It is recommended that notification be completed by an authorised member of the site management team to ensure all information is passed on correctly and the appropriate steps are followed.

Regardless of whether there is a duty to report the incident or not, you still need to take account of pollution incidents. Risks should be addressed and managed as part of your general environmental duty. You are also still required to restore the environment, whether or not it causes material harm.

It is Management's responsibility to monitor for updates, changes and modifications to the reporting / notification triggers on any Legislation and Regulation.

# 13. Clean-up (Waste Management)

With the appropriate containment systems in place to prevent firefighting wastes entering the environment, the waste generated from the fire must be disposed of lawfully.

Council recognises that in the event of an unplanned scenario (such as a fire or other unpanned event), reportable priority wastes (RPW's) may be produced. Potential events and appropriate actions to be taken have been addressed within this section (see below).

## Fire debris waste code

Fire waste is classified as an RPW, the highest order of waste, and is classified under waste code N140.

The table below provides the official description of fire waste as per the classifications in EPA Publication 822 *Waste codes*, June 2021.

*Table 4: Fire debris waste code as per EPA classifications.*

| **Waste Category** *(Industrial, PW, RPW)* | **Waste Code** | **Waste Description** |
|---|---|---|
| RPW | N140 | Fire debris and fire wash waters excluding anything covered under item 79* of this table. |

* Item 79 covers the presence of Per- and poly-fluoroalkyl substances (PFAS) contaminated materials, including soil and waste PFAS-containing products and contaminated materials.

## Lawful disposal

The lawful disposal of waste is a key component under the Environment Protection Act 2017 (Vic.) and the Environmental Protection Regulations 2021 (Vic.). This is formed under the general environmental duty.

Waste must only be disposed to sites that are appropriately permissioned to receive that waste code. In the case of RPW material, such as N140, the requirement for a permission also applies to transporters to carry the material.

Council is committed to protecting the environment through the responsible and lawful disposal of wastes produced from its activities.

All material leaving site must be classified under the EPA publication 1827.2, waste classification assessment protocol.

# 14. Regulatory framework

The following section provides a synopsis of the relevant regulatory framework.

## Environment Protection Act

The Environment Protection Act 2017 (the Act) provides the legislative framework for protection of the environment in Victoria, including:

- Principles of environment protection;
- A range of tools for control of activities with potential to impact the environment; and
- Offences related to pollution and improper handling of waste.

The key principles of environment protection set out in the Act constitute a guiding framework within which EPA's activities and decisions take place. These principles are:

- Integration of environmental, social and economic considerations;
- Proportionality;
- Primacy of prevention;
- Shared responsibility;
- Polluter pays;
- Waste management hierarchy;
- Evidenced-based decision-making;
- Precautionary;
- Equity;
- Accountability; and
- Conservation.

The Act also provides the main statutory framework for licensing and controlling discharges to land, water, and atmosphere. It contains provisions that:

- Requires prescribed permissions for activities;
- General Environmental Duty (GED) and risk-based approach to managing duties;
- Enable enforcements and proceedings;
- Control noise;
- Require prescribed permission activity for certain activities;
- Regulate transportation of wastes;
- Lawful disposal mechanisms (including duties for industrial waste management);
- Regulate accreditation of environmental auditors and the issue of certificates of environmental audit;
- Allow for accredited consigners to assist in managing businesses waste duties; and
- Require the minimisation of waste.

**General Environmental Duty (GED)**

On July 1, 2021, the new Environmental Protection Act (EP Act) 2017 was established and requires all businesses (activities) in Victoria to comply with the General Environmental Duty (GED). The GED has several areas that require coverage when operating a business which are as follows;

- Risk assessment, implementation and evaluation – SFARP
- Maintenance of plant and equipment to protect Human Health and Environment
- Develop, use and maintain adequate systems (such as this document) to minimise the risk of pollution or waste causing harm or potential harm
- Handling and storage of substances in a manner that reduces risk of harm or potential harm
- Provide information, training and supervision to ensure the duty holder complies

## Environment Reference Standards (ERS)

Environment reference standards (ERS) are declared under s.93 of the *Environment Protection Act* 2017 (Vic.).

Excerpt from the ERS :

*It sets out the environmental values of the ambient air, ambient sound, land and water environments that are sought to be achieved or maintained in Victoria and standards to support those values.*

*Environmental values are the uses, attributes and functions of the environment that Victorians value. Some examples are water that is safe to drink; air quality that sustains life, health and wellbeing; land that is suitable for production of food; and an ambient sound environment that supports sleep at night.*

A discharge to the relevant segment of the environment must not compromise the beneficial uses of that segment.

The ERS contains all relevant parts of the previous Act's State Environmental Planning Policies (SEPPs), in a single document that contains all values.

The Environment Reference Standards relevant to this FRMMP are:

- Part 2: Ambient Air
- Part 3: Ambient Sound
- Part 4: Land
- Part 5: Water

## Other Regulatory Requirements

Other regulatory requirements relevant to this FRMMP include:

- Environment Protection Regulations 2021. Risk based approach to perform an activity. Commitments to the General Environmental Duty (GED)
- Lawful place disposal, consigning waste produced correctly, commitments around priority waste;

## Relevant Policy, Codes and Guidelines

The following policies, codes, and guidelines are relevant to this FRMMP:

- EPA Publication 1588.1: Designing, constructing and operating composting facilities;
- EPA Publication 1667.2, Management and storage of combustible recyclable and waste materials, October 2018;
- EPA Publication 1695.1 Assessing and controlling risk for business August 2018;
- EPA Publication 1741 Industry guidance: supporting you to comply with the general environmental duty October 2020;
- EPA Publication 1700 Preventing liquid leaks and spills from entering the environment June 2018;
- EPA Publication 1856 Reasonably practicable September 2020;
- EPA Publication 822 Waste codes June 2021;
- EPA Publication 1827.2, Waste classification assessment protocol, March 2021;
- EPA Publication 1946 How to establish lawful place March 2021;
- EPA Publication 1828.2, Waste disposal categories – characteristics and thresholds, March 2021;
- EPA Publication 1851, Implementing the general environmental duty: A guide for licence holders, March 2020;

It is advisable to sign up to the EPA's newsletter so you are kept informed of recent events and updated guidelines to assist in forming the principles of this document.

# 15. Training & Education

EGSC understands and recognises that training of staff and contractors is integral to a strong and effective fire risk management and monitoring plan.

## FRMMP awareness

All staff and contractors are to be made aware of (and have access to) this Fire Risk, Monitoring and Management Plan (FRMMP).

This will be informed via the site induction process, refresher training and site familiarisation activities (i.e. toolbox meetings).

The FRMMP will be stored in the site administration office area.

## Site Induction

All staff and contractors are to complete a site induction as part of the on-boarding and engagement process.

The purpose of the site induction is to inform workers at the site (employees and contractors) of Council's site safety, environmental and behavioural expectations and processes on site.

## Procedure training

Staff and contractors who undertake activities relating to the operation or maintenance of the facility must be trained in procedures relating to their specific tasks. Depending on the nature of the job, this may entail many procedures.

Additionally, subject to the complexity and risk involved in the activity, assessment of competency should also be undertaken to ensure the person can prove they are capable of completing the task satisfactorily and without risk of causing harm to human health or the environment.

All training documentation must include a completed attendance record sheet, clearly outlining the names of the trainer, student, date, procedure name (and version) and date of completion.

## Training matrix

The below table outlines a simplified training schedule for activities on site that have potential to cause fire.

The training matrix should list the required training required for each job description to ensure new (and existing) employees are appropriately trained to conduct their jobs safely, compliantly and effectively.

Unless otherwise stated in specific training material or required under legislation, the following frequencies should be adhered to (table below).

*Table 5: Simplified training schedule for proposed activities at site*

| Training Description | Initial training | Refresher | Applicable to: |
|---|---|---|---|
| Site Induction | On employment / engagement | If needed (major change) | All staff & Contractors |
| Fire Risk, Monitoring and Management Plan (FRMMP) | On employment / engagement | 2 yearly (or on major change) | All staff |
| Workplace Emergency Management Plan (WEMP) | On employment / engagement | 2 yearly (or on major change) | All staff |
| Stockpile Management Plan (SMP) | On employment / engagement | 2 yearly (or on major change) | Site managers and supervisors |
| Specific procedures (SOP's) | On employment / engagement (prior to being permitted to perform task) | 2 yearly (if no change); or At time of any update or change | Relevant staff authorised to perform activity |
| Competency training (for specific tasks where required) | On employment / engagement | 2 yearly (if no change); or At time of any update or change | All staff authorised to perform identified activity |
| Incident / Hazard Reporting | On employment / engagement | 2 yearly (or on major change) | All staff |

# 16. Monitoring, recording and reviewing

## Regular reviews

Council understands that compliance needs change in line with legislation, the environment, safety and new and improved activities of the business. Therefore, regular reviews of systems on site are required to ensure compliant and safe operation.

All documents should be reviewed periodically to ensure systems are always improving and up to date. It is the responsibility of the Environmental Representative / Manager to ensure that controls presented here are implemented and documented in the case of management practices and operational procedures.

Reviews should be conducted upon any significant changes to a processes or at a minimum of annually for each process on site. Improvements and additional controls can be identified in a number of ways, including (but not limited to) Toolbox talks/meetings, management meetings, safety walks, legislation changes, audits, hazard and incident reports and investigations, general conversations and environmental and fire risk assessments.

It is important that if any change to a process occurs it must be documented and related documents be reviewed and updated to accurately reflect the change.

Any changes should then be clearly communicated to the relevant staff and documented.

## FRMMP Assessment

Frequency: **Annually**
By: **Environmental Management Team**

Assessment and monitoring of the FRMMP is to be conducted by the Environmental Management Team on an annual basis to ensure firstly that fire management measures are being implemented, and secondly that they are effective.

A site team leader will take responsibility for managing and conducting such inspections, and/or will delegate the responsibility to another staff member with a thorough knowledge of the FRMMP and fire risks at the site in their absence.

The assessment procedure should include the following key tasks:

- Review of the fire preparedness and fire prevention practices that are in place;
- Review integrity of firefighting water tanks (including access to outlets);
- Review of any incidents relating to any aspect of the operation with potential to cause fire to ensure control measures are effectively mitigating fire risks and potential impacts;
- Review of site inspection checklists; and
- Assessment of the performance of the FRMMP and provision of the required updates and changes to the FRMMP.

Any changes to the FRMMP are to be recorded according to the document control process of the FRMMP (See Document control and release) to ensure all changes are accurately captured and demonstrate the continual improvement of systems on site.

To assist in the assessment and monitoring process, an "Annual FRMMP Inspection Checklist" should be filled in to ensure that a standardised approach to monitoring is performed. The use of toolbox meetings is also used to assist the assessment and monitoring of potential fire risks.

The inspection checklist will be contained in the main office. A physical copy of the annotated checklist should be kept for review.

## Fire risk assessment review

Frequency: **Upon change of process and Annually**
By: **Environmental Management Team**

The site fire risk assessment (FRA) must be reviewed upon any change to processes on site. This is to ensure that fire risks posed by any change to operations on site is understood and assessed to be acceptable before proceeding.

Even if no changes have occurred to the process, the FRA must still be reviewed annually to assess the effectiveness of controls. This review should also be used to investigate alternative controls that may further improve current risk profiles of activities on site.

## Daily site Inspections

The following site inspections are required to be conducted in line with the frequencies stated.

Inspection: **Site inspection checklist**
Frequency: **Daily**
By: **Site Manager / Supervisor**

A daily site inspection should occur that ensures key aspects of the site are operating in a compliant manner. While this FRMMP focuses on fire only, it is recommended (for efficiency purposes) that a single site inspection checklist be completed, including environmental matters.

The fire related checks should include a visual inspection and recording of:

- General housekeeping in area (inside and out - including vegetation, contamination etc)
- Sufficient stockpile separation distances between stockpiles (in line with stockpile management plan)
- Current weather conditions on site (temperature, wind direction, wind speed)
- Inspection of tanks, bunding and drains, checking for leaks, signs of damage or blockage
- Chemical storage (correctly stored – i.e. correctly segregated)
- Signs of pest infiltration
- Visual inspection of all machinery
- Note any repairs required (maintenance as part of the GED)
- Note any known permit to work requirements planned for the day
- General observation of surrounding areas for any potential fire risks (i.e. nearby fires).

Any anomalies observed must be rectified at the time or reported to site management for rectification.

Name: **Environmental Inspection**
Frequency: **Monthly**
By: **Council Senior Operations staff**

A monthly environmental inspection is conducted by a senior member of the Council operations team. This inspection includes checks of environmental matters, including fire:

- Visual signs of stormwater contamination (pits & drains)
- Site condition (including housekeeping, site cleanliness, vegetation growth etc.)
- Note of last and next waste disposal review (see waste disposal reviews section)
- Review incident register (have any incidents with potential to, or have caused fire or harm to the environment occurred?)
- Review of site waste register (including lawful disposal check)
- Review any known legislative changes to ensure compliance is maintained
- Review any known changes to procedures on site (has all documentation been updated to match?)
- Review of complaints register
- Any other items of note

## Fire equipment testing

Inspection: **Fire equipment servicing and testing**
Frequency: **6 monthly (or in line with applicable Australian Standards/Legislation)**
By: **Appropriately qualified fire services provider**

Fire equipment testing must be completed by an appropriately qualified fire services contractor every 6 months, or as required by the applicable Australian Standards and Legislation for the environment in which each piece of equipment will be operating.

## Independent site Inspections

The following site inspections are required to be conducted in line with the frequencies stated.

Inspection: **Independent site inspection & report**
Frequency: **Annual**
By: **Appropriately experienced independent advisor**

On an annual basis, an independent, physical site inspection should be undertaken by a suitably experienced contractor to provide an external assessment of the site to ensure it is meeting compliance requirements for CRWM storage and general environmental compliance matters.

The checks should include a visual inspection and provide an assessment report on site activities and potential environmental hazards, including:

- Evidence that the FRMMP is being implemented
- Review of site risk assessments (environmental and fire)

- Chemical storage
- Stormwater protection
- Fire preparedness controls
- Waste management practices (including lawful disposal reviews)
- Dust control
- Noise
- Waste storage
- CRWM storage
- General housekeeping
- Areas for potential improvement
- Any updates to applicable legislation(s)

## Waste disposal reviews

Waste disposal activities will be reviewed on a regular basis to ensure that any waste disposed goes to a lawful place for disposal. This will be conducted in line with the schedule in the table below:

Note: This is applicable to the disposal of firefighting wastes (an RPW) as outlined in Clean-up (Waste Management).

*Table 6: Lawful disposal facility review schedule*

| Waste Category | Review Schedule |
|---|---|
| Industrial Waste | • On engagement of contractor (start of contract)<br>• Upon notification (or rumour) of any change<br>• Annually (at minimum)<br>• *Note: Any change to disposal location should be advised in writing from the contractor, checked and approved by EGSC management to ensure it is lawful prior to any change in disposal location being permitted.* |
| Priority Waste (PW) | • On engagement of contractor (start of contract).<br>• Upon notification (or rumour) of any change<br>• Each load for irregular, one-off loads (i.e. clean-outs).<br>• Quarterly (at minimum) for regularly disposed, consistent PW's<br>• Annually (at minimum) check for alternate disposal/reuse opportunities.<br>• *Note: Any change to disposal location should be advised in writing from the contractor, checked and approved by EGSC management to ensure it is lawful prior to any change in disposal location being permitted.* |
| Reportable Priority Waste (RPW) | • **Important:** Waste must be categorized and coded correctly. If unsure, the Council should engage an EPA Accredited Consigner to consign the waste correctly.<br>• On engagement of transport contractor (check transporter permissions and disposal outlet permissions at www.epa.vic.gov.au)<br>• At time of collection (confirm both transporter and disposal permissions at time of completion of Waste Tracker information)<br>• **Each and every load**<br>• *Note: Any change to disposal location should be completed in the EPA Waste Tracker program and approved by EGSC management to ensure it is lawful prior to any change in disposal location being permitted.* |

## Review Periods for items not specified

All procedures not specifically identified in the FRMMP are to be reviewed in accordance with applicable legislative requirements. If no legislative requirement exists, these will be performed on an "as-needed" basis, and **at least annually**.

Any major changes to the operations at the site should trigger a review and are to be reflected in the respective procedures and the effect of the change assessed in the fire risk assessment.

## FRMMP Review / Audit

It is recommended that the FRMMP be reviewed **by Council senior management annually** to ensure:

- The operation of the facility is meeting the regulatory requirements specified within the EP Act (2017);
- The FRMMP is being implemented;
- Lawful disposal has occurred (if there has been a fire); and
- Fire risks are being identified and adequately managed.

# 17. FRMMP monitoring matrix

The following matrix indicates the frequencies in which inspections and reviews identified in this FRMMP are to be completed.

*Table 7: FRMMP monitoring matrix, displaying frequencies for inspections and reviews:*

| Description | Frequency | | | | | |
|---|---|---|---|---|---|---|
| | Daily | Weekly | Monthly | 6 Monthly | Yearly | Other |
| Weekly site inspection (including checklist) | X | | | | | Daily (visual) observations |
| Firewater supply check (visual check and record) | | X | | | | |
| Fire protection systems – extinguishers, hoses etc. (external contractor – refer **Error! Reference source not found.**) | | | | X | | Or after use |
| Waste disposal – Lawful disposal checks (refer 0) | | | | | | As required – refer to Table 6, section 0) |
| FRMMP assessment (refer 0) | | | | | X | |
| Internal FRMMP audit/review (refer 0) | | | | | X | |
| Independent (external) FRMMP inspection (refer 0) | | | | | X | |
| Fire Risk Assessment review (0) | | | | | X | And upon any process changes |
| Site induction content review | | | | | X | And upon any relevant changes onsite |
| Items not specified (refer 0) | | | | | X | And upon any relevant changes onsite |
| Incident report & investigation | | | | | | As required |
| Invitation for familiarisation visits to site by local fire authority | | | | X | | Suggested 6 - monthly |

## 18. Limitations

This FRMMP has been prepared by CRA for the use of East Gippsland Shire Council (EGSC) for the proposed Bairnsdale Composting Facility, located at 200 Johnstons Road, Forge Creek. This document has been prepared in support of the requirements for the safe and environmentally compliant operation of the composting process on site. It is a requirement of the general environmental duty to have a risk-based approach to managing the EGSC's legal responsibilities.

CRA exercised a high-level of care, used thorough and appropriate investigation and review methodologies combined with extensive compliance knowledge and operational experience of fire hazards associated with operation of organics processing facilities.

This document has been prepared by Circular Resources Australia (CRA) for the exclusive use of EGSC in accordance with the project scope and CRA's standard terms and conditions. This report may not be relied upon, reproduced or copied by other parties without written consent from both CRA and the Client. No warranties or guarantees are expressed or should be inferred by any third parties.

The information in this report is for the use of EGSC only and is expected to change and mature along with the businesses journey of compliance with the new EP Act (2017).

The relevant information, provided by EGSC, has been used in good faith and CRA accepts no responsibility for the information supplied. Unless clearly stated in the report, any statements, facts, information, conclusions, opinions and or recommendations, in whole or part, are based on the information provided by the client. CRA cannot be held liable should any information, data or information be incorrect or concealed, misrepresented, withheld, omitted or otherwise not provided in its entirety to CRA.

CRA cannot be held responsible to the Client and/or others for any matters outside the agreed scope of services.

No warranty of site conditions is intended.

# 19. Appendix

- Proposed Bairnsdale Compost Facility Fire Risk Assessment (FRA)

| | |
|---|---|
| **Site Address** | 200 Johnstons Road, Forge Creek, Victoria. 3875 |
| **Context of Assessment** | This desktop assessment is intended to support East Gippsland Shire Council's application to EPA Victoria for a composting activity operating licence at the above location. This document has been designed to become a "live" document in future, to guide operations and form part of the site risk management and monitoring program once the site is operational. |
| **Date of Assessment** | Mar-24 |
| **Reviewed** | Oct-25 |
| **Completed by:** | Allan Cummins, Circular Resources Australia. Ph: 0402 275 713. Email: allan.cummins@craus.com.au |
| **Risk Model** | This fire risk assessment was based on techniques outlined in EPA publication 1695.1 (August 2018): *Assessing and controlling risk: A guide to business.* |

**Review Records:**

| Position / Title | Name | Signature | Date |
|---|---|---|---|
| | | | |
| | | | |
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## RISK ASSESSMENT STRUCTURE

This fire risk assessment has been constructed to provide a simple format for identifying and assessing fire risks and control effectiveness on site.

**Note:**

1/. This document should be thoroughly reviewed annually or when any change to process occurs. The risk assessment should be updated to reflect the risks involved with any changes made and the new process reviewed accordingly

2/. This risk assessment should be reviewed and signed off by senior management of East Gippsland Shire Council to ensure understanding of the risks and controls involved in the management and operation of the proposed Bairnsdale Composting Facility. All links in the Chain of Responsibility are reminded they have a General Environmental Duty under Victorian Environmental Law

3/. It is recommended that an appropriately experienced 3rd party review the document and operational activities with potential to cause fire and impact the environment on an annual basis to assist in identifying current environmental risks and general compliance with Victorian Environmental law (Environment Protection Act 2017).

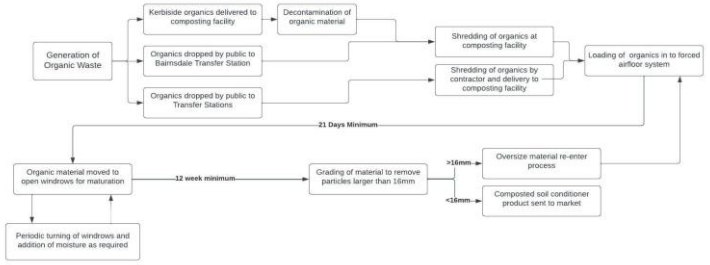
4/. Further information about Victorian Environmental Law and the General Environmental Duty (GED) can be accessed at the EPA Victoria website: www.epa.vic.gov.au

5/. Assistance with the preparation of this desktop Fire Risk Assessment has been provided by Circular Resources Australia (CRA), in line with information and site tours facilitated by East Gippsland Shire Council personnel. CRA thanks East Gippsland Shire Council for the opportunity to assist and their ongoing commitment to designing a compliant facility and consideration of the prevention of fire onsite, harm to the environment and human health.



| RISK LEVEL | DESCRIPTION |
|---|---|
| Extreme | Totally unacceptable level of risk. Stop work and/or take action immediately. |
| High & Very High | Unacceptable levels of risk. Controls must be put in place to reduce risk to lower levels. |
| Medium & Medium (High) | Can be acceptable if significant controls are in place. Attempt to reduce to low. |
| Low | Acceptable level of risk. Attempt to lower risk to very low but higher risk levels should take priority. |
| Very Low | Acceptable level of risk. |

| CONSEQUENCE | LIKELIHOOD: Rare | Unlikely | Possible | Likely | Almost Certain |
|---|---|---|---|---|---|
| | Could happen but probably never will | Not likely to happen in normal circumstances | May happen at some time | Expected to happen at some time | Expected to happen regularly under normal circumstances |
| Severe: Significant long-term serious environmental harm / threatening or long-term harm to health and wellbeing. | Medium (High) | High | Very High | Extreme | Extreme |
| Major: Serious environmental harm / high level harm to health and wellbeing. | Medium | Medium (High) | High | Very High | Extreme |
| Moderate: Medium level of harm to health and wellbeing or the environment over an extended period of time. | Low | Medium | Medium (High) | High | Very High |
| Minor: Low environmental impact / low potential for health and wellbeing impacts. | Very Low | Low | Medium | Medium (High) | High |
| Low: No or minimal environmental impact, or no health and wellbeing impacts. | Very Low | Very Low | Low | Medium | Medium (High) |



# Bairnsdale Fire Risk Assessment

| | |
|---|---|
| **Site Address** | 200 Johnstons Road, Forge Creek, Victoria. 3875 |
| **Context of Assessment** | This desktop assessment is intended to support East Gippsland Shire Council's application to EPA Victoria for a composting activity operating licence at the above location. This document has been designed to become a "live" document in future, to guide operations and form part of the site risk management and monitoring program once the site is operational. |
| **Date of Assessment** | Mar-24 |
| **Reviewed** | Oct-25 |
| **Risk Model** | This fire risk assessment was based on techniques outlined in EPA publication 1695.1 (August 2018): *Assessing and controlling risk: A guide to business.* |

**Reviewed by:**

| Position / Title | Name | Signature | Date |
|---|---|---|---|
| | | | |
| | | | |
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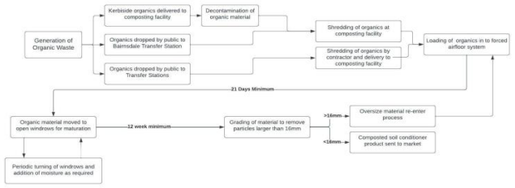
| RISK LEVEL | DESCRIPTION |
|---|---|
| Extreme | Totally unacceptable level of risk. Stop work and/or take action immediately. |
| High & Very High | Unacceptable levels of risk. Controls must be put in place to reduce risk to lower levels. |
| Medium & Medium (High) | Can be acceptable if significant controls are in place. Attempt to reduce to low. |
| Low | Acceptable level of risk. Attempt to lower risk to very low but higher risk levels should take priority. |
| Very Low | Acceptable level of risk. |




| CONSEQUENCE | | LIKELIHOOD | | | | |
|---|---|---|---|---|---|---|
| | | Rare | Unlikely | Possible | Likely | Almost Certain |
| Permanent or long term serious environmental harm / life threatening or long-term harm to health and wellbeing. | Severe | Medium (High) | High | Very High | Extreme | Extreme |
| Serious environmental harm / high level harm to health and wellbeing. | Major | Medium | Medium (High) | High | Very High | Extreme |
| Medium level of harm to health and wellbeing or the environment over an extended period of time. | Moderate | Low | Medium | Medium (High) | High | Very High |
| Low environmental impact / low potential for health and wellbeing impacts. | Minor | Very Low | Low | Medium | Medium (High) | High |
| No or minimal environmental impact, or no health and wellbeing impacts. | Low | Very Low | Very Low | Low | Medium | Medium (High) |
| | | Could happen but probably never will | Not likely to happen in normal circumstances | May happen at some time | Expected to happen at some time | Expected to happen regularly under normal circumstances |

| | | | | | | Uncontrolled Risk | | | | Controlled Risk (Suggested) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item No. | Location | Activity | | Hazard/Risk/Aspect | Impact | Consequence | Likelihood | Risk Rating | Proposed Controls | Consequence | Likelihood | Residual Risk Rating | Control Effectiveness | Additional Controls | Action Responsibility | Due Date | Consequence | Likelihood | Residual Risk | Control Effectiveness |
| 1 | Site Wide | Electrical Works | Construction & Maintenance | Electrical infrastructure or appliances causing heat, spark or fire | Fire causing damage to site infrastructure and risk to employee & contractor safety | Major | Unlikely | Medium (High) | Electrical works (including installation, repairs, or upgrades) to be only completed by qualified electricians<br>All construction and installations to be completed in line with applicable, current code/standards<br>Safety switches installed<br>Appliances to be tested and tagged with regular program in place<br>Immediate removal from service of appliances or equipment deemed to be faulty<br>Electrical equipment records to be kept (date of purchase, instructions etc.)<br>Pest control systems to reduce risk of damage to electrical infrastructure (i.e. rats)<br>Electrical infrastructure enclosed in PVC pipework<br>Regular housekeeping inspections include visual check of electric installation condition (clear of obstruction, material build-up etc)<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>Evacuation drills to be regularly conducted | Moderate | Rare | Low | | | | | | | |
| 2 | Site Wide | Hot works: Maintenance and repairs of equipment | Construction & Maintenance | Repair works on site causing heat, spark or fire | Fire causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Possible | Medium (High) | Hot work permit required for grinding, welding etc<br><br>If maintenance works are required while on site, it will be undertaken in designated areas with adequate separation distances to any combustible material or site vegetation<br>Fire extinguishers must be located nearby when hot works are performed<br>Hot works procedure<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>Evacuation drills to be regularly conducted | Minor | Unlikely | Low | | | | | | | |
| 3 | Site Wide | Equipment Maintenance | Construction & Maintenance | Failure to adequately maintain mobile and fixed plant on site, leading to breakdown of equipment or heat build-up causing fire | Heat from machinery causing ignition of material on site with potential to cause damage to site infrastructure, risk to employee & contractor safety and failure of general environmental duty (GED) | Moderate | Possible | Medium (High) | Mobile and fixed plant to be serviced in line with manufacturers recommendations<br>Pre-start checks prior to equipment being used each day (include checklist)<br>Fire extinguishers on every piece of equipment<br>Regular cleaning of machinery to ensure build-up of material is removed<br>Use of hire equipment where available if equipment is out of action to enable continual operation<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>Evacuation drills to be regularly conducted<br>Business continuity plan to be developed | Moderate | Unlikely | Medium | | | | | | | |
| 4 | Site Wide | Vegetation maintenance (grounds maintenance) | Construction & Maintenance | Poorly maintained vegetation can provide a pathway for fire to spread around site | Fire spreading around site causing damage to site infrastructure and risk to employee & contractor safety | Major | Possible | High | Regular maintenance of vegetation on site<br>Regular site inspections<br>Evacuation drills to be regularly conducted<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | Medium | | | | | | | |
| 5 | Site Wide | Employee / Contractor / Visitor behaviour | Human Behaviour | People on site acting in a way as to cause risk of fire (i.e. smoking, not completing tasks correctly etc.) | Fire causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Possible | Medium (High) | Site induction for employees and contractors<br>Site activities supervised<br>No smoking permitted on site (signage to be in place)<br>Daily site inspection (including checklist completion) to be completed by site supervisor/manager to ensure tasks are completed<br>Hazard/incident reporting system to be implemented<br>Fire Risk Management and Monitoring Plan (FRMMP) | Moderate | Unlikely | Medium | | | | | | | |

# Bairnsdale Fire Risk Assessment

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Site Wide | Vandalism / arson / malicious damage | Offsite Threats | Deliberate damage / ignition of product and/or equipment | Fire causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | Site is locked / secured during non-operational hours<br>Perimeter fencing. Gates closed and locked outside of operational hours<br>Remote monitoring capability for CCTV system<br>Remote alert system if an after hours fire is detected (i.e thermal monitoring system)<br>Emergency Services involvement<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Rare | **Low** | | | | | | | | |
| 7 | Site Wide | Lightning strike | Offsite Threats | Lightning strike causing fire on site | Fire on site with potential to spread to other areas causing larger fire | Major | Rare | Medium | Site stockpiles to be maintained at a maximum height of 4 metres (or less), minimising risk of lightning strike<br>Regular maintenance of vegetation on site to minimise opportunity for fire to spread<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>Call "000" in the event of fire | Moderate | Rare | **Low** | | | | | | | | |
| 8 | Site Surrounds | Offsite fires impacting site | Offsite Threats | Risk of bushfire impact from surrounding area | Fire causing damage to site infrastructure and risk to employee & contractor safety | Major | Unlikely | Medium (High) | Regular maintenance of vegetation on site to minimise opportunity for fire to spread onto site<br><br>Site to reduce operations on days of extreme fire danger<br>Site to be closed on days of catastrophic fire danger<br>Monitoring of emergency services communications (i.e. apps or AM/FM radio) in times of high fire danger<br>Evacuation drills (desktop style)<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>Call "000" in the event of fire | Moderate | Rare | **Low** | | | | | | | | |
| 9 | Site Wide | Firefighting preparedness | Emergency Response | Inappropriate fire-fighting capability for site operations resulting in inability to adequately fight fires on site | Fire causing damage to site infrastructure and risk to employee & contractor safety | Major | Possible | High | Firefighting water supply to be provided by clean water dams on site<br><br>Site design strategy to be focused on fire prevention and then a fire mitigation strategy, including processing of material quickly, ensuring any stockpiles of material is adequately separated, isolating any potential fires to the singular stockpile/area and preventing spread<br>Stockpile management plan - Access to all sides of stockpiles to be maintained at all times<br><br>Firefighting apparatus maintained on site (fire extinguishers, hoses, water levels in tanks and dams etc)<br>Regular inspection of fire fighting apparatus by external contractor<br>Operational staff to be trained in use of firefighting apparatus on site<br>Regular site inspections to include checks of firefighting apparatus on site<br>Incident report system if fire apparatus are discharged (for any reason)<br>Fire warden system on site<br>Emergency Information Box at front of site (to include site plans and layout)<br>Emergency services attendance if required (000)<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>Evacuation plan and drills<br><br>Site to reduce operations on days of extreme fire danger<br>Site to be closed on days of extreme fire danger | Moderate | Unlikely | **Medium** | | It is recommended to install additional water storage tanks to hold additional volumes of firefighting water. | | | | | | |
| 10 | Site Wide | Emergency notification | Emergency Response | After-hours fire going unnoticed | Fire spreading and causing fire escalation risk to rest of site and neighbouring properties and surrounding land | Moderate | Possible | Medium (High) | Remote monitoring capability for CCTV system<br>Remote alert system if an after hours fire is detected (i.e thermal monitoring system)<br><br>Site design strategy to be focused on fire prevention and then a fire mitigation strategy, isolating any potential fires to the singular stockpile/area and preventing spread.<br>Fire Risk Management and Monitoring Plan (FRMMP) | Moderate | Rare | **Low** | | | | | | | | |
| 11 | Site Wide | Emergency response access | Emergency Response | Impeded access for emergency services or staff escape or rescue | Unable to access areas to rescue personnel or fight fire | Major | Possible | High | Clear access to be maintained at all times into main entrances (vehicle and pedestrian)<br>Access pathways around site to be maintained in a clear and accessible manner at all times<br><br>Stockpile management plan - (adequate separation distances between stockpiles and infrastructure to ensure access to all sides of stockpiles is maintained at all times)<br>Regular grounds maintenance to ensure site vegetation is managed appropriately to reduce pathways for fires to spread around site<br>Regular site inspections to ensure access requirements are being maintained<br>Fire warden system on site<br>Evacuation plan and drills<br>Emergency Information Box at front of roperty (includes plans on site layout)<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | **Medium** | | Recommendation: Engage with local CFA and encourage them to visit site to familarise themselves with layout, access etc. | | | | | | |

# Bairnsdale Fire Risk Assessment

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| 12 | Site Wide | Containing firefighting emissions (water) | Emergency Response | Uncontrolled release of firefighting wastes into surrounding environment | Damage to the environment through impacted water reaching downstream waterways | Moderate | Possible | Medium (High) | Site design strategy to be focused on fire prevention and then a fire mitigation strategy, including processing of material quickly, ensuring any stockpiles of material is adequately separated, isolating any potential fires to the singular stockpile/area and preventing spread. Strategy includes the potential to minimise water use if not required (stockpiles may be allowed to burn out without excess water supplied)<br>Site has an onsite contact water dam for drainage water from maturation pad area<br>Higher risk materials on site (i.e. shredded FOGO material), unlikely to contain chemicals or contaminated run-off.<br><br>If firefighting water cannot be retained on site, appropriately permissioned contractor will be engaged to transport the fire water to a lawful disposal facility.<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Minor | Unlikely | **Low** | | Recommedation: Install earthen bunds around material storage areas to minimise potential for water escape in the event of fire | | | | | | |
| 13 | Offsite | Smoke | Emergency Response | Impact of smoke on surrounding community | Harm to human health for people with respiratory issues | Minor | Unlikely | Low | Minimum distance of 650m+ to nearest neighbouring property (residential dwelling)<br>Nature of material to be processed on site is not expected to generate toxic smoke<br><br>Regular removal of material from site, minimising volumes<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Minor | Rare | **Very Low** | | | | | | | | |
| 14 | Receival Shed | Receival of non-permitted materials at site (including possible hot loads) | Receival Process | Ignition of stockpile caused by (and assisted) by non-permitted materials (i.e. hot loads) | Fire causing damage to site infrastructure and risk to employee & contractor safety | Major | Unlikely | Medium (High) | Waste acceptance criteria to be developed based on EPA Licence conditions<br>Wastes accepted at site is clearly signposted at entry<br>Site induction for staff and contractors to include waste acceptance criteria<br>Supervised delivery of material into receival area<br>Regular visual inspections to include checks for contamination and non-permitted wastes<br>Non-permitted waste procedure to be developed, including designated area for storage of non-permitted materials<br><br>Hot load / vehicle fire procedure to be developed for site<br>No smoking permitted on site (signage in place at reception entrance)<br>Incident / Hazard reporting system<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | **Medium** | | Recommendation: Have a designated, cleared area on site to direct vehicles to if safe to do so | | | | | | |
| 15 | Receival Shed | Delivery of FOGO material | Receival Process | Vehicle fire | Fire spreading from vehicle and causing damage to site infrastructure and risk to employee & contractor safety | Major | Unlikely | Medium (High) | Contractor and Council vehicles are expected to be regularly maintained (as per contractual obligations)<br>Weighbridge located separatle from waste receival area, enabling potential identification of any vehicle problems prior to delivery<br>Supervised delivery of material into receival area<br><br>Hot load / vehicle fire procedure to be developed for site<br>Firefighting apparatus in place<br>Operational staff to be trained in use of firefighting apparatus on site<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Rare | **Low** | | Recommendation: Have a designated, cleared area on site to direct vehicles to if safe to do so | | | | | | |
| 16 | Receival Shed | Storage and handling of FOGO material (pre shredding) | Stockpile Management | Risk of spontaneous combustion of stockpiles if stored too long and allowed to heat up | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | Continual processing system during operating hours to ensure prompt processing of material as it arrives<br><br>All arriving material is expected to be processed on the day of arrival, minimising build-up of incoming material<br>Waste receival procedure to be developed to include receival floor management<br>Firefighting apparatus in place<br>Operational staff to be trained in use of firefighting apparatus on site<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Rare | **Low** | | | | | | | | |
| 17 | Receival Shed | Storage of shredded FOGO material | Stockpile Management | Spontaneous combustion of shredded material stockpiles after grinding | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Likely | High | Shredded material to be removed within 48 hours of being grinded/shredded to minimise sitting time<br>Stockpile management plan to be developed, including requirements for size and placement of stockpiles and appropriate management methods to monitor the material while awaiting placement into forced aeration (pasteurisation) system.<br>Mulched piles observed to be heating can be split to reduce their size & volume<br>Call "000" in the event of fire<br>Firefighting apparatus in place<br>Operational staff to be trained in use of firefighting apparatus on site<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP)<br>All staff on site to be trained in relevant procedures, including FRMMP and WEMP. | Moderate | Unlikely | **Medium** | | | | | | | | |

# Bairnsdale Fire Risk Assessment

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| 18 | Receival Shed | Storage of FOGO material (pre and post shredding) | Stockpile Management | Firefighting preparedness: Poor firefighting access to material inside receival shed | Inability for emergency services to access building, increasing risk of damage to site infrastructure and risk to employee and contractor safety | Major | Possible | High | Stockpile layouts to be designed in line with EPA CRWM storage requirements<br>Continual processing system during operating hours to ensure prompt processing of material as it arrives, including removal of shredded material<br>Waste receival procedure to be developed to include receival floor management<br>Daily site inspections to include stockpile size, location and access (in the event of an emergency) | Moderate | Unlikely | **Medium** | | | | | | | | |
| 19 | Receival Shed | Storage of FOGO material (pre and post shredding) | Pest Management | Damage to electrical infrastructure (causing sparks) due to infiltration of pests (e.g. rats) | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Possible | Medium (High) | Pest management contractor to be engaged (to supply baits, traps etc)<br>Daily site inspections include checks for signs of pest infiltration<br>Electrical infrastructure enclosed in PVC pipework<br>Safety switch installed<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Minor | Unlikely | **Low** | | | | | | | | |
| 20 | Receival Shed | Shredding of FOGO material | Shredding/grinding process | Spark or fire caused by foreign objects beings shredded (i.e. batteries, aerosol cans, gas bottles etc) | Explosion or fire causing damage to site infrastructure and risk to employee & contractor safety | Major | Possible | High | Decontamination process prior to shredding/grinding<br>Shredder loaded by excavator and grab, allowing controlled feed under direct supervision of machine operator<br>Shredder/grinder to have a magnetic system to remove steel from infeed prior to grinding<br>Slow speed shredder used to shred/grind/mulch material, minimising risk of spark<br>Council FOGO education programs (permitted items in FOGO bins)<br>Emergency stop system on shredder<br>Firefighting apparatus on site<br>Call "000" in the event of fire<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | **Medium** | | | | | | | | |
| 21 | Green Waste Stockpile(s) | Storage of loose green material (delivered from transfer station for processing) | Stockpile Management | Increased fire risk due to poor placement, shape and size of loose green waste stockpile | Fire spreading to (or from) stockpiles and surrounds causing fire escalation risk and risk to employee and contractor safety | Major | Possible | High | Stockpile management plan to be developed, outlining storage locations and required separation distances<br>Stockpiles to be stored in line with EPA CRWM requirements<br>Regular site inspections (includes stockpile location, sizes and separation)<br>Incident / Hazard reporting system<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | **Medium** | | | | | | | | |
| 22 | Forced Aeration (Pasteurisation) Area | Equipment Selection | Pasteurisation Process | Incorrect selection of equipment (inadequate specifications for task) | Failure of system resulting in poor management of pasteurisation with potential to dry out or spontaneously combust | Minor | Unlikely | Low | Project specifics have been discussed with potential providers of the equipment to determine the best process to suit the operation.<br>Multiple equipment providers and site construction firms consulted<br>Existing case studies | Minor | Rare | **Very Low** | | | | | | | | |
| 23 | Forced Aeration (Pasteurisation) Area | Construction of windrows | Pasteurisation Process / Stockpile Management | Inappropriate construction of windrows (i.e. oversized, poorly located/separated), resulting in potential for forced aeration process not to work properly | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | Windrows will be made in constructed "bunkers", determining maximum sizes of windrows<br>Windrow construction process to be developed and operational staff trained in its operation<br>"Recipe" for optimal production to be developed<br>Pasteurisation pad preparation process to be developed, ensuring infrastructure is appropriately prepared for windrow cinstruction<br>Stockpile management plan for site to be developed (to include windrows)<br>Windrow construction records to be maintained<br>Forced aeration system to be continuously and automatically monitored | Minor | Rare | **Very Low** | | | | | | | | |
| 24 | Forced Aeration (Pasteurisation) Area | Management of Pasteurisation Process | Pasteurisation Process | Inadequate monitoring of windrows leading to unsafe temperatures and/or unacceptable moisture levels | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | Sytem will have automated monitoring system in place, continuously monitoring the condition of the windrow<br>Regular system checks by staff<br>Forced aeration management procedure document to be developed for site and staff trained in it<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Minor | Rare | **Very Low** | | Recommendation: Ensure a remote monitoring capability is included in the forced aeration technology package | | | | | | | |
| 25 | Forced Aeration (Pasteurisation) Area | Management of Pasteurisation Process | Pasteurisation Process | Power failure leading to forced aeration management system stopping | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Minor | Unlikely | Low | Backup power supply system to be used on site in the event of mains power loss<br>Short term power loss is not expected to be a major concern as windrows are unlikely to combust in a short time period<br>Manual monitoring procedure to be developed and staff trained in it<br>Manual monitoring equipment (i.e. temperature probes and record books) to be available on site to enable ongoing monitoring in the event of power loss<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Minor | Rare | **Very Low** | | Recommendation: Ensure that remote monitoring capability has a warning capability if power to the system (or communication) is lost. | | | | | | | |

# Bairnsdale Fire Risk Assessment

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| 26 | Forced Aeration (Pasteurisation) Area | Management of Pasteurisation Process | Pasteurisation Process | Availability of suitable water supply to supply process | Inadequate water supply leading to drying of process and potential iginition of windrow, causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | The site will have multiple sources of water for use. These are the site contact water dam and also the two clean water dams on site<br><br>Sytem will have automated monitoring system in place, continuously monitoring the condition of the windrow<br><br>Windrow dimensions are unlikely to cause combustion<br>Fire Risk Management and Monitoring Plan (FRMMP) | Minor | Unlikely | **Low** | | Recommendation: Investigate opportunity to access bore water on site | | | | | | |
| 27 | Forced Aeration (Pasteurisation) Area | Management of Pasteurisation Process | Pasteurisation Process | Poor maintenance of forced aeration system leading to failure of system to operate as it is supposed to (i.e. blocked air outlets) | Ignition of combustible material causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | Windrow construction process to be developed and operational staff trained in its requirements (to include bunker preparation)<br>Bunker inspection process to be developed (including checklist as part of windrow construction process)<br>Preventative maintenance system to be developed, including regular servicing of the forced air system as per manufacturers recommendations<br>Regular site inspections<br>Fire Risk Management and Monitoring Plan (FRMMP) | Minor | Rare | **Very Low** | | | | | | | | |
| 28 | Forced Aeration (Pasteurisation) Area | Management of Pasteurisation Process | Stockpile Management | Firefighting preparedness: Poor firefighting access to material on pasteurisation pad | Inability for emergency services to access are in the event of fire, increasing risk of damage to site infrastructure and risk to employee and contractor safety | Major | Possible | High | Facility design to consider emergency access around pasteurisation pad area.<br><br>Bunkers are designed and constructed in fixed locations<br>Regular site inspections to check for site housekeeping concerns (i.e. obstructions on site etc)<br>Site induction to include requirement to keep roadways clear at all times | Moderate | Rare | **Low** | | | | | | | | |
| 29 | Maturation Pad | Construction of windrows | Maturation Process / Stockpile Management | Inappropriate construction of windrows (i.e. oversized, inadequate separation for turning, access etc) | Potential for spontaneous combustion, causing fire and damage to site infrastructure and risk to safety of employees on site | Moderate | Unlikely | Medium | Windrow construction process to be developed and operational staff trained in its requirements<br>Stockpile management plan to be developed, outlining size, locations, separation distances etc. and staff trained in it (equipment specifications such as windrow turner type, excavator size, loader size etc will determine sizing and separation requirements<br>Windrows will be actively managed as part of the composting process (i.e. regular monitoring - temperature & moisture and turning requirements). This will help ensure requirements of Australian Standards AS4454 will be achieved.<br>Actively managed windrows are unlikely to self combust if managed appropriately and if sizes are managed appropriately<br>Regular site inspections<br>Fire Risk Management and Monitoring Plan (FRMMP) | Moderate | Rare | **Low** | | | | | | | | |
| 30 | Maturation Pad | Management of Maturation Process | Maturation Process / Stockpile Management | Inadequate management/monitoring of windrows leading to spontaneous combustion of material (increased temperatures, mosture content, turning schedules) | Ignition of windrows causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Possible | Medium (High) | Windrows will be actively managed as part of the composting process (i.e. regular monitoring - temperature & moisture and turning requirements). This will help ensure requirements of Australian Standards AS4454 will be achieved.<br>Stockpile management plan to be developed, outlining size, locations, separation distances etc. and staff trained in it (equipment specifications such as windrow turner type, excavator size, loader size etc will determine sizing and separation requirements<br>Actively managed windrows are unlikely to self combust if managed appropriately and if sizes are managed appropriately<br>Regular site inspections<br>Fire Risk Management and Monitoring Plan (FRMMP) | Minor | Rare | **Very Low** | | | | | | | | |
| 31 | Maturation Pad | Management of Pasteurisation Process | Maturation Process / Stockpile Management | Availability of suitable water supply to supply process | Inadequate water supply leading to drying of process and potential iginition of windrow, causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | The site will have multiple sources of water for use. These are the site contact water dam and also the two clean water dams on site<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>In the unlikely event that water runs out, water will be purchased for delivery<br>Regular site inspections include water levels and availability on site | Minor | Unlikely | **Low** | | Recommendation: Investigate opportunity to access bore water on site | | | | | | |
| 32 | Maturation Pad | Management of Maturation Process | Maturation Process / Stockpile Management | Breakdown of equipment used for turning windrows resulting in being unable to turn windrows to help cool and apply moisture throughout the material as temperatures get to levels that require turning | Ignition of windrows causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Unlikely | Medium | Windrow turner to be regularly maintained in line with manufacturer instructions<br><br>Prentative maintenance system to be employed on site<br>Windrows can be turned using site excavator or wheel loader if required (slower process)<br>Fire Risk Management and Monitoring Plan (FRMMP) | Low | Rare | **Very Low** | | | | | | | | |
| 33 | Maturation Pad | Management of Maturation Process | Stockpile Management | Firefighting preparedness: Poor firefighting access to material on maturation pad | Inability for emergency services to access area in the event of fire, increasing risk of damage to site infrastructure and risk to employee and contractor safety | Major | Possible | High | Stockpile management plan to be developed, outlining size, locations, separation distances etc. and staff trained in it<br>Actively managed windrows are unlikely to self combust if managed appropriately and if sizes are managed appropriately<br>Access pathways around the facility to be maintained in passable condition at all times<br>Fire Risk Management and Monitoring Plan (FRMMP) | Moderate | Unlikely | **Medium** | | Ensure all-weather access is available around maturation pad area to enable emergency response access is available in the event of an emergency. | | | | | | |

# Bairnsdale Fire Risk Assessment

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| 34 | Screening Area | Storage and handling of material (pre screening) | Stockpile Management | Inadequate storage practices resulting in limited access, inadequate separation distances, monitoring of temperatures etc. | Spontaneous combustion of material, impeded access for firefighting, potential damage to site infrastructure and risk to employee & contractor safety | Moderate | Possible | Medium (High) | Stockpile management plan to be developed, outlining size, locations, separation distances etc. and staff trained in it<br>Stockpiles to be separated in line with EPA CRWM requirements<br>Piled up windrows (awaiting testing and screening) are to be managed in the same way as normal maturation windrows (i.e. regular monitoring - temperature & moisture and turning requirements), as the material may still be active and heating up.<br>Managed stockpiles are unlikely to self combust if managed appropriately and if sizes are managed appropriately<br>Note: Stockpiles should only be screened once test results are received, satisfying AS4454 requirements. This will help prevent potential cross-contamination of screening equipment<br>Fire Risk Management and Monitoring Plan (FRMMP) | Moderate | Unlikely | **Medium** | | | | | | | |
| 35 | Screening Area | Storage of screened material | Stockpile Management | Inadequate storage practices resulting in reduced access in the event of an emergency | Inability for emergency services to access are in the event of fire, increasing risk of damage to site infrastructure and risk to employee and contractor safety | Major | Possible | High | Screened material reduces the amount of oversized particles in the material and reduces the combustibility of the stockpile, lowering the risk of fire significantly<br>Stockpile management plan to be developed, outlining size, locations, separation distances etc. and staff trained in it<br>Stockpiles to be separated in line with EPA CRWM requirements<br>Regular site inspections to include checking of stockpiles on site (size, location, access etc)<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | **Medium** | | | | | | | |
| 36 | Screening Area | Operation of screening system | Screening Process | Inadequate cleaning of screening equipment, resulting in build-up of material in moving parts | Friction caused by built-up material resulting in ignition, causing damage to site infrastructure and risk to employee & contractor safety | Moderate | Likely | High | Screen to be regularly serviced in line with manufacturers recommendations (more frequent if required due to conditions)<br>Pre-start checks prior to equipment being used each day (include checklist)<br>Fire extinguishers on every piece of equipment<br>Regular cleaning of machinery to ensure build-up of material is removed<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Moderate | Unlikely | **Medium** | | | | | | | |
| 37 | Screening Area | Operation of screening system | Screening Process | Breakdown of equipment used for screening | Stockpiling of unscreened materials with potential for spontaneous combustion | Minor | Unlikely | Low | Stockpile management plan to be developed, outlining size, locations, separation distances etc. and staff trained in it<br>Stockpiles to be separated in line with EPA CRWM requirements<br>Stockpiles to be regularly monitored (temperature) and turned if required/as required | Minor | Rare | **Very Low** | | | | | | | |
| 38 | Non-permitted waste - Isolation area | Storage of isolated, non-permitted wastes received | | Ignition of non-permitted wastes (unknowlingly received but recovered and isolated) causing fire or other emergency situation. | Fire spreading and causing fire escalation risk and harm to human health | Moderate | Unlikely | Medium | Waste acceptance criteria<br>Regular site inspections / walk-arounds<br>Non-permitted waste procedure<br>Fire extinguishers on site<br>No smoking permitted on site (signage in place at reception entrance)<br>Call "000" in the event of fire<br>Fire Risk Management and Monitoring Plan (FRMMP)<br>Workplace Emergency Management Plan (WEMP) | Minor | Unlikely | **Low** | | | | | | | |

# Proposed East Gippsland Regional Composting Facility

## Town Planning Report

*(Amended November 2025 to reflect updated layout)*

**200 Johnstons Road, Forge Creek**

**Client**
East Gippsland Shire Council

**Issued**
12/11/2025
Revision 2

Beveridge Williams

## Introduction

Beveridge Williams acts on behalf of East Gippsland Shire Council in support of a proposed planning permit application, which seeks a permit to establish a composting facility at 200 Johnstons Road, Forge Creek (part, being Lot 2 LP116329).

The proposed activity is for the establishment of an aerobic composting facility adjacent to the Bairnsdale Regional landfill. The facility is intended to process 25,000t per year of Garden Organics (GO) and mixed Food Organics and Garden Organics (FOGO). The intended process will utilise covered, forced air bunkers for the initial pasteurisation phase of FOGO material before moving to open windrow maturation

The proposal requires a planning permit under the provisions of the East Gippsland Planning Scheme to use the land for this purpose as well as to undertake buildings and works to construct the composting centre. This report has been prepared by Beveridge Williams to provide an overview of the relevant town planning provisions affecting the site, outline the proposed land-use, and provide a response to key planning considerations.

### Amended Application following Community Consultation

East Gippsland Shire Council's waste management team has conducted extensive community consultation regarding the proposed composting facility. This process included formal advertising of the planning permit application in February 2025, in-person information sessions in March and June, and ongoing updates via Council's website: https://yoursay.eastgippsland.vic.gov.au/proposed-composting-facility

The Council greatly appreciates the valuable feedback provided by community members and stakeholders. In response, several significant amendments have been made to the facility's design and operation, including:

- Installation of odour monitoring devices to ensure low emissions
- Relocation and reorientation of the facility to increase separation from neighbouring properties
- Enhanced screening and landscaping to reduce visual and environmental impacts
- Expanded stormwater detention and water retention measures

These changes are detailed in this updated town planning report, with a dedicated section on page 4 outlining the outcomes shaped by community and stakeholder input. Council remains committed to ongoing engagement and will continue to provide updates and opportunities for further participation.

## Subject Site and Context

The application relates to Lot 2 on Local Plan 116329. This allotment is part of 200 Johnstons Road, also known as 665 Forge Creek Road. The site is located approximately 5.8 km south of the Bairnsdale-Yarram Railway Station. The northern boundary of the lot forms its frontage, abutting Johnstons Road for a length of 472.74m. The site has a depth of around 804.70m, and an area of 36.76 ha. A review of the certificate of title found that no restrictions, encumbrances or caveats apply to the subject lot. The site is generally cleared of vegetation, other than planted windrows along the western site boundary and site frontage, and centrally to the site. Topography in the area is relatively flat.

The site is located within the broader landholding of the Bairnsdale Regional Landfill, which is located immediately to the east. The surrounding area is generally made up of agricultural properties within the Farming Zone. Extractive industries are located nearby to the east and north. The Bairnsdale Airport is approximately 4.2 km west of the site. Macleod Morass Wildlife Reserve (hunting) is around 1.8km east of the land.

The nearest dwelling is approximately 530 metres to the west at 605 Forge Creek Road, Forge Creek. There are no other dwellings anywhere near the site. The prevailing winds blow from the northwest. The nearest sensitive receptor (dwelling) to the southeast is located at 77 McDonalds Road and is approximately 1.125km (1,125 m) from the proposed operational area.

**Aerial Photograph** (source: Nearmap 2024)

**Site Context** (source: Nearmap 2024)

| Subject Site Overview | |
|---|---|
| Address | 200 Johnstons Road, Forge Creek 3875 |
| Planning Scheme | East Gippsland Planning Scheme |
| Title Particulars | 2\LP116329 |
| Title Encumbrances | N/A |
| Zoning | Farming Zone - Schedule 1 (FZ1) |
| Overlays | Environmental Significance Overlay - Schedule 1-43 (ESO1-43) |
| Permit Triggers | • Clause 35.07-1 – Use of land for industry within FZ<br>• Clause 35.07-4 – Buildings and works for a Section 2 use within FZ<br>• Clause 52.17 – Removal of native vegetation<br>• Clause 52.06-5 & Clause 52.34 – Dispensation from parking and bicycle parking requirements |
| Area of Aboriginal Heritage Sensitivity | No |
| Bushfire Prone Area | Yes |
| Other Consideration | Extractive Industry Work Authorities (WA) to the east |
| Referral Authorities | Use land for industry – EPA (determining authority)<br>Removal of native vegetation – DEECA (recommending authority) |
| Public Notice | No exemptions apply |
| Applicant | East Gippsland Shire Council |
| Applicant Contact | Justin McDowell<br>Town Planner<br>Beveridge Williams<br>mcdowellj@bevwill.com.au<br>0479 193 201 |

## The Proposal

It is proposed to use and develop the land for a composting facility, to assist with the in-house processing of organic waste by East Gippsland Shire Council.

### Project Context

East Gippsland Shire Council currently collects garden waste (GO) at 11 transfer stations. In the past, this waste was shredded and used to restore landfills, but since the Cann River Landfill closed in 2022, there is less need for this approach. Now, a new way to process garden waste is needed. Under the Victorian Government's *Recycling Victoria* policy, all councils must introduce a kerbside food and garden waste collection (FOGO) by 2030. This means there will be more organic waste to manage locally, especially as Bairnsdale receives the largest amount at 12,000 tonnes a year, contributing to a total of 26,000 tonnes across the region.

To prepare for this, East Gippsland Shire Council plans to roll out a kerbside FOGO collection in 2025, which is expected to add another 4,500 tonnes of food waste each year. The new composting facility will help manage this waste locally, reducing what goes to landfill and cutting down on harmful greenhouse gas emissions. It also meets government policy to keep garden waste out of landfill, manage fire risks from stockpiled waste, and prevent pollution caused by food waste breaking down without air. The composting facility will provide a practical and sustainable solution for managing garden and food waste in the region.

### Project Description

The organic waste to be processed at the new facility includes grass, leaves, plants, branches, tree trunks, vegetables, fruits and seeds, kitchen scraps, paper waste and domestic food waste excluding liquid organic waste, meat, fish & fatty food waste. The facility is anticipated to produce approximately 40,000m3 of organic compost per year, which will be sold off-site in small bags and bulk loads.

Composting falls under the 'industry' land use term as defined in the Table to Clause 73.03 (Land use terms) of the East Gippsland Shire Planning Scheme.

The composting plant will be operated by three permanent staff, 7am-5pm, 7 days per week.

Composting is a managed process where microorganisms break down organic waste. The proposed method starts with a 21-day pasteurisation phase using a forced air-floor system to begin decomposition. After this, the waste is moved to open rows (called windrows) on a hardstand area to mature for about 12 weeks. During this phase, the material is regularly turned for aeration, and moisture is added as needed. The proposed combination of forced air-floor covered composting systems with open-air maturation has been selected for its alignment with the EPA guidelines as appropriate for the site's available buffer distances. Special plant and equipment will be used to support these activities.

During the initial grinding and 21-day pasteurisation process, the material will be fully under cover to ensure that it is not exposed to birdlife and/or vermin. This will ensure that the process does not interfere with natural systems or increase the number of birds within proximity to the airport.

Once the compost is stabilised, it will be graded, batched and ready for use or sale.

As shown in the Proposed Land Use Plan, the facility will require the construction of several components. Traffic, including both Council trucks and private vehicles, will enter the site from Johnstons Road. The proposed entry has been chosen to use existing low points within the site and road reserve and to limit the excavation required for internal works. The facility will support large vehicles, including 'Large Tipper' trucks and B-Doubles. An internal driveway will connect Johnstons Road to the weighbridge, site office and product sorting area. Once the material has been satisfactorily screened and weighed, it will be processed within the composting facility, which includes two composting areas (the forced aeration enclosed composting system and the maturation pad). All loading and unloading activities will be confined to the public drop off facility and drop off station. Clean stormwater runoff will be stored in the clean water dam towards the front boundary of the site. Water contaminated by the compost will be stored in a Class A contact water tank and Class B contact water dam, as appropriate. The contact water dam and tank is to be located to the east of the facility.

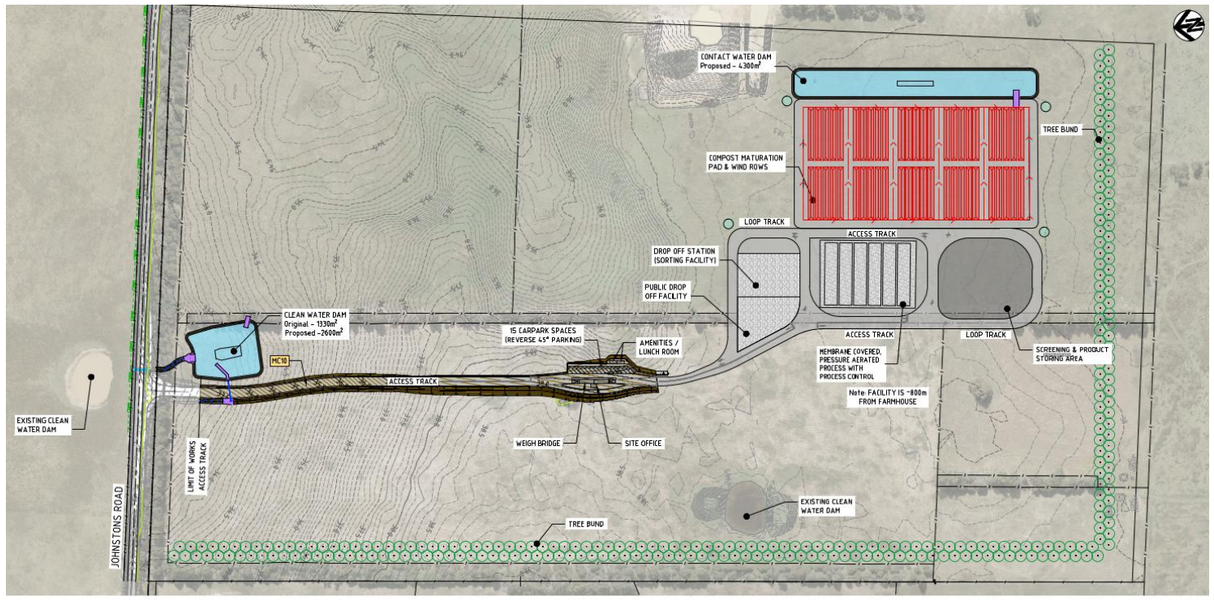
The proposal has the following proposed key features:

- Site office (and weighbridge)
- Vehicle parking areas
- Drop-off station / sorting facility
- Covered aeration system (compost pasteurisation pad)
- Compost maturation pad (open air windrows)
- Screening and stockpile storage area
- Contact water dam (draining from maturation pad)
- Contact water tank
- Clean water dam (existing)
- Clean water dam (proposed)
- Tree rows and other landscaping features
- Main drainage culvert running along boundary (north to south)
- Firefighting water tanks for sprinklers
- Hardstand driveway
- Mobile plant and equipment (excavator(s), wheel loader(s), windrow turner, screen(s))

The proposed facility has been located within the property to maximise separation from sensitive uses, including rural dwellings. This has included shifting the facility further eastward, as an outcome of the community consultation process.

Landscaped rows of trees are also proposed towards the west and south boundaries of the site to provide screening of the facility from neighbouring properties.

**Proposed Land Use Plan** (source: SMEC 2025)




## Stakeholder Consultation

East Gippsland Shire Council's waste management team actively engaged the community in shaping the proposed composting facility, conducting a comprehensive consultation process to ensure local perspectives and concerns directly informed the project's design and operation.

### Key Concerns

The key concerns raised during the consultation phase can be broadly summarised into the following themes:

- Odour Emissions
- Noise Emissions
- Vermin or Pests, as well as Concern for Birdlife
- Property Values and Subdivision Potential
- Water Quality – General & Aquifers
- Traffic
- Amount and Method of Consultation
- Farming Impacts – Stock and Soil
- Weeds
- Fire
- Viewlines

### What Has Changed?

We've listened carefully to community feedback and made significant improvements to the design.

- **Odour monitoring** – East Gippsland Shire Council's Waste Management team remains confident in the results of the odour assessment for the composting facility. In order to ensure that Council delivers the low levels of odour planned, Council will establish real time odour monitoring devices as part of the construction of the composting facility. In the unlikely event that odour emissions reach unsatisfactory levels, staff at the facility will be alerted, and will respond to reduce odour emitted from the facility. This safeguard seeks to improve community confidence in the composting facility and reflects Council's aim to act as a good neighbour.
- **Greater separation from neighbours** – The main facility has been moved further east, closer to the existing landfill and the maturation pads have changed orientation. These changes create more distance from the nearest sensitive receptor. The nearest dwelling (to the west) was previously 750m (approx.) from the perimeter of the odour source. The shift in design has increased this distance to 850m (approx.). The odour assessment demonstrates that a minimum separation distance of 750m is appropriate. The updates to the design exceed this distance, providing the best possible outcome on the land.
- **Enhanced screening and landscaping** – Existing trees along Johnstons Road already help screen the site, and we're adding rows of planted trees to further obscure views from the west and south. With these enhancements, the facility will be screened from all directions except when viewed from the landfill to the east.
- **Protecting water quality for agriculture** – We understand the importance of clean water and soils for local farms. While the original contact water dam of 2,200 kL would be sufficient for the facility, we have over-engineered this asset to substantially increase the capacity. Whilst the final and exact volume of the dam will be sized in response to a 1% AEP event, the contact water has been designed such that no contact water will leave the property.
- **Further stormwater runoff detention** – Properties to the north of the subject site (situated on the lower slope the site's surface water dam) were concerned regarding the clean water dam abutting the entry of the property. We emphasise that this dam will only include clean water runoff from the broader property, and is separate from the high nutrient water of the composting facility. However, in order to ensure the detention of all stormwater, the clean water dam has significantly expanded in area from 1330 sqm to 2600 sqm. Furthermore, in the unlikely event of overflow, the dam will drain to low-lying land on the property, rather than external to the site. These measures ensure water can be fully retained on site for reuse in processing and to protect agricultural land.

# Technical Investigations and Background Studies

A number of technical investigations have been undertaken to inform the proposal and this assessment. These are attached to this planning application for reference and a summary is provided below.

A concurrent Development Licence application has been made to the EPA under the *Environment Protection Act 2017*.

## Geotechnical

Ground Science undertook geotechnical investigations of the subject site to establish the existing pavement and subsoil profile. This included digging test pits, as well as pavement and shoulder dippings, with laboratory tests conducted on retrieved samples. Ground Science found that:

- Johnstons Road reserve had a fill depth between 200mm to 800mm;
- The subject site currently has poor drainage conditions and 200mm and 400mm topsoil depth;
- The subject site has *Pliocene to Quaternary aged alluvial trace deposits overlying the Pliocene to Pleistocene aged Haunted Hills Formation deposits*

## Native Vegetation

Ethos NRM completed a detailed assessment of native vegetation for the proposed composting facility. Ethos NRM found that the site is within the EVC 55 Plains Grassy Woodland, recording 37 indigenous flora species. Much of the vegetation was not native to the region, including widespread weed species, three of which are noxious weeds. The report outlines measures taken to minimise the loss of native vegetation. In particular, the report notes that the key location of native grasses (adjacent to the eastern shelterbelt) has been avoided and the one large tree on the property will be retained. To facilitate the development of the facility, ten patches of native vegetation were assessed, totalling 1.070 ha of proposed removal. A habitat offset will be required to protect suitable habitat external to the land and is available. A Flora and Fauna Guarantee Act application will also be required to remove 20 of the plants.

Changes made to the layout subsequent to community consultation, included moving the facility further to the east. This will result in most of the facility now being located in an area of the site with little native vegetation present. There are no changes to the proposed access points to the site, and impacts to native vegetation at the entry as a result of road works will remain the same. Advice from Ecologic NRM in relation to the modified layout, are that "the original habitat hectare scores apply to the new area assessed and [Ecologic NRM] do not believe there is any requirement to wait until Spring for further surveys". The changes to vegetation loss are minimal, though it was noted that "this configuration came in as less impact than the original". An Offset Plan can be provided by condition of permit pending approval of the amended site layout.

## Noise

Acoustic Compliance Australia conducted an environmental noise impact assessment to predict the noise levels associated with the composting facility. They found that the facility will be compliant with the Noise Protocol targets managed by the EPA. They consider the site to be of low risk, however outlined recommendations for noise levels to be even further reduced. Noise from the surrounding area and low frequency noise analysis has been undertaken, and the facility found to remain below the noise limit, and noise generated to generally be low frequency.

## Odour and Dust

Peter J Ramsay & Associates undertook an odour assessment to ensure that the composting facility will maintain the amenity of the area. After conducting preliminary analysis in the form of a Level 1 and Level 2 assessment, a Level 3 odour assessment was undertaken in accordance with the relevant EPA Publication. Using measurements from another composting facility with similar technology, odour dispersion modelling and a comparison to similar assessments, an assessment was made on the potential for odour to be detected. Using a conservative analysis of potential odours, it was found that the proposal satisfies relevant EPA controls, and that the odour exposure risk for all receiving environments is low. The Environmental Management Plan (EMP) contains consideration of odour management, including identifying odour sources, controls, monitoring, and management. The operational management of the site will need to ensure a balanced compost recipe that meets the required parameters. Actions and contingencies necessary to maintain the effective functioning of the facility are included in the report. Following concerns raised by residents in the community consultation process, EGSC has committed to undertaking additional odour monitoring at sensitive receptor locations during the facility's operation.

Dust and bioaerosols can be created during the agitation of organic material while processing. This may occur while grinding, screening, sorting, transporting, or turning organic material. To mitigate dust and bioaerosols emissions at the Site, a range of management measures are proposed including Council to undertake regular wet downs of unsealed roadways and maintain consistent moisture in maturation windrows. Fixed mechanical equipment use to process the raw material is within the shed.

## Water, Groundwater and Land Contamination

SMEC Australia Pty Ltd prepared a water balance assessment to estimate the volume of contact water generated and to help determine whether the proposed contact water management options were the most appropriate for the site. A Contact Water Management Plan was also prepared for the proposed composting facility. The report considered potential mitigation and exposure pathways, contact water generation, the proposed water management infrastructure, stormwater, surface-water and regulations associated with managing the water created by the composting process. SMEC outlined the relevant contact water infrastructure and management requirements as well as processes for Council to operate the facility while protecting the surrounding water systems from contamination.

The project has been appropriately designed to manage surface water, groundwater and land contamination. A concrete pad will be used as the feedstock drop-off area. The maturation pad will be built using low-permeability clay (less than 1 x 10-9 m/s). Feedstock will be mixed in the receival shed, which has its own water capture system that does not involve pasteurisation. Wastewater will be managed through a process of separation, containment, and either reuse or disposal. The contact water system separates runoff from the unpasteurised areas and the pasteurised areas. Contact water from unpasteurised areas will not be applied to material after it has gone through the composting process. Following community engagement, the contact and clean water dams have been increased in size to further minimise risk of overtopping in this unlikely event.

## Fire

Circular Resources Australia prepared a Fire Risk Management and Monitoring Plan to assess the risk and manage the potential for fire associated with the operation of the composting facility. The report identified a total of 38 aspects of the project, most of which had medium, low or very low risk. Where necessary, additional controls were specified to appropriately manage fire risk. Council will utilise the fire risk management plan during the operation of the facility. The site will have onsite firefighting equipment and plan, as well as a sprinkler system in the incoming shed and a firefighting water tank. Monitoring will be undertaken of windrows and temperature will be controlled during pasteurisation.

## Litter and Waste

As outlined in the EMP, Council will undertake daily inspections for litter, remove contamination from incoming material, as well as inspect batches post-pasteurisation and while on the maturation pad for litter. Any litter collected, together with any waste generated by staff, and any waste separated from the organic material, will be contained and then disposed of at the adjacent Bairnsdale Landfill.

## Greenhouse Gas

A greenhouse gas assessment was carried out to identify emissions from fuel and electricity use during the operation of the proposed facility. By composting organic waste instead of sending it to landfill, the facility is expected to reduce emissions from waste decomposition by around 97%. Furthermore, the facility will have zero Scope 2 emissions, as electricity used will be purchased from renewable sources. Steps to minimise emissions will include turning off equipment and machinery when not in use.

## Environmental Management Plan

The Environmental Management Plan (EMP) was prepared to support the Development Licence Application, consistent with EPA guidelines. It shows that the site can be managed in accordance with EPA Victoria requirements, ensure the site is safe and will not negatively impact human health. The EMP also considers risks to ecological receptors in the surrounding environment, providing a framework to guide the performance of the site. The management framework will ensure that the site can be operated in a safe and responsible manner in the long-term.

# Planning Assessment

The development of a new composting facility in East Gippsland aligns with Victoria's "*Recycling Victoria: A new economy*" policy, which aims to divert 80% of waste from landfill by 2030 and reduce greenhouse gas emissions through improved organics processing. This initiative supports state-wide sustainability goals while addressing the unique needs of regional areas. The facility will provide Council with expanded capabilities to process organic waste outside of landfill. The facility is co-located with the existing landfill, allowing for efficient operations and maintenance in the rural municipality.

The proposal is consistent with the requirements of the East Gippsland Planning Scheme as summarised below.

## Planning Policy Framework (PPF)

**Clause 02.01** identifies the site as within the Lakes and Coastal sub-region, which has the highest population density of the shire as well as the main commercial centres. Placing the composting facility in this location, and within an appropriate driving distance of Bairnsdale and Paynesville, will ensure that the population of the municipality can efficiently access the facility.

**Clause 02.02** provides the vision and principles of the Council Plan (2017-2021). The proposed composting centre will improve the sustainability of the community by reducing landfill waste and increase the productivity of the soil where fertiliser produced from the compost is placed. This will also support the economic development of the municipality (**Clause 02.03-6**).

**Clause 02.03-2** discusses the need to balance business development with natural landscape values. The proposal will be screened by established trees and vegetation along the road frontage of the property boundary. The planting of rows of trees to the eastern and southern boundaries will provide high-quality screening to neighbouring properties. Combined, existing and proposed trees screen the facility from all public areas and adjoining private properties. It is not necessary to provide visual amenity to the existing landfill, which is the only boundary where screening is not proposed. The proposal manages high-nutrient water created during the composting and ensures that it will not transfer into the surrounding waterways, as outlined within the Contact Water Management Plan (**Clause 02.03-3**).

Supporting **Clause 12.01-1S**, biodiversity will be protected to the greatest extent possible. To avoid attracting wildlife or pest species, the waste material will be kept under cover throughout the initial grinding and 21-day pasteurisation process. This will ensure that surrounding ecological systems are not disturbed, and protect the Bairnsdale Airport from increased bird activity. This is significantly preferable to the current arrangement of the food waste being placed in the nearby open landfill.

In accordance with **Clause 12.01-2S**, vegetation clearing is proposed to the minimum extent necessary, where it will be required primarily along the site frontage, to allow the facility to be constructed and accessed. The majority of the land to be cleared is weed-dominated pasture. Revisions to the layout subsequent to community consultation have further reduced native vegetation loss. In addition to the efforts to minimise loss, some offsets will be purchased to ensure there is no net loss of native vegetation.

In accordance with **Clauses 12.03-1S and 12.03-1L**, there are no waterways located on the subject allotment. Furthermore, SMEC have shown that contact water will be contained within the property, ensuring that waterways remain healthy. This will also assist **Clause 14.02-1S**, which aims to protect waterways. Following community consultation, the plans have been amended to significantly increase the size of the dams on the site to minimise risk of overtopping during heavy rain events. The facility is a net user of water, and all stormwater will be captured and retained to be utilised in processing. In the highly unlikely event of overflow from the clean water dam, this stormwater will now be directed to the east and retained on a low lying portion of paddock on the site. The design ensures that no run off will occur to neighbouring land.

The land is within a designated bushfire prone area, which is considered by **Clause 13.02-1S**. However, the proposed composting facility does not fall within the uses listed by the Clause and will not result in the congregation of large numbers of people. Accordingly, the proposal does not present a risk to human life or property, satisfying the control. Furthermore, a detailed Fire Risk Management Plan will be implemented.

Pursuant to **Clause 13.04-1S**, we note that no sensitive uses will be established by the project.

**Clause 13.05-1S** considers noise management. Acoustic Compliance Australia found that the proposal poses a very low risk to human health and the environment when noise control treatments are implemented. Council will be responsible for undertaking these measures as part of their careful operation of the facility.

**Clause 13.06-1S** aims to manage air quality. Using a variety of assessment methods, Peter J Ramsay and Associates found that the proposal is in accordance with the relevant EPA guidelines and is appropriately separated from dwellings to ensure they are not impacted by odours.

**Clause 14.01** considers agriculture within the municipality. The proposed composting facility will not prevent productive agricultural uses on surrounding properties (**Clause 14.01-1S and 14.01-2L**). It will maintain the quality of soil within the ESO1, which is within proximity to the frontage of the property (**Clause 14.01-1L-02**).

**Clauses 14.03-1S and 14.03-1L** discuss the need to protect natural resources from the encroachment of sensitive uses. The proposed use is considered compatible with the nearby extractive industries and will not hinder any future activities undertaken nearby.

In accordance with **Clause 15.01-6S**, the proposed composting facility is located away from the frontage of the site, ensuring that views from Johnstons Road remain visually appealing. Further, existing vegetation will remain in place, providing screening from the road frontage.

Supporting **Clause 17.03-2S**, the composting facility will be located adjacent to a landfill facility, which is complementary in both purpose and required buffer distances to sensitive uses. The proposal will provide employment opportunities by directly employing three staff and producing and selling fertiliser that can increase the crop yields of local soils (**Clause 17.01-1S**).

Pursuant to **Clause 18.02-5S**, the composting facility can be accessed via sealed roads suitable for freight vehicles.

**Clause 19.03-5S and 19.03-5L** aim to reduce waste and maximise resource recovery, reducing reliance on landfills. The proposal will assist with meeting the resource recovery needs of existing communities and is well placed to support growing townships within the sub-coastal region, particularly Bairnsdale and Paynesville. The facility is located in proximity to an existing landfill site, as well as destination locations of the fertiliser to be produced. It minimises impacts on sensitive uses through appropriate separation from these uses as well as implementing suitable procedures. The proposal is environmentally sound, equitable and efficient as it is within an appropriate distance of large, growing towns, which will maximise its long-term efficiency and ensure transport costs are minimised.

## Farming Zone - Schedule 1 (FZ1)

The Farming Zone - Schedule 1 (FZ1) aims to support agricultural uses. Relevant to the site, it seeks to:

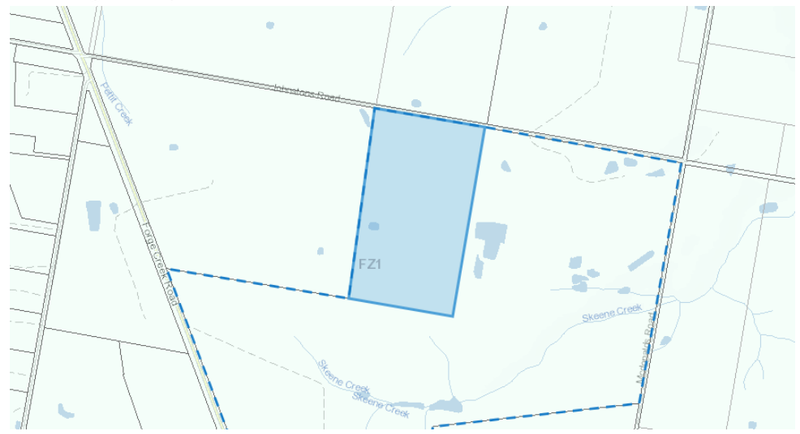
- *To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.*
- *To encourage the retention of employment and population to support rural communities.*

The proposed composting facility is considered compatible with farming uses and will not reduce rural production on adjacent land. Furthermore, the composting plant will directly employ three staff, as well as supporting businesses that sell or use the fertiliser produced on site.

A composting facility is within the land-use category of Industry, which requires a permit under the zone (Clause 35.07-1). Furthermore, buildings and works associated with a section 2 use also require a permit (Clause 35.07-4).

The proposal is in accordance with the decision guidelines at Clause 35.07-6. The composting facility is compatible with surrounding agricultural uses and will not place any restrictions on the future expansion of any productive farming activities. In accordance with EPA guidelines, it is appropriately designed and separated from dwellings, allowing any odours to disperse before reaching homes. SMEC have shown that water utilised in the composting process will be appropriately contained, to ensure that waterway health is supported, and continues to support flora and fauna. On-site effluent will be carefully managed to ensure nutrient loads of waterways remain healthy. The facility will remain visually appealing, as it is well setback from the road and screened by vegetation abutting the fence line of the frontage (north). Vegetation will be planted to screen the facility from the east and south.

**Existing Zone** (source: VicPlan 2024)



## Environmental Significance Overlay – Schedule 1-43

The Environmental Significance Overlay – Schedule 1-43 aims to identify and protect biological significance within East Gippsland, with the objectives:

- To ensure that development occurs so as not to adversely impact upon the environmental values of the site or any other value that may be identified within the overlay area.
- To conserve and enhance the environmental sustainability and ecological integrity of these values.

ESO1-43 applies specifically to the road reserve and frontage of the subject site, being part of the Goonnure Wildlife Corridor, significant for Gippsland Plains Grassy Woodland. Management Practices include:

- *Encourage landholders to fence vegetation remnants.*
- *Develop and encourage application of an appropriate weed control program.*
- *Encourage cooperative fox control programs which minimise risk to non-target species.*
- *Encourage application of appropriate fire regime.*
- *Design a road maintenance strategy which minimises damage to roadside vegetation.*
- *Encourage parallel plantings on freehold land to widen vegetation corridor.*
- *Encourage revegetation of any vegetation gaps along the roadside.*

A small section of the roadside vegetation will be lost to allow access to the site. Section 3.0 of the schedule states that works carried out on behalf of a municipal council are exempt from requiring a permit.

Notwithstanding, it is noted that works and vegetation removal are minimised to the greatest extent possible to facilitate installing road access to the composting facility. It should be noted that some species, such as Ironbark Eucalyptus tricarpa and Snow Gum E. pauciflora, which are not indigenous to the Red Gum Plains have been planted in this corridor. EGSC intends to plant some screening native vegetation to assist in compensating for the loss of this native vegetation.

## Particular Provisions

**Clause 52.06-5** requires industry to have 2.9 parking spaces to each 100 sqm of net floor area. 15 parking spaces are provided, supporting 3 staff and visitor parking. A permit for a dispensation from the parking requirement is required. Given the nature of the operations, it is only necessary to provide parking for staff and a limited number of site visitors, with most traffic being associated with deliveries moving through the site and not requiring parking.

A dispensation from the bicycle parking requirements is sought under **Clause 52.34** given the rural location and unsuitability of the roads for travel by bicycle to this location.

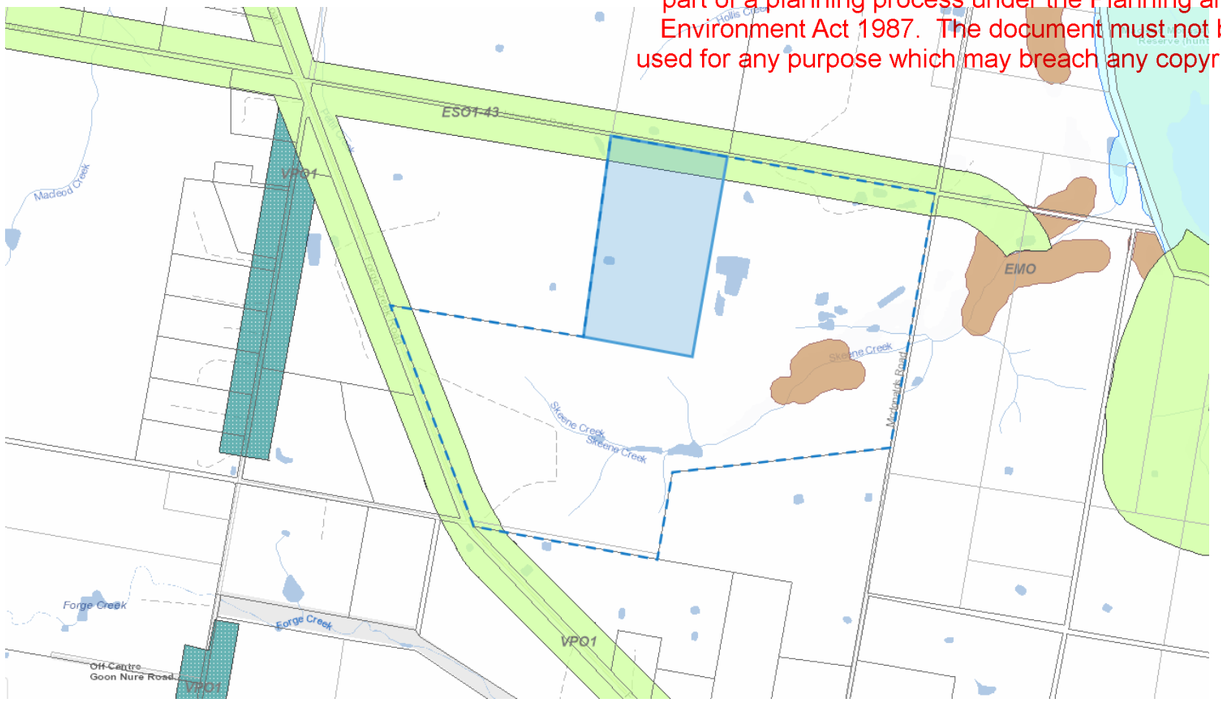
**Clause 52.09** applies to applications within 500 m of an extractive industry. It aims to ensure that future stone resources are protected from inappropriate use and development. There are no referral requirements or decision guidelines for non-accommodation uses. This reflects that the proposed use is compatible with any additional extractive industry proposed in the future. The proposal will not hinder the operation of future stone exploration or extraction on nearby land.

**Clause 52.17** requires no net loss to biodiversity as a result of the removal of vegetation. The proposal has minimised the loss of native vegetation to the greatest extent possible through design. The main area of native grasses and one large tree on the site will be avoided by the development footprint entirely. Some native vegetation removal is required however, to the minimum extent necessary, to facilitate the development of the facility. Ten patches of native vegetation were assessed, totalling 1.070 ha of removal. This will require an offset of 0.277 General Habitat Units with a minimum strategic biodiversity value of 0.352 at a cost of approximately $25,000 to $47,000; these offsets are currently available on the credit register. Further details are provided in section 3.5.7 of the native vegetation assessment. It is noted that as a result of changes to the layout proposed following community consultation, the loss of some native vegetation within the site has been reduced. An Offset Plan will be prepared following approval of the final layout, and will likely be a condition of a permit.

It is noted that **Clause 52.31** applies to local government projects. Whilst the project has a cost less than $10M, the proposal is within the land-use category of industry, which does not benefit from municipal permit or notice exemptions.

**Clause 53.10** defines the types of industries, which if not appropriately designed and located, may cause offence or unacceptable risk to the surrounding area. Composting is listed under 'Waste, recycling and Resource Recovery' with no threshold distance specified. As such, **Clause 66.02-7** of the VPP notes that EPA is a 'determining' referral authority for applications that seek to use land for industry or warehouse for a purpose listed with no separation distance specified in the table to **Clause 53.10-1, Threshold Distance**.

**Existing Overlays** (source: VicPlan 2024)




**Organics Processing Facility at Wangaratta** (source: Rural City of Wangaratta 2024)

## Conclusion

The proposed composting facility at Lot 2 on Local Plan 116329 (part of 200 Johnstons Road, Forge Creek) will reduce the municipality's dependency on landfill and produce local compost which can be purchased by persons seeking to improve the productivity of the soil.

The proposed composting facility will support Victoria's "*Recycling Victoria: A new economy*" policy and the planning policy framework (PPF) and is aligned with the vision and principles of the Council Plan. The facility is located within the Lakes and Coast sub-region, where population growth is anticipated by Council, particularly in Bairnsdale and Paynesville. Accordingly, the project supports state-wide sustainability goals while addressing the unique needs of the regional area. The facility will benefit East Gippsland by creating local jobs and producing high-quality compost for local use, fostering economic and environmental sustainability.

The facility will be screened from Johnstons Road by vegetation and is well-placed adjacent to the existing landfill facility. Clauses 19.03-5S and 19.03-5L of the Planning Scheme are particularly relevant to the proposal, highlighting the need to reduce reliance on landfill, while ensuring that the composting facility is separated from sensitive uses.

The proposal is compatible with the farming zone and will not hinder productive agricultural uses on surrounding land. The application considers environmental health and will ensure that nutrients from the facility do not enter waterways. Amendments to the layout to address community concerns include larger clean and contact water dams to minimise risk of overtopping and will fully contain water run off within the site for reuse in processing.

The proposal has been carefully planned to ensure that noise and odour impacts are appropriately minimised. Specialist investigations have shown that the combination of distance from sensitive uses as well as the implementation of technology and procedures will ensure that dwellings and other sensitive uses will maintain the existing standard of amenity. As a result, residents can expect to enjoy living within the local agricultural environment without disruption. Following community concerns relating to noise, odour and visual impacts, the layout of the facility has been redesigned to increase separation distance and planted screening landscaping has been incorporated into the design to provide additional buffering of the site to neighbouring properties. The vegetated buffer will be densely planted, improving the visual amenity when viewing the western and southern boundaries of the site. This will also contribute to obscuring the existing landfill site.

The Environmental Management Plan provides an analysis of the various risks that will be managed by the project. It outlines processes to be undertaken during the operation of the facility to ensure the composting facility can operate safely and mitigate adverse impacts. It includes appropriate operational requirements for considerations including stormwater management, noise, dust and odour management, as well as for fire risk, and appropriately manage any potential residual impacts.

The planning assessment completed in this report has confirmed that the proposal is consistent with key planning provisions. For the reasons outlined above and throughout this report, the proposal demonstrates a net community benefit, and it is requested that a planning permit be issued to enable the composting facility to promote a circular economy within the municipality whilst respecting other uses within the surrounding agricultural region.

**Screening Vegetation to Frontage –** View within the site, facing northern frontage (source: BW Site Visit 2024)

**Subject Site –** View within the site, facing south (source: BW Site Visit 2024)