

Planning guidance: Assessing an application for a composting facility

A guide for land use planners

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Development Advisory



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Purpose of this guideline

1.1. Introduction

This guideline applies to both standalone composting facilities and composting activities that are associated with other land uses. It is generally intended to help responsible authorities and planning permit applicants identify and control risks and assist in the preparation and assessment of planning permit applications.

This guideline is targeted at smaller facilities/activities that fall within the 'prescribed registration activity' threshold limits set out in Schedule 1 of the Environment Protection Regulations 2021 (EP Regulations). This permission is discussed further in Section 4.3 Environment Protection Regulations 2021, on this guideline.

This guideline should be read in conjunction with EPA Publication 1588 – Designing, constructing and operating composting facilities (or as superseded) available online at: <https://www.epa.vic.gov.au/our-work/publications>

EPA Publication 1588 provides further guidance for industry, government and the community on EPA's expectations and requirements for the siting, design, construction, and operation of composting facilities, including further information about:

- location and siting
- managing feedstock
- best practice design and management
- composting process
- environmental management.

1.2. Legal status

EPA guidance does not impose compliance obligations. Guidance is designed to help duty holders understand their obligations under the *Environment Protection Act 2017* and subordinate instruments, including by providing examples of approaches to compliance. In doing so, guidance may refer to, restate, or clarify EPA's approach to statutory obligations in general terms. It does not constitute legal or other professional advice, and should not be relied on as a statement of the law. Because it has broad application, it may contain generalisations that are not applicable to you or your particular circumstances. You should obtain professional advice or contact EPA if you have specific concerns. EPA has made every reasonable effort to provide current and accurate information, but does not make any guarantees regarding the accuracy, currency or completeness of the information.

1.3. Intended audience

This guideline has been prepared by EPA for responsible (statutory) authorities who may receive and be required to assess planning permit applications for composting facilities. However, it may also be useful for other parties involved in the process, such as planning permit applicants or other planning authorities.

Composting facilities and planning

2.1. What is composting?

Composting is the microbiological transformation of organic materials under controlled aerobic conditions to achieve pasteurisation and a specified level of maturity. There are two phases to this composting process:

1. Pasteurisation which generates heat within the material to significantly reduce the number of viable pathogens and plant propagules.
2. Maturation which sees the decline in microbial activity and an increase in biological stability of the organic material.

2.2. How are composting facilities defined in planning schemes?

Composting falls under the 'industry' land use term as defined in the Table to Clause 73.03 (Land use terms) of the Victoria Planning Provisions (VPP).

2.3. What are the risks to the environment and human health from composting facilities?

A combination of feedstock (organic wastes), siting and process factors determine the level of risk that composting operations pose to the environment, amenity and human health. Best practice design and operation of facilities can minimise many of the potential impacts. Potential risks include:

Air: Composting produces a wide range of chemical compounds, some of which are highly odourous and offensive to humans. Odour is one of the most common causes of community pollution reports related to composting operations. Dust and other airborne particulates may also be generated.

Noise: Noise nuisance from composting operations may arise from the use of machinery within the site and from movements of transport vehicles servicing the premises. Onsite operational activities have the potential to create noise impacts for surrounding land uses.

Uncontrolled organic matter: Composting can result in the pollution of groundwater, surface water and land when water that has come into contact with organic matter escapes via seepage or run-off into the local environment.

Vermin, birds, weeds, and pathogens: Vermin, birds, water and wind can transport waste, weeds and/or pathogens offsite. This can be a potential risk to the environment, biosecurity, amenity and human health. Compost facilities can also act as habitats for populations of pests to proliferate.

Litter: Litter from contamination of feedstock, vehicles entering or leaving the facility, or from other sources, can be wind-blown into the surrounding areas and can impact the local amenity. Windblown litter must be prevented from leaving the premises.

Fire: Fire at composting operations can arise from overheating waste piles, cigarette butts, lightning strikes, bushfires or other activities.

2.4. Location and siting of composting facilities

Siting from sensitive receptors

Composting can have odour impacts on the surrounding area and impact air, land and groundwater. Litter, dust, spread of disease, vermin, fire management and transfer of contaminated stormwater across property boundaries are also common concerns. These problems need to be considered when planning a new facility or a major upgrade of an existing site. A composting facility should be located in an area where it will not pose an adverse risk to the environment, amenity, or health of the local community.

To protect human health and amenity, appropriate separation distances should be provided between composting facilities and sensitive land uses.

Siting and environmentally sensitive areas

Composting facilities should be located and designed so that polluted stormwater can be retained on-site. The land should not be flood prone (it should have a flood average recurrence interval less than 100 years) to reduce the risk of wastewater being discharged to waterways. Composting facilities should be sited at least 100 metres from surface waters to protect those waters from harm.

Planners are encouraged to use Land Subject to Inundation Overlays, Special Building Overlays, Floodway Overlays and Urban Floodway Zone as a basis for identifying high risk flood prone areas. Contingency planning should consider and plan for the management of flood events, regardless of site location.

Composting in conjunction with other odourous activities

Cumulative environmental, human health and amenity impacts should be considered at sites where composting is occurring in conjunction with other uses at the site. For example, it is quite common that intensive animal industries such as broiler sheds, piggeries etc., have associated composting activities where litter, manure and/or animal mortalities are composted.

The same environmental risk management principles apply to these composting activities as to stand-alone industries, however cumulative odour impacts must also be considered.

2.5. What separation distances apply to composting facilities?

Even when a composting facility or activity is operating in accordance with all relevant statutory obligations, there may still be unintended offsite impacts that must be accounted for. Separation distances are designed to account for such impacts and at the same time minimise the risk of human health and amenity impacts on any nearby sensitive land uses. However, they are not an alternative to controlling offsite impacts or meeting legal obligations.

Where an applicant has requested a variation from a recommended separation distance, it is the responsibility of the applicant as the 'agent of change' to demonstrate to the responsible authority that the variation is appropriate.

EPA Publication 1588 – Designing, constructing, and operating composting facilities

Location and siting information, and details on how to calculate an appropriate separation distance for composting facilities is provided in EPA publication 1588.

Recommended separation distances are dependent on a range of factors including feedstock, process design and site capacity. In calculating the separation distance, responsible authorities are encouraged to seek information on feedstock, process design and site capacity, if not included in the application documents. EPA may require an odour assessment, which may include operational and field odour assessment covering all aspects of the process as well as the pathways for odour dispersion.

2.6. What threshold distances apply to composting facilities?

Clause 53.10 - Uses with adverse amenity potential

Clause 53.10 defines those 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.

Environmental risk and management controls

Appropriate separation distances and siting of facilities do not eliminate the need for effective source emission control. EPA publication 1588 provides further details regarding environmental risks, an environmental risk management approach and further guidance for control measures for applicants and operators to incorporate into the design and operation of their facility.

Proposals for composting facilities should address these environmental and amenity risks and demonstrate the relevant control measures in the planning permit application to prevent harm to human health and the environment, comply with legal obligations, and meet community expectations.

EPA advice and support

EPA provides environmental expertise to assist planning and responsible authorities in understanding environmental risks associated with certain planning and development decisions. EPA can help prevent risk to human health and the environment and improve the quality of land use and development decisions by:

- highlighting significant environmental and human health risks or impacts likely to occur from the proposed use or development
- providing technical advice to support responsible authorities to eliminate or otherwise reduce environmental risks
- providing information and guidance related to management techniques for environmental and human health protection
- recommending interventions, such as planning permit conditions, where appropriate.

4.1. Environment Protection Act 2017

The *Environment Protection Act 2017* (EP Act) and related sub-legislative instruments came into effect on 1 July 2021 and sets the required approach for environmental management in Victoria. The focus is on preventing pollution impacts rather than managing those impacts after they have occurred. The cornerstone of the EP Act is the general environmental duty (GED), which requires Victorians to understand and minimise their risks of harm to human health and the environment, from pollution and waste.

Under the GED, "a person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably

practicable". Reasonably practicable means implementing controls that are proportionate to the risk, particularly in the design stage of a new development or when updating an existing development.

The action to minimise a risk is 'reasonably practicable' if:

- it is generally adopted within an industry or should be adopted, based on what is known, or has been experienced in the past
- the actions and measures undertaken are suitable, available and the cost is proportionate to the risk.

More information on how to comply with the GED is available in *Industry guidance: Supporting you to comply with the general environmental duty* (EPA publication 1741).

4.2. Environment Reference Standard

The Environment Reference Standard (ERS) is a subordinate instrument under the EP Act that sets out the environmental values that are sought to be achieved or maintained in Victoria. Environmental values describe a use, attribute, or function of the environment that Victorians value. As reference standards, environmental values can be identified in relation to objectives for supporting different uses of the environment and through indicators that can be measured to determine whether those objectives are being met.

The ERS contains environmental values, indicators, and objectives for:

- Air (Part 2)
- Noise (Part 3)
- Land (Part 4)
- Water (Part 5).

When considering an application for a planning permit, the responsible authority may consider the ERS, where relevant, 'if the circumstances appear to so require it'. The responsible authority must determine whether the circumstances of the application would require the ERS to be considered. Where they do, the relevant environmental values, indicators and objectives should be considered.

For further detail on the ERS, refer to the *Guide to the Environment Reference Standard* (EPA publication 1992)

4.3. Environment Protection Regulations 2021

The Environment Protection Regulations 2021 (EP Regulations) set out which activities require an EPA permission to develop and/or operate (licence, permit or registration). The type/level of EPA permission required is dependent on activity type and production capacity threshold limits set out in *Schedule 1- Prescribed permission activities, exemptions, and fees*.

Composting is listed as a 'prescribed permission activity' under Items 10 and 11 in *Schedule 1- Prescribed permission activities, exemptions, and fees*. The type/level of EPA permission required is dependent on the volume of materials accepted into and produced by the composting facility.

Item 11, Activity type A07b (Organic waste processing – small) lists small composting activities as a 'prescribed registration activity', meaning the facility must be registered with EPA to operate lawfully. The maximum stated threshold limits for acceptance and production of material mean that that such facilities/activities accept no more than 100 tonnes or 200 cubic metres of organic waste in any month; or more than 70 tonnes or 140 cubic metres of organic waste is accepted in any month and more than

50 tonnes of pasteurised material, compost or digestate is produced in any month, but not including, operations processing organic waste generated on-site and that retain the processed organic waste on-site.

The development and operation of larger composting activities (in accordance with Item 10) exceeding these threshold limits require development and operating licences from EPA.

4.4. Planning and Environment Act 1987

Section 55 referrals

EPA has specialist expertise to advise responsible authorities on risks to the environment, amenity and human health. EPA provides this expertise as a referral authority under Section 55 of the *Planning and Environment Act 1987* (P&E Act).

Section 55 requires that a responsible authority give a copy of an application to every person or body that the planning scheme specifies as a referral authority for that kind of application. Pursuant to Clause 66.02.7 of the Victoria Planning Provisions, EPA is a determining referral authority for composting facilities.

EPA may object to the application; in which case the responsible authority must refuse to grant a permit. Alternatively, under Section 56 of the P&E Act, where EPA does not object and specifies conditions, those conditions must be included in any permit granted.

Further information is available in Planning Practice Note 54: Referral and Notice Provisions.

EPA considers the potential environmental risks posed by the proposal and assesses the siting and design of the facility to respond to the identified risks as part of its assessment and response. The referral response is informed by the recommended separation distance between a composting facility and a sensitive use, which can be determined in accordance with EPA publication 1518 (or as superseded).

Section 52 notifications

For applications where a responsible authority seeks EPA's expertise on controlling the risks to the environment, amenity and human health, the responsible authority may give notice of the application to EPA under section 52 of the P&E Act.

When writing to EPA, it should be specified whether notice is being given under Section 52 or if being referred under Section 55 of the P&E Act.

EPA may object to an application that it has been notified of; however, the responsible authority may still choose to grant a permit.

4.5. EPA response time

EPA is committed to providing an initial response to both Section 55 referrals and Section 52 notifications within 28 days. Councils may request a faster response time, which will be considered based on the individual merits of the application.

Application requirements – what information can a responsible authority request?

EPA referral responses may include advice targeting control measures outlined in EPA guidance, and when appropriate, clear, and enforceable planning permit conditions that effectively manage risks of harm.

Applications for composting facilities should at minimum, consider the likely environmental and human health effects on the locality and surrounding land uses, including expected:

- noise levels
- air-borne emissions (including odour and dust)
- emissions to land or water.

In determining the suitability of a site for development and use of a composting facility, the responsible authority may consider requesting supporting documentation prepared by a suitably qualified environmental professional. Supporting documentation can assist in the assessment of a planning application or form the basis for ongoing management of risks to the environment or human health as part of the proposal.

5.1. Supporting documentation - assessment

Land use planning proposals must not prevent the applicant from achieving compliance with the GED. Where it is unclear whether risks to the environment or human health can be managed appropriately, it is the obligation of the applicant to demonstrate that risks are acceptable. The responsible authority may request additional assessment documentation, this may include plans or documents for endorsement as part of the planning permit approval. For composting facilities, additional assessments should be proportionate to the risk and may commonly include, but are not limited to:

Human health risk assessment (HHRA)

- A HHRA is scalable depending upon the risk to human health from the proposal, it should demonstrate that no unacceptable public health risks are likely from the proposal or proposed operations enabled by the planning permit.

Acoustic assessment

- An acoustic risk assessment should follow the methodology outlined in the *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (EPA publication 1826) and demonstrates whether noise emitted from the proposal would be determined unreasonable per the Environment Protection Regulations 2021 (r. 118).

Nuisance dust assessment

- Nuisance dust assessments provide a risk assessment to determine the overall risk of nuisance dust impact to the receiving environment and locality.

Odour assessment

- An odour assessment that evaluates the potential impact of odour pollution on human health and wellbeing within the locality of the proposal.

5.2. Supporting documentation – ongoing management

In circumstances where the protection of environment and human health is dependent upon the ongoing management of risks, the responsible authority should consider requesting that an environmental management plan be prepared.

Environmental management plan

- An Environmental Management Plan should:
 - address each of the environmental and human health risks identified with a proposal and document what control measures will be put in place during the development of, and continued operation of the facility.
- Depending on the scale and nature of risks posed by the proposal, the following components be considered for inclusion in an Environmental Management Plan:
 - **Stormwater Management** - reflecting guidance on best practice site management techniques. EPA publication 1588 provides information regarding control and performance options for stormwater management.
 - **Dust Management** - reflecting guidance on best practice site management techniques. EPA publication 1588 provides information for control and performance measures for dust management.
 - **Odour Management** – reflecting guidance on best practice site management techniques. EPA publication 1588 provides information to assist in developing understanding of how to manage odour, including through referral to odour management plans and best practice design and operation of composting facilities.

Each of the above plans/assessments should demonstrate compliance with the relevant legislation and, where appropriate, make recommendations to control and mitigate environmental risks.

EPA aims to work with responsible authorities to review the content of supporting plans / assessments and develop recommendations into planning controls for a site.

The type of information provided with a planning permit application should be proportionate to the anticipated environmental and amenity risk of a proposal.

Appendix A includes a checklist for councils and proponents, which will assist in the application assessment process.

More information

Additional, relevant planning information and guidance includes:

- *Industry guidance: supporting you to comply with the general environmental duty* (EPA publication 1741)
- *Assessing and controlling risk: A guide for business* (EPA publication 1695)
- *Designing, constructing and operating composting facilities* (EPA publication 1588)
- *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (EPA publication 1826)

- Australian Standard 4454: 2012 – Composts, Soil Conditioners and Mulches (AeS 4454: 2012) is a voluntary standard for the production of composts, soil conditioners and mulches. The standard provides information on the composting process as well as product standards. (This guideline has been informed by elements of the standard that relate to environment protection.)
- *Guide to the Environment Reference Standard* (EPA publication 1992)
- *Urban stormwater management guidance* (EPA publication 1739.1)
- *Best Practice Environmental Management Guidelines, 1999*

More information about planning schemes and the planning permit application process is available online: planning.vic.gov.au

Appendix A – Composting facility application checklist

APPLICATION #:	
Details of development	
Portion of site land affected by this application:	
Photographs:	
Other:	
Details of PRIMARY use or development	
Primary use proposed:	
How much waste from Primary use?	
Details of OTHER use (if applicable)	
Description of any OTHER related operations (e.g. Piggeries, wineries, etc.):	
Description of OTHER type of waste:	
Volume of OTHER type of waste:	
Volume of waste from OTHER that will go to the composting facility:	

Volume of OTHER that will be taken off site / elsewhere on site:	
Volume of waste accepted from off-site per month:	
Type of feedstock accepted:	
How much feedback stock accepted per month?	
Volume of compost material produced per month:	

Details of risk management measures	
Bunding details:	
Stormwater controls:	
Leachate dam(s):	
Measures to reduce permeability and prevent groundwater contamination:	
Height and width of stockpiles and separation distances in between:	
Fire prevention considerations and CFA involvement:	
Setbacks to boundaries:	
Distance to Sensitive receptors:	

Required separation distances:	
Summary of Assessment against <i>Designing, constructing and operating composting facilities</i> (EPA publication 1588)	
Provision of odour control (where specified in 1588 publication above)	
Modelling (e.g., air, odour, noise):	
Litter Management:	
Measures to control dust:	
Measures to control vermin:	
Transportation measures to ensure adherence to council rules, preventions of spills, nuisance noise etc.:	
OTHER COMMENTS	

[*Designing, constructing and operating composting facilities*](#) (EPA publication 1588) provides guidance on various issues covered in the checklist.

Accessibility

Contact us if you need this information in an accessible format such as large print or audio. Please telephone **1300 372 842** or email contact@epa.vic.gov.au

Interpreter assistance



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