

Guide to separation distance and landfill buffer changes

The following tables outline changes to recommended separation distances and landfill buffers in the proposed *Separation distance guideline* and *Landfill buffer guideline*, compared with current guidance. The tables only include information on proposed separation distances and landfill buffers that have increased, reduced, been introduced or been removed.

Note that the proposed *Separation distance guideline* sets out separate separation distances for odour and dust, unlike EPA publication 1518.

Bold text indicates where a separation distance/landfill buffer for a sub-section of industry or landfills has been introduced or changed.

Table 1: Odour (Separation distance guideline)

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Agriculture			
Cattle or dairy intensive farming or feedlot; dairy	5,000 metres	Case by case	Modified to case by case because separation distances for dairy farms are highly design and size dependent.
Fish farming	N/A	100/150/200 metres (depending on type)	Introduced to account for odour from fish farming.
Grain and stockfeed mill and handling facility; with meat or meat by-products incorporated in feed (> 20,000 t/year)	250 metres	500 metres	New sub-section introduced to account for odour where meat or meat by-products are incorporated in feed.
Intensive sheep or goat feeding systems	N/A	See further guidelines	Introduced to account for odour from emerging intensive farming.
Piggery; outdoors	N/A	See further guidelines	Introduced to account for odour from outdoor piggeries.
Soil blending, conditioning and mixing applied to farms or market gardens	N/A	500 metres	Introduced to account for the rise in application of manures, biosolids etc. to farms and market gardens.
Stock sale yard; > 10,000 head per week	500 metres	1,000 metres	New sub-sections introduced to adopt a flexible scale for sale yards based on size/head of stock.

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Stock sale yard; > 30,000 head per week	500 metres	2,000 metres	
Basic metal products			
Metal casting	Various	100/500/1,000 metres (depending on type and scale)	Large scale smelters are not expected to be developed in Victoria in future (and if they were, would always trigger a full risk assessment). Basic metal products category changed to take into account odour from more common metal casting and foundries using sand and die casting.
Chemical, petroleum and coal products			
Briquette (coal) production (> 2,000 t/year)	250 metres	N/A (500 metres under 'hydrocarbon and coal products and derivatives production')	Briquette (coal) production no longer requires a separate category based on current knowledge of the sector, instead included in 'hydrocarbon and coal products and derivatives production'.
Coke production (> 100 t/year)	N/A	Case by case	Introduced to account for odour from premises on which coke is produced, quenched, cut, crushed or graded from coal or petroleum
Chemical blending or mixing	N/A	300/500 metres (depending on type and scale)	Introduced to account for odour from premises that blend or mix chemicals.
Cosmetic and toiletries production (> 2,000 t/year)	100	300	Distance increased based on recent field experience for these types of facilities and peer review from technical experts within EPA.
Formaldehyde production (> 2,000 t/year)	250 metres	N/A (Case by case under 'other organic and inorganic chemical production')	Formaldehyde production no longer requires a separate category based on current knowledge of the sector, instead included in 'other organic and inorganic chemical production'.

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Industrial gas production (> 2,000 t/year)	1,000 metres	Case by case	Modified to case by case as these facilities are typically fully enclosed and 1,000 metres is considered excessive for odour emissions.
Plastics manufacture and or recycling (> 2,000 t/year)	N/A	200 metres	Introduced to account for odour from manufacture of plastic products from raw or recycled plastic material, distinct from synthesis and production of plastic precursors (polymers and resins).
Rubber, polyester and synthetic resins production (> 2,000 t/year)	1,000 metres	500 metres	Distance reduced to reflect modern pollution control equipment available.
Food, beverages and manufacturing			
Abattoir – no rendering; > 6,000 head/day	500 metres	1,000 metres	Size-specific distances adopted for abattoirs. Size thresholds now determined by number of head per day processed (in head of sheep equivalent).
Alcoholic beverage manufacturing	N/A	250/500 metres (depending on throughput)	Introduced to account for the growth in the alcoholic beverage manufacturing industry in Victoria.
Bakery; where heat is used to clean baking equipment (> 200 t/year)	100 metres	Case by case	New sub-section introduced to account for odour from bakeries where heat is used to clean baking equipment, as this is a more odorous activity.
Produce processing works (> 200 t/year)	N/A	500 metres	Introduced to account for odour from production of finished foods and the recent development of manufacturing-only restaurants.
Mining and extractive industry			
Gas and oil extraction	250 metres	Case by case	Modified to case by case as it is anticipated that a risk assessment would be required for any proposal of this type.

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Miscellaneous manufacturing			
Hot dip galvanising	N/A	400 metres	Introduced to account for odour from hot dip galvanising operations.
Manufacture of products using fibreglass and resin (> 250 t/year)	250 metres	500 metres	Distance increased based on experience that these operations are highly odorous and establishing at larger scales.
Skin and hide processing	N/A	500 metres	Introduced to account for odour from premises on which animal skins or hides are dried, cured or stored.
Spray painting	N/A	100/300 metres (Depending on throughput)	Introduced to account for odour from spray painting operations.
Storage of wet-salted and unprocessed hides	250 metres	100 metres	Distance reduced to reflect current experience with these premises.
Surface coating (including drum coating)	N/A	200 metres	Introduced to account for odour from surface coating operations.
Non-metallic mineral products			
Asphalt plant; > 100 tonnes per week, existing plant	500 metres	1,000 metres	Two categories created for asphalt plants to account for agent of change situations where there is encroachment of older plants. Control technology of newer plants is expected to be of a higher order.
Paper and paper products			
Paper or paper pulp production; using semi-processed or recycled materials	100 metres	500 metres	Distance increased based on recent experiences in this sector in Victoria, where odour plumes have been recorded multiple times at long distances from the sources.
Storage and transport			
Bulk storage of chemicals etc.	N/A	1,000 metres	Introduced to account for odour from bulk chemicals storage.
Chemical storage and warehousing facilities	N/A	100 metres	Introduced to account for odour from smaller scale chemical storage and warehousing.

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Storage of petroleum and hydrocarbon products; > 2,000 t in total, fixed roof	250 metres	500 metres	Distance increased for fixed roofed storage of petroleum and hydrocarbon products to align with relevant distance for major hazard facilities. The 250-metre distance still applies where nitrogen pressurisation is used.
Textiles			
Dyeing or finishing of cotton, linen and woollen yarns and textiles	250 metres	100 metres	Distance reduced as technology has evolved in expectation of odour control.
Treatment and production of textiles – using chemicals or heat	500 metres	250 metres	Carbon disulphide removed from title and distance reduced given carbon disulphide is no longer used in textile manufacturing in Victoria.
Wool scouring	250 metres	200 metres	Distance reduced to be consistent with clause 53.10 of the Victoria Planning Provisions.
Waste management			
Biosolids application areas	N/A	500/1,000 metres (depending on type and throughput)	Introduced to account for odour from biosolids application areas.
Chemical or oil recycling (> 1,000 m ³ :total capacity)	N/A	500 metres	Introduced to account for odour from chemical or oil recycling.
Composting facility	See further guidelines (superseded)	See further guidelines	Updated to reference current guidance (EPA publication 1588) and Appendix C of the proposed <i>Separation distance guideline</i> , which includes a broader range of separation distances covering a wider range of composting technologies.
Container, tanker, or drum washing /reconditioning	N/A	500 metres	Introduced to account for odour from container, tanker, or drum washing/reconditioning.
Incineration	N/A	150/500 metres (depending on type)	Introduced to account for odour from incineration.

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Landfill	See further guidelines (Landfill BPEM)	See further guidelines (<i>Landfill buffer guideline</i>)	Updated to refer to new guidance on landfill buffers. <i>For more information about changes to landfill buffers in the Landfill buffer guideline, see Table 3 below.</i>
Liquid waste facility (> 1,000 m ³ total capacity)	N/A	500 metres	Introduced to account for odour from liquid waste facilities.
Materials recovery and recycling; accepting scrap metal	Case by case	500 metres	Distance adjusted to only reflect scrap metal materials recovery and recycling processes. Other materials recovery and recycling only requires a separation distance for dust (see Table 2).
Transfer station; accepting green waste/putrescible waste (e.g., FOGO)	250 metres	500 metres	Distance increased and only applied to transfer stations accepting green waste or putrescible waste. 250-metre separation distance for nuisance dust still applied to all transfer stations.
Waste to energy plant	N/A	Case by case	Introduced to account for odour from waste to energy plants, as an emerging industry.
Wood, wood products and furniture			
Manufacture of wood-fibre or wood-chip board	250 metres	1,000 metres	Distance increased based on in-field experience with odour from milling and stockpiles.
Sawmill; sawing, milling, chipping, debarking and hogging	250 metres	500 metres	Distance increased for these typically larger sawmills.
Sawmill; handling, cutting and processing logs into timber, including timber drying/seasoning	250 metres	200 metres	Distance reduced for these typically smaller sawmills.
Timber preserving works (> 10,000 cubic metres of timber per year)	100 metres	250 metres	Distance increased based on more odorous treatment agents used (compared with older facilities) such as creosote.

Table 2: Dust (Separation distance guideline)

Industry type	Current distance (EPA pub. 1518)	Proposed distance (draft EPA pub. 1949)	Reason
Mining and extractive industry			
Open cut coal mine	1,000 metres	2,000 metres	Distance increased based on the size and nature of these premises.
Coal handling and storage without mining	N/A	500/1,000 metres (depending on throughput)	Introduced to account for dust from coal handling and storage without mining. Coal can easily be broken down into finer particles during handling and in transit, posing a risk of dust emissions.
Quarry; without blasting	250 metres	500 metres	Based on recent experience with these facilities. The distance can be reduced to 250 metres if activity is substantially below ground level (> 10 metres).
Miscellaneous manufacturing			
Abrasive blasting	N/A	50/100/300/500 metres (depending on type and throughput)	Introduced to account for dust from abrasive blasting.
Waste management			
Landfill	See further guidelines (Landfill BPEM)	See further guidelines (<i>Landfill buffer guideline</i>)	Updated to refer to new guidance on landfill buffers. <i>For more information about changes to landfill buffers in the Landfill buffer guideline, see Table 3 below.</i>
Materials recovery and recycling facility	Case by case	250 metres	Distance adjusted to reflect processes used, which are largely similar to those used at quarries (without blasting). Distance aligns with current 250-metre separation distance for quarries (without blasting).
Wood, wood products and furniture			
Sawmill; sawing, milling, chipping, debarking and hogging	250 metres	500 metres	Distance increased for these typically larger sawmills.
Sawmill; handling, cutting and processing logs into timber, including timber drying/seasoning	250 metres	200 metres	Distance reduced for these typically smaller sawmills.

Table 3: Human health and amenity impacts (Landfill buffer guideline)

Landfill type	Current buffer (Landfill BPEM)	Proposed buffer (draft EPA pub. 1950)	Reason
Landfill accepting municipal (putrescible) waste (Type 2); tip face greater than 500 m²	500 metres	1,500 metres	<p>EPA’s position on landfill buffers has evolved as a result of in-field experience and evidence published in a recent study by Bydder and Demetriou (July 2019) in the International Journal of Integrated Waste Management, Science and Technology ‘Establishing the extent of odour plumes and buffers for waste handling facilities’.</p> <p>The current buffer of 500 metres as prescribed in the Landfill BPEM is out of date and inadequate to address human health and amenity impacts, in particular odour emissions. The study also found that the 500-metre buffer may not account for routine odour emissions from larger putrescible landfills, even when operating at best practice.</p> <p>The 1,500-metre buffer may be varied to a minimum of 1,000 metres with an appropriate odour risk assessment that demonstrates an alternative buffer is acceptable.</p>
Landfill accepting solid inert waste (Type 3)	200 metres	500 metres (for odour)	Recent experience has shown that subsurface hotspots and landfill gas generation in leachate can develop in operating solid inert landfills and generate odour that can be detected up to and beyond 500 metres from the landfill.