

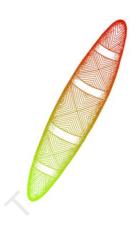
# Regulating litter and other waste: toolkit

Publication 1927 December 2020



This publication is for general guidance only. You should obtain professional advice if you have any specific concern. EPA Victoria has made every reasonable effort to ensure accuracy at the time of publication.

This work is licensed under a Creative Commons Attribution 4.0 licence.



EPA acknowledges Aboriginal people as the first peoples and Traditional custodians of the land and water on which we live, work and depend. We pay respect to Aboriginal Elders, past and present.

As Victoria's environmental regulator, we pay respect to how Country has been protected and cared for by Aboriginal people over many tens of thousands of years.

We acknowledge the unique spiritual and cultural significance of land, water and all that is in the environment to Traditional Owners, and recognise their continuing connection to, and aspirations for Country.

Authorised and published by Environment Protection Authority Victoria 200 Victoria Street, Carlton VIC 3053 **W** epa.vic.gov.au | **T** 1300 372 842 (1300 EPA VIC)



If you need interpreter assistance or want this document translated please call **131 450** and advise your preferred language.

If you are deaf, or have a hearing or speech impairment, contact us through the National Relay Service. For more information, visit: www.relayservice.gov.au

# Message from the CEO

Littering and illegal dumping harms our environment and our health, creating a significant challenge for EPA, councils, and litter authorities across Victoria.

In recent years, joint efforts have seen the implementation of litter reduction and waste management programs, as well as enforcement under the *Environment Protection Act 1970*.

In preparation for the introduction of Victoria's new world-leading environment protection laws in 2021, EPA has updated its litter enforcement toolkit – a critical resource for litter authorities and litter enforcement officers. This toolkit sets out the laws and Regulations that prohibit litter and the unlawful deposit of waste, as well as detailing the powers that litter enforcement officers will have under our new Act.

To support EPA's preventative focus, the toolkit also provides examples of how enforcement works alongside successful litter prevention strategies.

Our thanks to the many organisations and individuals who contributed to the development of this updated toolkit. We look forward to building on this resource and continuing our partnership with councils and other litter authorities across Victoria to prevent more harm from pollution and waste than ever before.

Dr Cathy Wilkinson *Chief Executive Officer* Environment Protection Authority Victoria

# Disclaimer

This draft toolkit was written prior to the proposed Environment Protection Regulations (the Regulations) being made. Care should therefore be taken when reading the toolkit as the final form of the Regulations, which are expected to be made prior to 1 July 2021, may be different to the draft version that was put out for public consultation along with the regulatory impact statement - see engage.vic.gov.au.

# Using this toolkit

This toolkit is a resource for litter authorities and litter enforcement officers in Victoria. The toolkit sets out the laws under the *Environment Protection Act 2017* (the Act) and proposed Regulations that prohibit littering and other unlawful deposit of waste and the associated penalties. It explains the powers that litter authorities and litter enforcement officers have to investigate and take action.

The toolkit also:

- shows how enforcement action works alongside litter prevention strategies
- provides tips for investigating litter and dumping
- includes case studies.

# Use this toolkit with:

- the Act and Regulations at legislation.vic.gov.au
- information about illegal dumping <u>epa.vic.gov.au</u>

# Contents

Message from the CEO	 3
Disclaimer	 4
Using this toolkit	 4
Littering and illegal dumping in Victoria	 6
Litter prevention	 
What the law says	 
Litter authorities	 11
Litter enforcement officers	12
How is waste defined in the Act?	 15
Unlawful deposit of waste	 16
Estimating the volume of waste	
Waste deposited from vehicles	21
Additional offences in the Regulations	 23
Investigating litter and other waste offences	24
Using your powers to investigate	
Collecting evidence	 
Taking compliance and enforcement action	 
Contact EPA	 
Stakeholders and networks	 
Appendix A: Schedule of offences	 45
Appendix B: Waste information gathering notice	 
Appendix C: Waste abatement notice	 
Appendix D: Infringement notices	 
Appendix E: Prosecution	 54
Appendix F: Estimating volume of waste	 56

# Littering and illegal dumping in Victoria

Littering and other unlawful deposit of waste (illegal dumping) presents a significant challenge to EPA, councils and other litter authorities across Victoria. It causes pollution, impacts our health, threatens wildlife and affects the amenity of our communities. It costs councils and the State Government millions of dollars a year, diverting public money from other services to the community.

Common examples of waste often disposed of illegally include:

- televisions, appliances and electronic waste (e-waste)
- furniture and mattresses
- cigarette butts
- industrial waste
- construction and demolition materials
- garden waste and soil
- packaging
- old cars
- tyre and chemical waste stockpiles.



Figure 1. Illegal dumping at Kilcunda Cemetery

# Litter prevention

Litter authorities use a range of methods to discourage littering and illegal dumping, change behaviour and educate the community. Preventative approaches can be effective either on their own or combined with enforcement.

Effective enforcement can reinforce positive behaviours around responsible litter and waste actions. It can support preventative approaches (such as education and providing adequate facilities) and create a general deterrent.

Effective preventative approaches include:

- education and awareness campaigns, especially social media
- engaging with residents
- communicating enforcement outcomes
- information about disposal options
- access to transfer stations
- using 'under investigation' barrier tape when dumping is found on roadsides, especially in high visibility locations
- strategies such as delayed response collection of waste, combined with signage and warnings
- infrastructure such as:
  - o barriers, bollards and fencing to prevent access to land
  - o permanent and movable signage to warn the area is under surveillance
  - o surveillance cameras
  - lighting in targeted locations, signage and bins at litter hot spots and roadside stops.



Figure 2. Illegal dumping tape and litter alert cards

#### **Preventing litter in the City of Monash**



Overflowing bins and kerbside dumping are serious problems in the Clayton area. The area is home to many students who attend Monash University. It has a high proportion of renters who are regularly moving in and out of the area.

The City of Monash ran a public education campaign in two phases to increase understanding and reduce litter and waste in the area.

Figure 3. Overflowing bins. Photo: Monash City Council

**Phase 1:** Distribution of educational material including:

- a letter explaining which waste goes in which bin
- waste collection calendars if bins were put out on the wrong dates or left out for more than 24 hours.

**Phase 2:** Door knocking to engage and educate residents, encouraging them to do the right thing instead of punishing mistakes.

The campaign highlighted several problems, including:

- a lack of understanding about what should go in rubbish, recycling or green waste bins
- people putting hard waste out too early for hard waste collection
- residents who were unaware they could get a larger rubbish bin, or landlords who weren't willing to pay for one.

The campaign showed promising results. After phase 1, the number of overfilled rubbish bins dropped from 163 to 84. After phase 2, it dropped further from 84 to 43.

Before phase 1, 90 households had illegally dumped waste. This dropped to 83 after phase 1 and to 46 after phase 2.

During the campaign the council issued 25 infringements for overflowing bins and illegal dumping.

#### **Overflowing public bins**



Figure 4. Overflowing street bins. Photo: EPA

A local council asked an EPA Officer for the Protection of the Local Environment (OPLE) to help solve a recurring litter problem. During summer the area saw a big increase in visitors. Despite regular waste collection, overflowing rubbish bins was a frequent problem. Commercial waste from local shops seemed to be contributing to the problem.

The OPLE worked with council waste collectors to map problem areas and helped develop a flyer for local traders. The flyer outlined their obligations and potential fines. The OPLE visited 89 local businesses, speaking with staff, handing out flyers, and emailing business owners to support them to comply with their obligations.

After this education campaign, the OPLE worked with the council litter enforcement officers to conduct surveillance and collect evidence of further non-compliance. When some businesses continued to use the public bins, the council took enforcement action.

# What the law says

Waste is primarily dealt with in **Chapter 6** of the *Environment Protection Act* 2017 (the Act).

The objectives of Chapter 6 are to:

- minimise litter and waste disposal by encouraging management of waste in accordance with the waste hierarchy
- promote waste reduction, resource recovery and efficiency
- minimise the impact on human health and the environment from waste.

The key laws used by councils and other litter authorities are in Part 6.3, including:

- the offences for unlawful deposit of litter and other waste that are based on increasing scales by volume and have associated escalating penalties
- disposal and removal of litter and other waste
- the powers, functions and enforcement tools of litter authorities and litter enforcement officers.

These laws represent a modernisation of the litter laws of the *Environment Protection Act 1970* (the 1970 Act). The powers and enforcement tools, as well as the litter penalty structures, have been designed to better deal with dangerous litter and dumping of larger volumes of waste. This will support a more proportionate response to the challenge of littering and dumping in our communities.

Waste is also covered by the **general environmental duty** (section 25), where it creates a risk of harm to human health or the environment, and the **duty to manage contamination** in Chapter 3. These obligations are only administered by EPA.



# Litter authorities

**Litter authorities,** including councils and other land managers such as Parks Victoria, VicRoads, rail authorities and water authorities, play an important role in litter and waste prevention. They have powers under the Act and Regulations to deal with a broad variety of waste from domestic, commercial and industrial sources.

Litter authorities may appoint their employees as litter enforcement officers.

*Litter authority* is defined in section 3 of the Act as:

- the Authority (EPA)
- any other body created by or under an Act
- a Government department
- a council
- the Secretary, being the body corporate established by Part 2 of the *Conservation, Forests and Lands Act 1987*
- a body created by Order of the Governor in Council under section 113 to be a litter authority.

# Litter enforcement officers

Section 114(2) of the Act allows litter enforcement officers (LEOs) to be appointed. LEOs have powers and functions to enable them to enforce litter and other waste laws.

Provisions in the Act mean that LEOs who were appointed under the 1970 Act don't need to be re-appointed.

EPA's authorised officers are also LEOs and do not require an additional appointment.

Litter enforcement officer is defined in section 3 of the Act as:

- a person appointed by EPA or a litter authority as a litter enforcement officer
- an authorised officer under the Act
- a police or protective services officer
- an authorised officer under the *Victorian Fisheries Authority Act 2016* appointed for the purposes of this Act.

# Where can a litter enforcement officer act?

While EPA authorised officers and police have state-wide powers, LEOs employed by other litter authorities can only act in the situations set out in section 114(2) of the Act.

Because council municipal areas overlap with land managed by other litter authorities, it is generally up to the relevant litter authorities to decide who will act. In some cases, there may be restrictions preventing councils from acting on land managed by other government agencies or authorities.

# Litter enforcement officers - Section 114

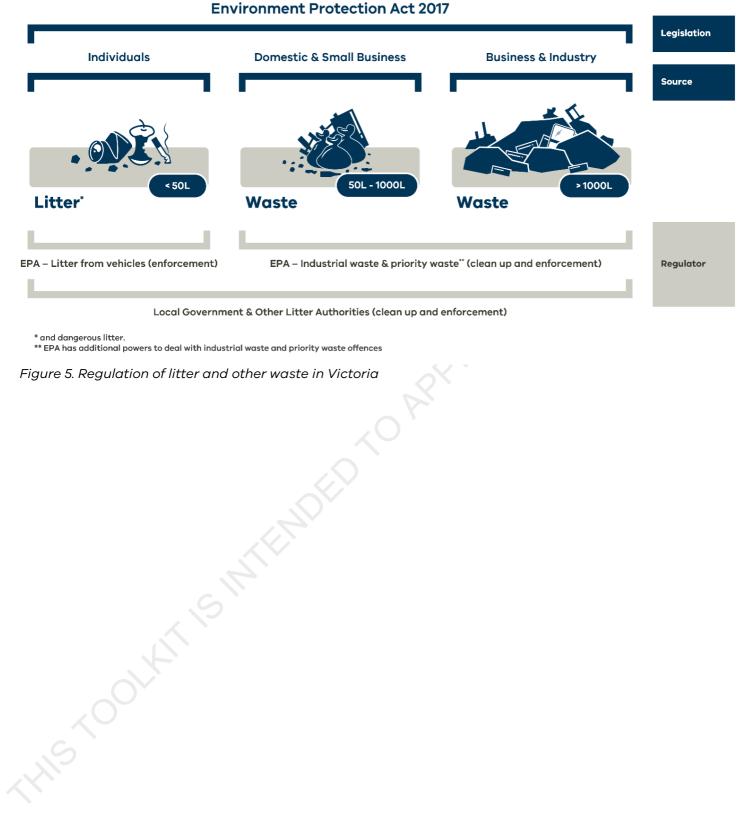
- (1) The Authority may appoint a person as a litter enforcement officer.
- (2) A litter authority may appoint an employee of the litter authority, or a member of a class of employee of the litter authority, as a litter enforcement officer in relation to:
  - a) any bus, tram, watercraft, rail vehicle or aircraft owned or managed by the litter authority that is used for a public purpose; or
  - b) in the case of a litter authority that is a council, any land or waters in a council's municipal district; or
  - c) any land or waters under the control or management of the litter authority; or
  - d) any offences under this Part that may result in waste appearing on land or waters under the control or management of the litter authority (regardless of where the offence occurs).

# Powers of litter enforcement officers and litter authorities

LEOs and litter authorities have powers to enforce the litter and other waste laws under the Act and Regulations. These powers are summarised in Table 1 below, and are explained in more detail throughout this toolkit.

Table 1: Powers of LEOs and litter authorities

Section/ Regulation	Power	LEO	Litter authority
s114(2)	Appoint an employee as a LEO		~
s119	Request person to remove waste		
s121	Issue a waste abatement notice; or vary or revoke a waste abatement notice	1	$\checkmark$
s122	Remove waste and recover costs		$\checkmark$
s124	Powers of entry	√	
s125	Ask a person's name and address	✓	
ss127-129	Issue a waste information gathering notice; extend period for complying with the notice; amend or revoke a requirement in the notice	~	
s130	Apply for a court order to compel compliance with a waste information gathering notice	~	
s307(4)(e)	Serve an infringement notice for an infringement offence under Part 6.3 of the Act	√	
s347(4)	Take proceedings for an offence under Part 6.3 of the Act	~	~
s347(5) Regulation 59	Take proceedings for an offence under Part 4.1 of the Regulations	√	~
s307(4)(a) s347(5)	Issue an infringement notice for an infringement offence under Part 4.1 of the Regulations.	~	$\checkmark$
Regulation 59			



# How is waste defined in the Act?

Previously, under the 1970 Act, LEOs could only address waste issues through the narrow concept of 'litter'. The old definition of litter did not give the option to distinguish between minor acts of disposal and larger scale dumping.

The Act now uses a broader, criteria-based definition of 'waste' to establish the subject matter of the offences and then builds on this concept, with graduated and increasingly higher offences.

The core definitions that support the new range of offences are as follows:

Waste is given the following definition under section 3 of the Act.

waste includes any of the following -

- a) matter, including solid, liquid, gaseous or radioactive matter, that is deposited, discharged, emitted or disposed of into the environment in a manner that alters the environment;
- b) a greenhouse gas substance emitted or discharged into the environment;
- c) matter that is discarded, rejected, abandoned, unwanted or surplus, irrespective of any potential use or value;
- d) matter prescribed to be waste;
- e) matter or a greenhouse gas substance referred to in paragraph (a), (b), (c) or (d) that is intended for, or is undergoing, resource recovery;

*Litter* and *dangerous litter* are defined in section 112 of the Act:

*litter* means a quantity of waste that does not exceed 50 litres.

*dangerous litter* means litter that is wholly or partly comprised of one or more of the following –

- a) oil, fuel, grease, paint or solvents;
- b) a lit cigarette or lit cigarette butt;
- c) glass;
- d) a syringe;
- e) any substance, material or other thing prescribed by Regulations.

# **Priority waste and dangerous litter**

The Act and Regulations define certain waste types as priority waste. Priority wastes (listed in Schedule 5 of the Regulations) are industrial wastes that require special management. Industrial waste is defined in section 3 of the Act and includes wastes that come from commercial, industrial or trade activities.

Regulation 54 prescribes that priority wastes (in quantities less than 50 litres) are *dangerous litter*.

# What can a LEO do about priority wastes?

LEOs can act if priority wastes from a commercial, industrial or trade activity are unlawfully deposited in a volume of less than 50 L - making them *dangerous litter*.

Priority wastes unlawfully deposited in larger volumes should be referred to EPA who has additional powers to deal with offenders.

# Unlawful deposit of waste

The main offences under Part 6.3 of the Act are for **unlawful deposit of waste** (section 115). These offences are broken up by volume of waste, as well as waste type in the case of dangerous litter.

The offences under section 115 have escalating penalties associated with them. The lowest is for litter (waste less than 50 L), and the highest penalties are for depositing waste exceeding 1,000 L.

These are infringement offences (a fine can be issued) and summary offences where the offender can be prosecuted in the Magistrates Court. For penalties see <u>Appendix A: Schedule of offences</u>.

# Section 115: Unlawful deposit of waste

- (1) A person must not deposit waste that is litter other than in circumstances specified in sub-section (5).
- (2) A person must not deposit waste that is dangerous litter other than in circumstances specified in sub-section (5).
- (3) A person must not deposit waste of more than 50 L but not more than 1000 L other than in circumstances specified in sub-section (5).
- (4) A person must not deposit waste of more than 1000 L other than in circumstances specified in sub-section (5).

This is an extract from section 115 of the Act. Read the full Act section at <u>legislation.vic.gov.au</u>

# What is unlawful deposit of waste?

Deposit of waste occurs when a person parts with the possession of litter or other waste. This includes the burning of waste, and where waste blows from or falls or escapes from a premises or place.

The deposit of waste is unlawful unless the circumstances set out in section 115(5) apply – see next section.

Refer to the following definitions from the Act that are important in determining if waste has been unlawfully deposited:

- **deposit**, in relation to litter and waste, means the act of parting with the possession of litter or waste and includes the disposal of litter or waste by burning (section 3)
- a reference in section 115(7) to the deposit of waste includes waste that is blown from or falls or escapes from premises or place
- **place** includes land, waters, a location, an area or a region (section 3)
- **place** also includes a receptacle (section 112).



# When is it lawful to deposit waste?

In some circumstances it is lawful to deposit waste. These circumstances are set out in section 115(5):

- A person deposits waste in a premises or place provided for the deposit of waste, appropriate for waste of that size, shape, nature or volume. An example is an appropriately sized bin.
- A person deposits waste in or on premises or a place in such a way that it cannot leave the premises or place without human assistance, and the person owns, controls or is in possession of the premises and place, or has the consent of the owner or person in control of the premises. Industrial waste offences may still apply in this situation. If suspected, the matter must be referred to EPA.
- A person is authorised to deposit the waste by a law.
- A person deposits the waste as a consequence of a lawful activity that cannot reasonably be avoided.
- A person accidentally deposits the waste and it is not reasonably possible to retrieve it.

# **Connected deposits of waste**

Section 115(6) says that two or more deposits of waste in or on premises or place may be taken to be one deposit, or if the two or more deposits constitute a connected series of deposits.

For example, three loads of waste bricks of 500 L in volume each, that can be attributed to the same dumper, can be regarded as 1,500 L of waste. In this case an offence under s115(4) applies, which attracts a higher penalty.



Figure 6. Illegal dumping at property in Geelong. Photo: City of Greater Geelong



# Estimating the volume of waste

The offences for deposit of waste under section 115 are based on volume in litres (L). The three volume-based thresholds are:

- Less than 50 L (for litter and dangerous litter)
- More than 50 L but less than 1,000 L
- More than 1,000 L.

To work out which offence may apply, LEOs need to estimate the volume of the waste, or the total volume of a connected series of deposits (section 115(6)).

Read more and find resources in <u>Appendix F: Estimating volume of waste</u>.

# Is it waste?

These examples of how commonly dumped items fit the definitions of litter and other waste will help you identify if an offence has occurred.

Remember – discarding litter or other waste is not always illegal - there are circumstances where it is <u>lawful to deposit waste</u>.

Example	How it is defined
Cigarette butts	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus'. Litter because it's less than 50 L in volume.
Lit cigarettes or cigarette butts	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus'. Litter because it's less than 50 L in volume. Also defined by the Act as 'dangerous litter'.
Household rubbish	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus'. Litter if it's less than 50 L in volume. Dumping two or more bags of household rubbish in the same place with a total volume more than 50 L may be an offence under section 115(3) or 115(4).

# Regulating litter and other waste: toolkit

Example	How it is defined
Household rubbish including glass	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus'. Litter if it's less than 50 L in volume. Glass is defined in the Act as 'dangerous litter'.
Domestic and commercial hard waste, such as mattresses, fridges, furniture	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus, irrespective of any potential use or value'. Litter if it's less than 50 L in volume. If the volume exceeds 50 L, it may be an offence under section 115(3) or 115(4).
Dumping around charity stores and bins	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus, irrespective of any potential use or value'. Litter if it's less than 50 L by volume, because it is not in 'a place thatis appropriate for waste of that volume'. Waste if it's more than 50 L by volume, because it is not in 'a place thatis appropriate for waste of that volume' and attracts an offence under section 115(3) or 115(4).
Overflowing public street litter bins	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus'. Litter if it's less than 50 L by volume, because it is not in 'a place thatis appropriate for waste of that volume'. Waste if it's more than 50 L, because it is not in "a place thatis appropriate for waste of that volume" and an offence under section 115(3) or 115(4).
Construction and demolition waste	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus, irrespective of any potential use or value'. The volume is likely to exceed 50 L, making it waste that attracts an offence under section 115(3) or 115(4). It may also attract industrial waste offences administered by EPA. See <u>Referral of</u> <u>reports.</u>

# Regulating litter and other waste: toolkit

	surplus'. It's <i>dangerous litter</i> if it's less than 50 L by volume because asbestos (if it arises fr
	commercial, industrial or trade activities) is a priority waste under schedule 5 of t Regulations.
	If the volume exceeds 50 L it may be waste that attracts an offence under section 115(3) or 115(4).
	When asbestos waste is in significant volumes, priority and industrial waste offen administered by EPA may apply. See <u>Referral of reports.</u>
	<b>Warning:</b> Removing, transporting and disposing of asbestos can be dangerous. Y must manage asbestos waste the right way. Always take a sample if you suspect are dealing with asbestos and follow Occupational Health and Safety and WorkSo guidance. Find out more about dealing with asbestos waste on the <u>EPA website</u> .
Waffle pods from building	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus, irrespective of any potential use or value'.
sites	If the volume exceeds 50 L it may be 'waste' that attracts an offence under section 115(3) or 115(4).
Waste paint washed into	Waste because it's 'matter that is discarded, rejected, abandoned, unwanted or surplus'.
stormwater drain	It's <i>dangerous litter</i> if less than 50 L in volume, under the definition in section 112.
	If the volume exceeds 50 L it may be 'waste' that attracts an offence under section 115(3) or 115(4).

# Waste deposited from vehicles

The Act includes laws that attribute waste deposited from a vehicle to the vehicle owner. These laws target litter thrown from vehicles such as cigarette butts and food packaging, and unsecured loads. Failure to adequately cover or secure trailer loads can result in litter entering storm water systems and polluting local creeks and waterways. Items that fall on the road and roadside also present a safety risk for motorists and negatively affect amenity.<sup>1</sup>

Litter from vehicles can be:

- addressed by councils and other litter authorities taking action
- reported to EPA.

# Liability of owners and drivers

If waste is deposited in contravention of section 115, the following persons are taken to have committed the offence (section 116):

- the driver of the vehicle
- the registered owner of the vehicle
- a person authorised by the registered owner to use the vehicle when the offence was committed.

A LEO can take action against any of the above, and the course of action will depend on the evidence at hand. Do you know the vehicle registration or driver's identity, or do you have a witness? Sections 116(3), (4) and (5) further define the liability of vehicle owners, and ensure a person accused of an offence is fairly dealt with.

# **Exceptions to liability**

There are exceptions to the liability of drivers, vehicle owners or authorised users (section 117):

- the waste was deposited by a passenger of public transport
- if the vehicle was stolen at the time of the waste offence, the vehicle's registered owner, or authorised user is not liable
- the liable person provides a written statement stating they did not deposit the waste. Section 118 sets out what information needs to be provided.





<sup>&</sup>lt;sup>1</sup> Cover your load- City of Whittlesea; Metro Waste Resource Recovery Group; July 2017; mwrrg.vic.gov.au

#### Written statement

A person issued with an infringement notice under section 116 can dispute the infringement on the grounds they were not the person who deposited the waste (section 118). They can do this by providing a written statement within 10 business days. In the statement they must identify another person, or if they saw another person near the waste, giving enough details to identify and locate that person.

no further action.



Litter authorities must make this statement available to infringement notice recipients.

Penalties apply for proving false or misleading information in connection to a written statement. Refer to <u>Appendix A: schedule of offences</u>.

# **Requesting information from VicRoads**

Litter authorities may request information about the identity of registered vehicle owners from VicRoads. VicRoads provides training in confidentiality to council employees who wish to access vehicle information. Obtaining information from third parties is covered in the <u>Collecting</u> <u>evidence</u> section of this toolkit.

A witness reported to council a table tennis table dumped on a

roadside, supplying the vehicle registration details. The council LEO requested the vehicle owner's details from VicRoads, then contacted the vehicle owner requesting they remove the waste under section 119. The person complied with the LEO's request. The LEO decided to take

#### Waste deposited from a vehicle



Figure 7. Photo: Mornington Peninsula Shire Council

# A cigarette dropped by the beach

As a LEO from a coastal council conducted a litter count at a beach carpark, she saw a man drop a cigarette out the window of a parked car. The officer approached the car and identified herself. She then advised the man he had committed an offence of unlawful deposit of a waste that is litter under section 115(1) and would receive an infringement notice.

The LEO requested the man's name and address under section 125, which he refused to supply. The LEO then informed him that the owner of the vehicle would receive an infringement notice under section 116 - liability of owners and drivers of vehicles. The LEO requested the vehicle information from VicRoads and issued an infringement notice to the owner.

# Additional offences in the Regulations

Several laws from the 1970 Act have been adapted, and now found in Part 4.1 of the proposed Regulations. Many LEOs who operated under the 1970 Act will be familiar with the substance of these provisions. The Regulations are expected to be made prior to 1 July 2021.

# Depositing or affixing unsolicited documents

Regulation 55 provides an offence that addresses a range of issues mainly relating to unsolicited advertising material such as junk mail, leaflets placed on vehicles and posters affixed to buildings in public places.

There are exceptions to the offence when documents are placed in mailboxes, unless a No Junk Mail sign is present.

# Preventing unwanted junk mail

- Residents receiving unwanted junk mail should attach a No Junk Mail sign to their mailbox.
- Report illegal or irresponsible distribution practices to the <u>Distribution Standards Board</u> (DSB).
- DSB can provide free No Advertising Material stickers to residents.

# Persons who commission or engage the distribution of unsolicited documents

Regulation 56 provides an offence relating to the distribution of unsolicited documents, including engaging another person to distribute an unsolicited document, in a way that contravenes Part 4.1. This includes paying someone to place advertising leaflets under car windscreen wipers.

# Offence relating to public litter receptacle

Regulation 57 provides an offence for defacing, setting fire to, damaging or destroying a receptacle for waste provided by a litter authority.

# Loading of vehicles

Regulation 58 provides an offence relating to vehicle loads that are not well secured. A person in control of a moving vehicle must ensure it is loaded so no part of the load can leave without human assistance.

There is an exception to the offence where a person was required to move the vehicle in accordance with a lawful instruction from an authorised officer or police officer.

Remember this offence is committed by the driver. The registered vehicle owner is not automatically liable as with an offence of unlawful deposit of waste.

Read more about waste deposited from vehicles.

# Penalties for non-compliance

A litter authority or LEO can issue an infringement notice for all offences under Part 4.1 of the Regulations except the offences in Regulation 56. A litter authority or LEO can initiate court proceedings for all offences under Part 4.1.

For penalties see <u>Appendix A: Schedule of offences.</u>



# Investigating litter and other waste offences

As a LEO, you will investigate incidents of unlawful deposit of litter and other waste and decide how to respond.

LEOs:

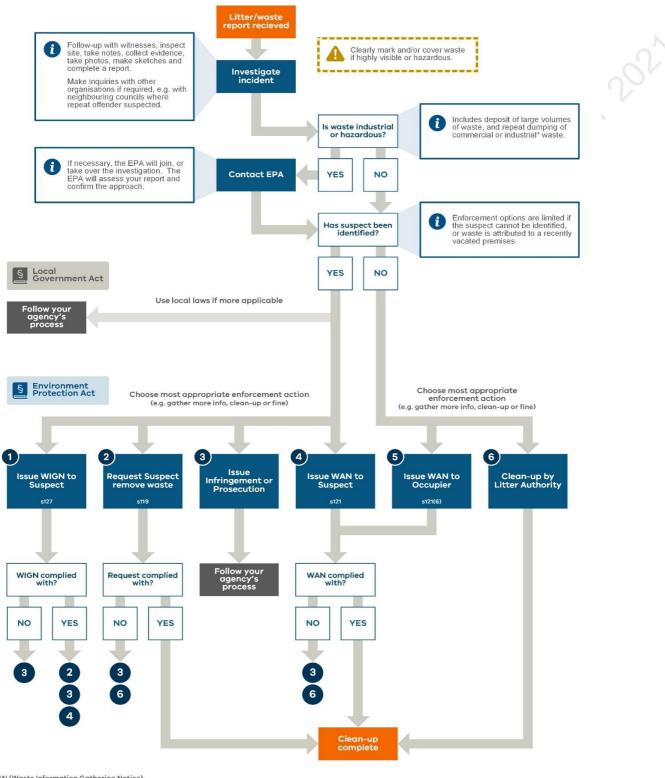
- follow up with witnesses
- make observations and collect other evidence
- investigate suspects
- provide guidance on how to comply with the law
- take compliance and enforcement action if required.

This section of the toolkit provides LEOs with general guidance for investigating litter and waste offences and explains your powers.

# Investigating litter/waste under the Environment Protection Act 2017



Environment Protection Authority Victoria



WIGN (Waste Information Gathering Notice)

WAN (Waste Abatement Notice)

\*EP Act defines industrial waste as - waste arising from commercial, industrial or trade activities or from laboratories; or waste prescribed to be industrial waste for the purposes of this definition.

Figure 8. Investigating litter and other waste reports

#### Receiving reports of litter and other waste

EPA, councils and other litter authorities receive reports of litter and illegal dumping through their call centres, websites and reporting apps. Reports may come from the public or other agencies.

Reporters should be encouraged to provide as much information as possible, such as photos, location of the dumping, contact information and any other details.

# Signed reports provided to EPA or councils

EPA and councils (but not other litter authorities) can take enforcement action against an offence under Part 6.3 based on a signed written report lodged by a person who witnesses an offence. Section 131 lists the information the reporter must supply. It is an offence to supply false or misleading information in connection with a litter or waste report.

Taking action based on public reports (under s131) is a cost-effective method of enforcement and empowers the community to help prevent littering.

Public reporters should be encouraged to keep original details of their report, such as any notes made, in case the matter proceeds to court.

#### **Initial investigation**

Having received a report or detected litter or illegal dumping through other means, LEOs will conduct an initial investigation. This stage involves:

Understanding the nature of the litter or waste issue	Its location, type of waste, size and nature of the deposit (e.g. kerbside dumping, litter blowing from a premises or waste burning).
Following up with witnesses	<ul> <li>Ask the reporter or other witnesses questions such as:</li> <li>Do they have information about the possible offender, e.g. description of person, vehicle make and/or registration number, business name on vehicle?</li> <li>Have they witnessed similar incidents?</li> <li>How long has the waste been there?</li> </ul>
Decide what kind of response to start with	<ul> <li>Ask yourself:</li> <li>Does the waste need to be cleaned up immediately?</li> <li>Is the waste hazardous or in a highly visible location?</li> <li>Is there evidence indicating who may have deposited the waste?</li> <li>What further information do I need?</li> <li>Will a site inspection be required?</li> <li>Can compliance and enforcement action be taken immediately? (e.g. where council has received a signed written report, or you have other evidence about the identity of the suspected offender)</li> <li>Does the report need to be referred to another agency?</li> </ul>

# **Referral of reports**

Depending on the nature of the waste, the scale of the waste offence, or the location, it may be appropriate to involve or refer the report or investigation to another litter authority.

#### **Referral to EPA**

EPA is Victoria's environmental regulator. Contact EPA regarding waste incidents involving:

- industrial waste, especially suspected repeat or organised dumping of industrial waste
- waste that is hazardous
- very large volumes of waste
- storages of waste that may require EPA permission, for example stockpiling more than five cubic metres of waste tyres.

EPA will assess the report or evidence collected and may provide advice or take over the investigation.

Littering from vehicles can also be reported to EPA online <u>epa.vic.gov.au</u> or by calling 1300 372 842 (1300 EPA VIC).

#### **Referral to other litter authorities**

If the offence occurred in an area under the control or management of another litter authority, contact that organisation to determine who is best placed to take action.

#### **Police assistance**

When investigating a suspect known to be aggressive, or if assistance is required to gain entry to a premises where unlawful deposit of waste is believed to have occurred, it may be appropriate to seek police assistance. LEOs should follow their organisation's protocols regarding involving police in illegal dumping investigations. Under the Act, police officers also have LEO powers.

#### **Collaborative prosecution**



Figure 9. Dumped concrete. Photo: EPA

In 2020 EPA, the Victorian Building Authority and Mornington Peninsula Shire worked together to prosecute an alleged serial concrete dumper.

Multiple incidents of roadside dumping at sites from Pearcedale to Cape Schanck had been reported to Mornington Peninsula Shire. The incidents caused serious road safety concerns and cost the council and VicRoads thousands of dollars to remove.

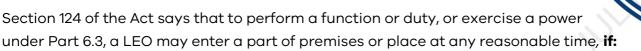
The local council's investigation was referred to EPA because of its serious nature. EPA charged a Tarneit man with 15 incidents of dumping industrial waste. The matter is still before the courts at the time of publishing.

# Using your powers to investigate

To investigate litter and waste incidents, the Act provides LEOs with powers to enter premises and request information. LEOs also have obligations to identify themselves.

#### Powers of entry of litter enforcement officers

To investigate a suspected waste offence, LEOs can enter premises used for a range of purposes (such as commercial or trade purposes), at any reasonable time, but cannot generally entry a house or other residential dwelling.



- that part is not being used as a residential premises; and
- the officer reasonably believes that an offence of unlawful deposit of waste, or failure to comply with a waste abatement notice, is being, or is likely to be committed at, a premises or place not being used for residential premises.

This means that generally you do not have the power to enter a house or other residential dwelling, such as a caravan or bungalow, or the land associated with that dwelling, such as a backyard. However, where the premises is, for example, under construction or being renovated, then it may be reasonable to conclude that those areas are not being <u>used</u> as residential premises (for example where the front yard of the house is being used to store construction materials).

What is a **'reasonable time'**? This generally means, in the case of a business, during the ordinary operating hours of that business.

# Investigating waste deposited on or from private land

To make sure you are acting lawfully, be clear where you can take action, and if this extends to private land.

Ask yourself:

- 1. Do I have jurisdiction? See <u>'Where can a LEO act?'</u>
- 2. Do I have powers of entry?
- 3. Has an offence occurred? See <u>What constitutes unlawful deposit of waste?</u>
- 4. What action can you lawfully take? Check the specific provisions of any enforcement tool you are considering using, for example waste abatement notice.

Consider the following scenarios that look at deposit of waste and private land:

#### Waste deposited by the land owner

An offence of unlawful deposit of waste may **not** have occurred if the waste is deposited on land owned or controlled by the person who deposited it (or by a person who has the consent of the person who owns or controls the land), as long as the waste cannot leave the premises without human assistance (115(5)(b)). In this situation (for example a person dumping the waste from a shed they demolished on their property), a LEO may not be able to take action, however a breach of section 25 - the general environmental duty, or other waste offence may still apply where EPA can take enforcement action.

#### Powers of entry on commercial and industrial land

If you hold a reasonable belief that a litter or waste offence has occurred at a property that is used for industrial, commercial or trade purposes, you can enter at any <u>reasonable time.</u>

#### Scenario: Unsecured waste stored on a building site

Waste building materials are stored on a building site next to a council reserve. The materials are not secured and are likely to blow off site.

The materials have been deposited in a way that makes it clear that it is a large pile of mixed construction waste. Some or all of the waste could leave the site without human assistance, for example if wind dislodged wrapping from the insulation batts. In this case the waste would end up on the council reserve next door.

A litter enforcement officer from the local council investigates, using their powers of entry to inspect the waste for the purposes of considering enforcement action. However, it may also be possible for the officer to make an assessment without entering the site. This is where you must use your judgement.

#### Powers of entry at residential premises

If an offence occurs on residential premises, such as a back yard, you cannot enter the premises. Land adjoining residential premises and used for commercial or industrial purposes, such as farmland, may not be considered residential.

Where a home business operates from a property, you cannot enter the part used for residential purposes. You can only enter the part used for industrial, commercial or trade purposes. Use your judgement, exercise your powers within the scope of your training and, if in doubt, seek advice from your manager.

# Litter enforcement officer may ask a person's name and address

If a LEO reasonably believes a person is committing, is likely to commit or has committed an offence under Part 6.3, the officer may request the person state their name and ordinary place of residence or business (s125 of the Act).

In asking for a person's name and address the officer must:

- inform the person of the reason for their beliefs
- give them sufficient information to enable them to understand the nature of the suspected offence.

It is an offence to fail to comply with this request without a reasonable excuse, or to provide a false name or address. If a LEO suspects a false name or address has been given, they can request proof. For penalties see <u>Appendix A: Schedule of offences</u>.

# Litter enforcement officer to provide proof of identity and official status

LEOs exercising their powers must produce proof of identity and official status if requested (s126 of the Act). For example, if you are using your powers of entry to gain access and investigate, or asking a person you reasonably believe has committed an offence for their name and address. Always carry identification issued by your organisation.

# Waste information gathering notice

Waste information gathering notices (s127 of the Act) can be used by LEOs to obtain information about waste they reasonably believe has been unlawfully deposited.

The information obtained through a waste information gathering notice can be used as evidence to take enforcement action such as requiring removal of the waste, or issuing an infringement notice.

Read more in Appendix B: Waste information gathering notice.



<b>以</b> —
$\square$
区—



#### Using waste information gathering notices

**Tip 1:** WIGNs may be used fairly broadly to gather information about a waste offence, that is not just be issued to a person suspected of depositing the waste. However a WIGN would only be useful if the person or company it's issued to can provide information about the waste offence. If the party doesn't have the relevant information then section 127(4) applies and there is no obligation to comply with the notice. For example if a LEO finds plastic wrap from construction material with the supplier's name on it among other dumped construction waste, issuing a WIGN to the supplier is only useful if they are likely to know who they sold the material to.

**Tip 2:** If you don't get a response from a WIGN and suspect the person may not be at the address you sent the notice to, further investigation may be required, such as door knocking or requesting information from a real estate agent. Use the information you have and your judgment to determine if the person is choosing not to comply with the notice, in which case an infringement may be appropriate, or whether they may not have received the notice.

#### Scenario: Dumping on vacant land

A community member reported household waste had been dumped on a vacant block. The waste included several garbage bags and boxes of general household waste, and hard waste items including a heater, TV and dryer. A council LEO inspected the site, taking notes, photos and measuring the waste to help estimate volume. An invoice with a name and address was found in one of the boxes. The same details were on an address sticker on the side of another box. The officer then organised removal of the waste by the council.

The LEO sent a waste information gathering notice to the name and address on the invoice. There was no reply to the notice, so the LEO went to the address and, using the powers under section 125, asked the occupant for their name and address, to confirm their identity matched the name on the invoice. The LEO informed the occupant that they suspected they were responsible for depositing the waste. In this instance the LEO decided to issue an infringement notice to the occupant for failure to comply with the waste information gathering notice (2 penalty units).

#### Scenario: Issuing a waste information gathering notice for skip bins on vacant land

The owner of some vacant land found six dumped skip bins of waste and reported it to the local council. A LEO investigated the report.

Among the waste the LEO found documents, letters and receipts naming different companies, suggesting each waste pile may have come from a different source. One pile held information naming Needing an Upgrade Pty Ltd.\* The pile included construction and demolition waste.

Susan Porter\*, owner of Needing an Upgrade, told the LEO a skip bin company took the waste. However, she was reluctant to give documentation or evidence.

The LEO told Susan Porter that her company would be issued a waste information gathering notice. The officer issued this notice on the grounds that the company previously had possession of the waste.

The waste information gathering notice required Porter to provide information about the skip bin company. The response to the notice named the skip bin company as Skips-4-U Pty Ltd\*.

The officer issued Skips-4-U with a waste abatement notice, requiring them to remove the skip bins within seven days and dispose of waste to a lawful place. The LEO also issued the company with an infringement notice for the offence of unlawful deposit of waste greater than 1,000 L under section 115(4).

\*Names are fictional

32

#### Interacting with suspects

During an investigation LEOs will usually need to communicate directly with suspects - often face-to-face. The following is general advice for interacting with suspected offenders.

Act within your powers Be courteous Identify yourself	<ul> <li>When investigating and collecting evidence, remember your powers of entry.</li> <li>Failing to gather evidence in a lawful way and within your powers can result in damage to organisational reputation, and means you won't have sufficient grounds to take enforcement action.</li> <li>Avoid being overbearing or getting involved in arguments.</li> <li>You must show identification if requested under section 126 of the Act.</li> <li>However, it is good practice to always identify yourself. For example 'My name</li> </ul>
	is I am a litter enforcement officer for Council.'
Explain the offence and ask name and address	<ul> <li>Where you have evidence that a person may have committed an offence, explain to them what you know or have seen, and what the law says.</li> <li>For example: <ul> <li>'I have just seen you leave/drop/throw/place etc. a</li></ul></li></ul>
	<ul> <li>litter/waste) on the road / footpath / ground etc.'</li> <li>'It is an offence to deposit litter/waste in that manner'.</li> <li>Or</li> <li>'I have found evidence (such as a bill or letter with their name on it amongst the waste, or information from a witness) that (specify the litter/waste) belongs to you'.</li> <li>'It is an offence to deposit litter/waste in that manner.'</li> <li>'I am requesting your name and address' or 'please confirm your name and address is' 'in relation to the litter/waste'.</li> </ul>
HISTOOLAT	<ul> <li>you should tell the person 'as a litter enforcement officer I have the power to request your name and address'.</li> <li>give the person enough information to understand the suspected offence.</li> <li>inform them it is an offence not to comply with your request for their name and address (if name and address are not given, note any identifying features of the offender and details such as vehicle type and registration.)</li> <li>LEOs do not need to provide suspects with a formal 'caution'. This is because protection against self-incrimination under the Crimes Act</li> </ul>

Listen to a person who denies or disputes an offence	Sometimes a person may not be aware they have committed an offence, such as leaving household waste on the curb side without booking a collection. In this instance educating the person about the law may be the most appropriate response.	
	If you do not accept the explanation the person gives, you can say so. For example. 'I have heard your version of what happened, but I saw you throw the (bottle, cigarette butt etc.) and I am therefore serving you an infringement notice.'	
Explain what action you intend to take:	<ul> <li>Your options for taking action include:</li> <li>providing information about the law</li> <li>giving a warning</li> <li>requesting waste be removed</li> <li>issuing a notice and explaining review rights</li> <li>explaining penalties for not complying with a verbal request or notice.</li> <li>The action you take should be proportionate to the offence. For example, if the person is willing to remove the waste when asked, issuing an infringement notice may not be necessary.</li> <li>See taking compliance and enforcement action.</li> </ul>	
Keep the discussion short	After explaining the offences and action you intend to take, avoid engaging in further discussion or argument with the offender.	
Take notes or fill out a report as soon as you can.	Always take notes to record your interaction with a suspected offender. If you intend to issue an infringement notice for the offence, you can make a report in the remarks section of the penalty infringement notice. Longer reports, if necessary, should be made in the manner approved by your organisation.	

# Collecting evidence

LEOs must have sufficient evidence to support their belief that a person has committed an offence if they intend to take enforcement action such as issuing a notice. One point of evidence may not be enough. You may need to consider a range of ways to prove your point.

Evidence is anything which may be submitted to prove or disprove the facts under inquiry. This includes evidence a person deposited waste, and that there are no lawful circumstances excusing the deposit of waste.

Evidence needs to be gathered by a LEO to:

- prove or disprove a non-compliance
- support your judgement and decision to issue a notice or infringement  $^{
  m h}$
- be used in court proceedings.

Evidence can take many forms, including:

- information provided in an email, or information provided orally by a person
- witness statements
- photos and video footage
- your own observations, such as notes and sketches taken of an illegal dumping site, or someone's answers to your questions
- samples of waste
- other material goods or documentation supporting your claims
- information from third parties such as VicRoads or a banking institution.

#### In this next section we look at key evidence types in more detail.

#### **Contemporaneous notes**

Notes taken by an officer as part of an investigation act as important evidence to support enforcement action.

Notes are an official record of what the officer saw and heard during the course of their investigations, including any conversations they had. Include sketches and 'mud maps' in your notes.

Notes should be taken contemporaneously (at the time of the observations or actions taking place). Officers should always keep their original notes.

Notes are used to:

- complete a report, statement or affidavit, all of which can be used as evidence
- provide details that support enforcement action such as issuing infringements and other notices
- form part of evidence that an officer gives in court when they are unable to rely solely on their memory to answer questions.

# **Photographs and videos**

Photos and videos are taken during an investigation when you need an objective and indisputable record of the scene and evidence. They are key evidence supporting your judgement and decisions about taking enforcement action.

When taken correctly, photos and videos can be worth a thousand words. Remember to take photographs and video (and notes or sketches) before disturbing anything.

# **Statements**

A statement is something said or written which gives information in a formal way. Statements are a way to capture information from witnesses about the circumstances of an alleged offence, and are admissible in court.

Types of statements likely to be used as part of a waste investigation include:

- witness statements taken from a witness or reporter to gather their account of the incident
- a person's response to a waste information gathering notice you have issued
- statements from a LEO to support court proceedings.

# **Material goods and documents**

LEOs will often identify physical evidence, including material goods and documents, such as items that bare a person or business's name and address. It is important to preserve potential evidence and ensure there is no interference with exhibits or the area where the item is located or stored.

Remember to:

- wear gloves when collecting evidence for safety and to avoid fingerprint contamination
- clearly identify the item and record it.

### **Sampling waste**

Samples are a small part or quantity intended to show what the whole is like. It may be beneficial to take samples of waste such as soil or demolition waste to prove the type of waste, any dangerous contaminants such as asbestos, or where it may come from. The resulting data can be used as evidence.

## **Continuity of evidence**

To preserve the evidential value of an exhibit (such as material goods or samples) as it passes from one person to another, the chain of possession must be clearly established. This is called continuity of evidence.

Once it has been determined an item will be seized as an exhibit, logical and systematic procedures must be followed to ensure that continuity of the item can be proven. Proper records of, and adherence to these procedures, should be maintained by LEOs. It is the responsibility of the investigating officer to ensure the exhibit has not been altered, tampered with, or had its identifying label changed while in their possession.

### **Obtaining information from third parties**

LEOs are able to request information from third parties that helps them with an investigation. For example the name and address of a registered vehicle owner from VicRoads or tenant details from a real estate agent or DHHS. If a receipt or invoice or receipt is found, a person's name and address can be requested from finance or banking institutions.

Most councils do this by sending a letter citing the Information Privacy Principles (2.1(g)(i) of the *Privacy and Data Protection Act 2014*), which allows for personal information to be lawfully released for law enforcement purposes.

In the letter, you should explain your statutory role, for example, I am a litter enforcement officer appointed by X Shire, to administer and enforce legislation including the *Environment Protection Act 2017* and General Purposes Local Law 2012.

Outline the nature of the offence and what information you are seeking.

# Taking compliance and enforcement action

Where a LEO reasonably believe a person has committed an offence, and further action is required to fix the problem or the offence warrants a penalty, LEOs have powers to take compliance and enforcement action. This section explains the enforcement options available to LEOs and litter authorities.

All relevant circumstances of the offence should be considered, in conjunction with any applicable compliance and enforcement policies, to determine the most appropriate compliance and enforcement action.

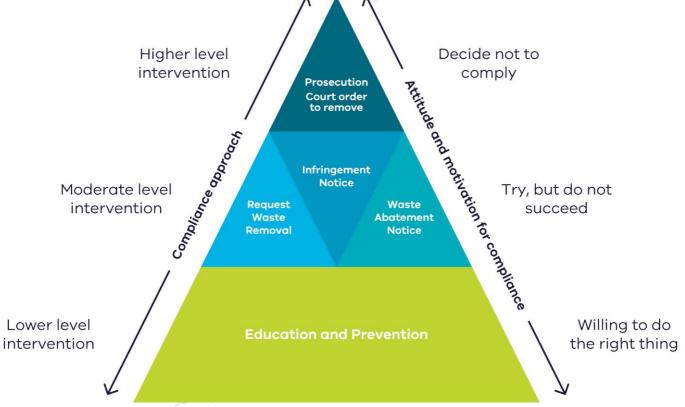


Figure 11: Compliance and enforcement approach to litter and other waste offences

# Litter enforcement officer may request persons to remove waste

If a LEO reasonably believes a person has deposited waste in contravention of Part 6.3 of the Act, they can request the person remove the waste (s119 of the Act). The request should be made in writing where practical. If given verbally, it should be followed up in writing such as though a letter or email. The LEO should make a note of this action in their notebook or logbook.

# Are there consequences if a person fails to comply?

It is an offence not to comply with a LEO's request to remove waste under section 119. An infringement can be issued. For penalties see Appendix A: Schedule of offences.

# Waste abatement notice

Waste abatement notices (s121 of the Act) can be used by LEOs to manage waste, or material that may become waste, and ensure it is deposited in a lawful manner.

Waste abatement notices are designed to address waste which has a negative impact on the health, safety or welfare of the public, negatively impacts the proper use of a place, or is a hazard to the environment.

Read more in Appendix C: Waste abatement notice

# Infringements

Infringement notices impose a financial penalty for certain breaches of the law. This allows certain contraventions to be dealt with through a fine rather than court proceedings. Infringement notices can be served by LEOs for certain infringement offences under Part 6.3 of the Act and Part 4.1 of the Regulations.

Read more:

- Appendix A: Schedule of offences lists infringement offences and penalties •
- Appendix D: Infringement notices explains how LEOs can use infringement notices

# Prosecution

Litter and waste offences under the Act are summary criminal offences that are heard in the Magistrates' Court. Summary offences are considered less serious and have lower maximum penalties than indictable criminal offences.

Read more:

- Appendix A: Schedule of offences lists maximum penalties that a court can order
- Appendix E: Prosecution



[				
		-	_	,
L	ተ			





## Court may order person to remove waste

If a court finds a person guilty of an offence against Part 6.3, under s120 of the Act the court may require the person to do one of the following:

- clear away the waste
- pay compensation for the removal of waste to another person or body that has management or control of the land or waters where the waste was deposited

Such an order may be instead of or in addition to any other penalty imposed by the court.

## Supervision of the clean up

If the court orders a person to remove waste, the court will nominate a supervisor to oversee the clean up, such as the owner of the land, or officer of a council or other land manager. If the person complies with the order to remove waste, the supervisor must send a statement to the person confirming the clean up is complete.

# Are there consequences if a person fails to comply?

It is an offence not to comply with a court order to remove waste. If a person contravenes the order, the supervisor can apply to the court, which can issue a summons and may impose an additional fine.

#### Scenario: Overflowing bins at a shopping centre

There are often overflowing bins behind a small suburban shopping centre. The bins are unsightly and litter regularly blows out onto the surrounding footpath, gutters and street.

A litter enforcement officer investigates and finds it difficult to identify the particular businesses responsible. The officer issues a waste abatement notice to the shopping centre's facility management company because they have not provided enough bins, or emptied the bins within a reasonable timeframe. The notice requires the company to clean up excess waste and create a waste management plan to address ongoing issues.

Note: If food and odour are involved, these complaints could be dealt with through a joint investigation between council LEOs and Environmental Health Officers.

#### Scenario: Roadside dumping

A member of the public called a council's Litterwatch hotline to report seeing waste dumped on a road reserve. They also supplied photos of the waste.

A LEO investigated and found two cubic metres of sheeting and asbestos. A licenced asbestos removalist was engaged to remove the waste. The LEO took the witness's statement, which included the licence plate of the car seen dumping the waste. By requesting vehicle details from VicRoads, the LEO was able to contact and interview the offender.

Due to the serious nature of the offence, which involved a hazardous material, the LEO chose to prosecute the offender through the Magistrates' Court, rather than issuing an infringement notice. The result was a successful prosecution. The offender paid a fine and the council's clean up and legal costs.

### Scenario: Mud from a building site

A resident reports mud and debris from a building site are covering pedestrian and vehicle access routes. A LEO inspects the site, taking photos as evidence, and contacts the building site supervisor to request clean up, using their powers under section 119. The supervisor complies, so the LEO decides not to issue a WAN.

A week later, the issue is reported again. This time the LEO issues a notice to the builder requiring clean up and a change in practices to prevent the issue recurring. The LEO can issue a waste abatement notice because the waste has ended up on the footpath, road and stormwater drains that are managed by council.

### Supporting business to comply with their obligations

In 2019, Officers for the Protection of the Local Environment (OPLEs) investigated poor environment practices at several construction sites in Casey.

They found several issues, including premix concrete slurry running into the stormwater system. An uncovered pile of sand on a downward sloping driveway also risked sediment run-off into the stormwater system.

The OPLE provided the sites with advice on how to comply with the law. This included digging a small sediment pond, installing a sediment sock barrier, and covering the pile of sand. Because of the short-term nature of the building projects, the OPLE focused on supporting the construction businesses to comply with their obligations with simple but effective solutions, rather than taking enforcement action.

The OPLE saw more serious issues at other sites and referred them to the local Casey Litter Enforcement Officer for immediate regulatory action. The OPLE worked with the council officer to serve a notice on the spot, sending a clear message about the standards expected from residential building companies.



Figure 12: Stormwater issues from a construction site Photo: OPLE program, EPA

# Contact EPA

epa.vic.gov.au Ph 1300 372 842 (1300 EPA VIC)

**Head office** 200 Victoria Street Carlton 3053

**Southern Metro** Level 3, 14 Mason Street Dandenong 3175

North Metro

Building One, 13a Albert Street Preston 3072 **West Metro** Level 2, 12 Clarke Street Sunshine 3020

**North East** 27–29 Faithfull Street Wangaratta 3677

**North West** Level 1, 47–51 Queen Street Bendigo 3550 **South West** West 1, 33 Mackey Street North Geelong 3215

**Gippsland** 8-12 Seymour St Traralgon 3844

# Stakeholders and networks

### Department of Environment, Land, Water and Planning

The Department of Environment, Land, Water and Planning (DELWP) works in partnership with a range of agencies and stakeholders to protect and preserve Victoria's native landscape. DELWP directs environmental policy development for Victoria and coordinates the environment portfolio with support from EPA and Sustainability Victoria.

environment.vic.gov.au

### Sustainability Victoria

Sustainability Victoria (SV) is a Victorian State Government statutory authority established under the *Sustainability Victoria Act 2005*. SV facilitates and promotes environmental sustainability in the use of resources by delivering programs addressing integrated waste management and resource efficiency. SV is responsible for state-wide waste management strategy and planning, including alternatives to waste disposal. <u>sustainability.vic.gov.au</u>

#### Waste Resource Recovery Groups

Waste Resource Recovery Groups (WRRGs) are statutory authorities established under the Act. Each WRRG represents a regional area in Victoria. WRRGs work with and support councils to plan for waste management and resource recovery facilities and services across their region, and to work with their communities to minimise waste, maximise resource recovery and reduce litter. WRRGs also work with state and local government bodies, the private sector and the community to achieve sustained reduction in waste.

Find resources to support waste prevention programs at Metropolitan WRRG <a href="https://www.mwrrg.vic.gov.au/">https://www.mwrrg.vic.gov.au/</a>

### **Council's Litter Environment Action Network**

Metropolitan Waste Resource Recovery Group (MWRRG) coordinates the Councils Litter Environment Action Network (CLEAN). CLEAN is a network and community of practice that brings together litter and illegal dumping prevention professionals from council, State Government and not for profit organisations. It promotes litter prevention best practice and provides a forum for officers to connect and discuss litter issues. To become a member of CLEAN visit <u>mwrrg.vic.gov.au</u> or call (03) 8698 9800.

## Litter Enforcement Officer Network

The Litter Enforcement Officer Network (LEON) is a professional network consisting of LEOs, land managers and individuals brought together by their concern for litter or illegal dumping. LEON is coordinated by Keep Victoria Beautiful, and focuses on reducing litter and illegal dumping by upskilling officers, promoting best practice and encouraging strong working relationships with land managers. LEON provides resources, engagement and training opportunities for LEOs and tracks illegal dumping in Victoria. Visit <u>litterenforcement.org</u>

# Appendix A: Schedule of offences

Infringement offences are listed in Schedule 10 of the Regulations. Note that the Regulations are expected to be made prior to 1 July 2021.

Section in the Act or Regulation	Summary of offence	Maximum court penalty in penalty units	Infringement penalty in penalty units	Infringement offence code
Section 115(1)	Unlawful deposit of litter	20 (natural person)	2 (natural person)	0200
		100 (body corporate)	10 (body corporate)	0201
Section 115(2)	Unlawful deposit of dangerous litter	60 (natural person)	4 (natural person)	0202
		300 (body corporate)	20 (body corporate)	0203
Section 115(3)	Unlawful deposit of waste of more than 50 L but less than	100 (natural person)	6 (natural person)	0204
	1,000 L	500 (body corporate))	30 (body corporate)	0205
Section 115(4)	Unlawful deposit of waste of more than 1,000 L	240 (natural person)	10 (natural person)	0206
		1200 (body corporate)	50 (body corporate)	0207
Section 119	Fail to remove waste when requested by a litter	10 (natural person)	2 (natural person)	0208
ć	enforcement officer	50 (body corporate)	10 (body corporate)	0209
Section 121(5)	Refuse or fail to comply with waste abatement notice	40 (natural person)	6 (natural person)	0210
		200 (body corporate)	30 (body corporate)	0211
Section 121(7)	Fail to comply with notice to remove or dispose of waste	40 (natural person)	6 (natural person)	0212
		200 (body	30 (body	0213

# Regulating litter and other waste: toolkit

Section in the Act or Regulation	Summary of offence	Maximum court penalty in penalty units	Infringement penalty in penalty units	Infringement offence code
		corporate)	corporate)	
Section 125(3)	Fail to comply with request by litter enforcement officer to provide name and address	20 (natural person)	2 (natural person)	0214
Section 125(4)	State false name or address to litter enforcement officer	20 (natural person)	2 (natural person)	0215
Section 125(6)	Fail to comply with request by litter enforcement officer to provide proof of name or address	20 (natural person)	2 (natural person)	0216
Section 127(3)	Refuse or fail to comply with waste information gathering	10 (natural person)	2 (natural person)	0217
	notice	50 (body corporate)	10 (body corporate)	0343
Section 132	Supply false or misleading information	40 (natural person)	Not an infringement	N/A
		200 (body corporate)	offence	
Regulation 55(1)	Unlawful deposit of unsolicited document	10 (natural person)	2 (natural person)	0247
	A M	50 (body corporate)	10 (body corporate)	0248
Regulation 55(3)	Unlawful deposit of junk mail	10 (natural person)	2 (natural person)	0249
, NG		50 (body corporate)	10 (body corporate)	0250
Regulation 56(1)	Commission the distribution of unsolicited documents	20 (natural person)	Not an infringement	N/A
		100 (body corporate)	offence	

## Regulating litter and other waste: toolkit

gage another person to tribute unsolicited cuments mage public waste ceptacle	20 (natural person) 100 (body corporate) 20 (natural person) 100 (body	Not an infringement offence 4 (natural person)	N/A 0251
mage public waste	corporate) 20 (natural person) 100 (body	4 (natural	0251
_	person) 100 (body		0251
	corporate)	20 (body corporate)	0252
I to secure load	20 (natural person)	4 (natural person)	0253
	100 (body corporate)	20 (body corporate)	0254
	H S MIEMPER	corporate)	corporate) corporate)

# Appendix B: Waste information gathering notice

What is it?	Waste information gathering notice (WIGN) – section 127 of the Act
	WIGN can be used by LEOs to obtain information about waste they reasonably believe has been unlawfully deposited.
	The information obtained through a WIGN can be used as evidence to take enforcement action such as requiring removal of the waste, or issuing a waste abatement notice or infringement, or prosecution for unlawful deposit of waste.
Who can it be issued to?	A WIGN can be issued to a person (meaning natural person or body corporate) believed to have previously had possession of the waste, or be responsible for commissioning the production or distribution of material that became waste.
What can the notice require a person to do?	<ul> <li>A WIGN can require any relevant information about the waste specified in the notice. The following information can be requested by the notice under section 128(2): <ul> <li>how, when and where the waste came into or left the person's possession</li> <li>if the waste has left the person's possession – the name and address of another person who currently has possession of the waste</li> <li>the name and address of another person who was involved in commissioning the production or distribution of material that became waste.</li> </ul> </li> </ul>
What form does the notice have to take?	<ul> <li>The information that must be included in the notice is set out in section 128(1), including: <ul> <li>name and address of recipient</li> <li>grounds on which the notice is issued</li> <li>penalties for non-compliance.</li> </ul> </li> <li>Notices can be issued by email, mail, leaving it at the usual or last known address, or in person. Refer to section 344 of the Act - service of documents.</li> <li>Use the notice template provided by EPA.</li> </ul>

the person have to comply with the notice?	The timeframe within which the person must comply with the notice must be stated in the notice. The LEO will decide what is a reasonable timeframe to comply.
Amending or revoking requirements	<ul> <li>By serving a written notice of amendment, the LEO can:</li> <li>extend the time period that the person has to comply with the notice, or</li> <li>revoke or amend any requirements in the notice</li> </ul>
Are there consequences if	It is an offence not to comply with a WIGN without a reasonable excuse. An infringement notice can be issued.
a person fails to comply?	It is also an offence to supply false or misleading information in connection with a WIGN. This is a serious offence that must be pursued through court proceedings.
	For penalties see Appendix A: schedule of offences.
	Note: litter enforcement officers can seek a court order under section 130, compelling compliance with a waste information gathering notice.

# Appendix C: Waste abatement notice

What is it?	Waste abatement notices (WAN) – section 121 of the Act
	WAN can be used by LEOs to manage waste, or material that may become waste, and ensure it is deposited in a lawful manner.
	WAN can be issued if the LEO or litter authority reasonably believes a person has:
	deposited waste in contravention of Part 6.3
	<ul> <li>deposited waste at a premises or place that causes risks of harm to human health or the environment</li> </ul>
	<ul> <li>deposited waste at a premises or place in a way that makes the premises or place disorderly, or detrimentally affects its proper use</li> </ul>
	• engaged in, or proposes to engage in, an activity that causes or is likely to cause a contravention of Part 6.3.
	Restrictions on issuing waste abatement notices
	WAN have stricter criteria compared to most other litter and waste enforcement tools. Section 121(2) limits litter authorities (other than EPA) from issuing WANs except in relation to land or waters under their management or control. This mainly effects councils, who otherwise generally have powers in relation to any land or waters in their municipal district. This doesn't necessarily mean that council LEOs cannot issue waste abatement notices to deal with issues arising from private land. Consider the scenario below about mud from a building site.
Who can it be issued to?	A WAN may be issued to a person (meaning natural person or body corporate), who has caused or is likely to cause the deposit of waste. If the person who caused the waste issue cannot be located, a notice may be issued to the occupier of the place or premises where waste has been deposited. In this case, under section 123, the occupier may recover costs of
- AU	removing waste from the person who deposited the waste.

What can the notice require a person to do?	<ul> <li>A WAN may require the person who deposited the waste to:</li> <li>conduct a cleanup to remove waste</li> <li>restore the premises or places impacted by waste</li> <li>modify activities that cause waste to be deposited</li> <li>lawfully dispose of waste.</li> </ul> In the case of a notice issued to the occupier, the notice may require the removal or disposal of the waste.
What form does the notice have to take?	The information to be included in the notice is set out in section 121(4). It includes name and address of recipient, grounds on which the notice is issued and penalties for non-compliance. Notices can be issued by email, mail, leaving it at the usual or last known address, or in person. Refer to section 344 of the Act - service of documents. Use the notice template provided by EPA.
How long does the person have to comply?	The time period within which the person must comply must be stated in the notice. The LEO issuing the notice will decide on a reasonable time period.
Varying or revoking the notice	A WAN may be varied or revoked by serving a written notice to the person.
VCAT review	The person on whom the waste abatement notice is issued can apply for review at the Victorian Civil and Administrative Tribunal.
Are there consequences if a person fails to comply?	<ul> <li>Unless the notice recipient has a reasonable excuse for not complying with the notice, enforcement action can be taken, including: <ul> <li>a LEO may serve an infringement notice</li> <li>the litter authority may remove or dispose of the waste, recovering any reasonable costs incurred in doing so under section 122</li> <li>a LEO or litter authority may initiate court proceedings.</li> </ul> </li> <li>For penalties see <u>Appendix A: Schedule of offences.</u></li> </ul>

# Appendix D: Infringement notices

What are	Infringement notices impose a financial penalty for certain breaches of the law.
they?	This allows certain contraventions to be dealt with through a fine rather than court proceedings.
Who can serve them?	<ul> <li>Infringement offences under the Act:</li> <li>Infringement notices can be served by LEOs for offences under Part 6.3 of the Act. This LEO power comes from section 307(4)(e) of the Act.</li> <li>Infringement offences under the Regulations:</li> <li>Infringement notices can be served by litter authorities or LEOs for infringement offences under Part 4.1 of the Regulations. This power is derived from s307(4)(a) and s347(5) of the Act, and regulation 59.</li> <li>Revenue from litter and waste infringements is retained by the litter authority that issued them.</li> </ul>
What can they be served for?	Schedule 10 of the Regulations lists infringement offences. Other than section 132 (supply false or misleading information) all offences under Part 6.3 of the Act are infringement offences. In Part 4.1 of the Regulations, all offences are infringement offences, except for Regulation 56(1) and (2) dealing with the distribution of unsolicited documents. Refer to <u>Appendix A: Schedule of offences</u> .
Who can they be served to?	An infringement notice can be served to a person (meaning natural person or body corporate), believed to have committed an infringement offence. Under Part 6.3 of the Act, this mainly relates to the person responsible for unlawfully depositing waste, but can also be issued to the occupier of a premises who has failed to comply with a waste abatement notice.
Serving infringement notices	<ul> <li>Notices under the Act can be issued by email, mail, leaving it at the usual or last known address, or in person. Refer to section 344, Service of documents.</li> <li>Litter enforcement officers should follow their organisation's own processes for serving infringement notices, and refer to the <i>Infringements Act 2006</i> and relevant Regulations.</li> </ul>

Disputing an	
infringement	<ul> <li>Under the <i>Infringements Act 2006</i>, recipients of an infringement notice can apply to have their infringement reviewed by the authority that issued it.</li> <li>Applications for review must be made within 14 days of the applicant becoming aware of the infringement notice.</li> <li>A vehicle owner or driver issued with an infringement under section 116 of the Act can submit a written statement under section 118 within 10 days. See <u>Wasted deposited from vehicles</u>.</li> </ul>
What happens if the person doesn't pay the infringement?	<ul> <li>Litter authorities have three options:</li> <li>Unpaid infringements can be referred to Fines Victoria who, for a fee, wil pursue the recipient of the infringement to recoup the debt <u>online.fines.vic.gov.au.</u></li> <li>The infringement can be withdrawn, with the offence then prosecuted through the Magistrates' Court.</li> <li>Council can use a private debt collector to pursue the infringement amount.</li> </ul>
Penalty units	A penalty unit is monetary amount that is fixed for a financial year by the Treasurer and adjusted annually in line with CPI - see <u>Department of Treasury</u> and Finance website. Offences under the Act and Regulations list the maximum number of penalty units (for both natural persons and body corporates) that can be imposed by a court in the event of a prosecution. For infringement offences, Schedule 10 of the Regulations lists the applicable penalty units. See <u>Appendix A: Schedule of offences</u> .

When may	Scenarios when court proceedings may be appropriate include:
proceedings be initiated?	<ul> <li>an offence is too serious to be dealt with by way of an infringement notice</li> </ul>
	<ul> <li>a person has failed to pay a penalty within the time specified</li> <li>the person is a repeat offender and previous enforcement action has not been a deterrent</li> <li>the accused has elected to have the matter referred directly to the Magistrates' Court for determination.</li> </ul>
Who may initiate	For an offence under Part 6.3 of the Act, a litter authority or LEO can initiate court proceedings. This power comes from section 347(4) of the Act.
proceedings?	Litter authorities and LEOs can also initiate court proceedings for an offence under Part 4.1 of the Regulations. This power is derived from s347(5) of the Act, and Regulation 59.
	Follow the prosecution procedures of the council or agency concerned.
Timeframe for court proceedings	Legal proceedings for the litter and waste section of the Act (for summary offences) or the Regulations must begin within twelve months after the commission of the alleged offence. For further details see the <i>Criminal Procedure Act 2009</i> .
Brief of evidence	If initiating court proceedings, a LEO may be required to compile a brief of evidence consolidating all relevant evidence into a concise and structured format. The format and process for assembling a brief may vary according to the requirements of the prosecuting authority and the nature of the matter. The LEO should consult their own agency and prosecutors, or local council. The compilation of any brief of evidence reflects on your professionalism. Ensure where possible that all relevant documentation and evidence has been supplied.
	The brief of evidence is likely to include:
	<ul> <li>brief cover and table of contents</li> <li>summary</li> <li>copy of charges</li> <li>the identity of the alleged offender</li> <li>list of witnesses and exhibits</li> </ul>

# Appendix E: Prosecution

	<ul> <li>certificate concerning litter offences</li> <li>prior convictions</li> <li>the method used to commit the offence.</li> </ul>
Affidavits	Affidavits are usually the main means by which information gathered during investigation is converted into admissible evidence. An affidavit is essentially the written form of what a witness knows and can say about a matter. It is usually a chronological account of their observations and experiences. An affidavit is a statement that has been attested to by oath or affirmation and carries a penalty for untruths. An affidavit from a witness preferably should be obtained and affirmed as near as possible in time to the events it relates to. Your organisation can provide further information about preparing an affida- and the preferred format. The <i>Evidence Act 2008</i> outlines the categories of persons who may witness statutory declarations and affidavits.
Certificate concerning litter	Section 339 provides a 'certificate concerning litter offences'. This certificate, submitted as part of a court proceeding, is evidence confirming a person is a LEO or that land or waters are under the control or management of a litter authority, at the time of an offence under Part 6.3.

# Appendix F: Estimating volume of waste

# Why do LEOs need to estimate the volume of waste?

The <u>offences for deposit of waste under section 115</u> are based on volume in litres (L). The three volume-based thresholds are:

- less than 50 L (for litter and dangerous litter)
- more than 50 L but less than 1,000 L
- more than 1,000 L.

The Act aims to deter people from dumping waste and therefore avoid the costs of collecting and transporting the waste items. When people dump, these costs are worn by local government or the State. The larger the volume of the waste, the greater the nuisance of cleaning up that waste, hence the greater penalties.

LEOs need reliable evidence of waste volume estimate to identify the appropriate offence. In criminal law terms the **purpose** of your evidence is to establish, beyond reasonable doubt, that the volume of waste clearly falls into one of the three volume thresholds.

Where the volume is close to either the 50 L or the 1,000 L threshold, your evidence must reliably establish which threshold applies. For example, a household garbage bag may be close to the 50 L mark, so extra care may be needed to substantiate whether the deposit is in the litter offence or belongs to the next threshold up. Your goal is to ensure no reasonable doubts remain about the volume of the waste.

Often it will be clear which volume threshold applies. A single plastic drinking bottle is clearly less than 50 L. Several dumped chemical pods of 1,000 L each will be more than 1,000 L. In these circumstances a visual estimate, supported by photos and other notes, should be enough to confirm the correct threshold.

# How is volume assessed?

The volume of waste is the volume of space the item(s) takes up – not just the volume of the materials from which it is composed. For example, a dumped fridge is assessed by its outer dimensions only.

# **Recommended methods for estimating volume**

Use one or more of the recommended methods to estimate volume listed below. The methods are listed from least to most precise.

It is important to take clear, contemporaneous notes and photographs or video, to record the method you are using.

Method of volume estimation	When and how to use it
Method 1:	When to use
Visual estimation based on the types of waste	For commonly dumped items, estimates can be made using typical volumes for those items. For example, standard dimensions for a single, double, queen or king size mattress can be used to calculate estimated volume. Similarly, paint cans generally have standard volumes. This method may be particularly useful where waste is spread out.
	How to use
	Having estimated the volume of the main components of the waste deposit, add up each of the volumes to calculate the total volume and select the correct offence. Remember that a visual assessment using reference volumes will only produce an approximation of an amount of waste. See <u>Reference items for estimating volume.</u>
Method 2:	When to use
Visual estimation using a scale object	<ul> <li>Taking photographs of the waste pile can be used to estimate the dimensions of the waste, and then to calculate volume. This method is useful where:</li> <li>you suspect the waste contains hazards such as asbestos</li> </ul>
	<ul> <li>the waste deposit is too high to physically measure</li> <li>you are limited by time or environmental conditions.</li> </ul>
	How to use
~00LX	Take photos from each side of the waste (at least four angles), placing an object (such as a surveyor's staff) next to the waste to show scale. It may be useful to include two scale objects to show both vertical and horizontal scales. You could also include a person in the photo to show scale.
(HIS	Convert estimated measurements to volume using the methods explained in the last row of this table.

Method 3:	When to use
Direct measurement	Physically measuring the dimensions of a waste deposit offers the greatest precision in estimating volume. It is also the most time consuming. Weigh up the cost and benefits of using this approach.
	How to use
	Use a tape measure to obtain dimensions of the waste deposit in order to more precisely estimate its volume, or at least its minimum volume. If the waste forms a recognisable shape, that basic shape should be noted and calculations may be made using a tape measure that are needed to be able to calculate an estimated volume. Common examples where you could use this shape-based approach include:
	<ul> <li>piles of mostly uniform materials that form a cone shape, such as dumped piles of soil – where you can use the base area and pile height measurements to estimate volume</li> <li>individual items that form box shapes, such as mattresses, whitegoods, and boxes of waste – where the length, width and height of the items can be used to calculate the volume(s)</li> <li>materials in bags or individual items that form a cylindrical shape, such as plastic bags containing rubbish, individual tyres or paint cans – where the diameter and height/length can be used to estimate the volume</li> </ul>
Ensure the volume is expressed in	To ensure volume measurements are recorded in litres the following methods can be used:
litres (for methods 2	• Take measurements in centimeters in order to make the calculations, or
and 3)	<ul> <li>Convert cubic metres (m<sup>3</sup>) to L by multiplying the value by 1000: e.g.         <ul> <li>0.05m<sup>3</sup> = 50 L</li> <li>0.5m<sup>3</sup> = 500 L</li> <li>1m<sup>3</sup> = 1,000 L</li> <li>10m<sup>3</sup> = 10,000 L</li> </ul> </li> </ul>
	See also <u>Calculating volume of different shaped waste</u> which assumes measurements are taken in meters and includes a section on converting measurements and units.

# **Reference items for estimating volume**

Using the typical volume of commonly dumped items can be an efficient way of estimating waste volume. Litter authorities can add to this list to meet local needs.

	Typical volume (L)*	
Retail water casks	10 L	
Round plastic buckets for domestic use	9–10 L	
Large wine-casks	4 L	
Passenger tyre	50-80 L	
Council (wheelie) bins – general waste	140 L	
Council (wheelie) bins - recycling/green waste	240 L	
Petrol 'jerry cans'	20 L	
Bar fridges	120–550 L	
Single door fridge	400–1000 L	
Double door fridge	1000–1500 L	
Single mattress	350 L (0.92 m x 1.90 m x 0.2 m	
Double mattress	525 L (1.38 m x 1.90 m x 0.2 m)	
Queen size mattress	621 L (1.53 m x 2.03 m x 0.2 m)	
Volumes are approximations only		

Calculating the volume of different shaped waste

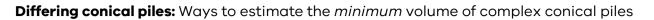
Basic shape	Example	Measurements needed (in metres)	Diagram	<b>Volume calculation</b> (in litres)	Issues
Boxes	Whitegoods Mattresses Actual boxes	Height of box Width of box Length of box		<ul> <li>The volume of a box is calculated by multiplying the length, width and height.</li> <li>Multiply the length by the width, then by the height</li> <li>Multiply by 1,000</li> <li>Formula: (V = lwh) Volume = length x width x height</li> </ul>	
Cylinders	Drums Cans Tyres	Height of cylinder Radius (half the width of the cylinder)		The volume of a cylinder is calculated by multiplying the height of the area by the base. • multiply the radius by itself (e.g. if the radius is 4, multiply 4 by 4) • multiply by the height • multiply by 3.14 (known as "pi" or $\pi$ ) • multiply by 1,000 <b>Formula:</b> ( $V = \pi r^2 h$ ) Volume = 3.14 x (radius x radius) x height	

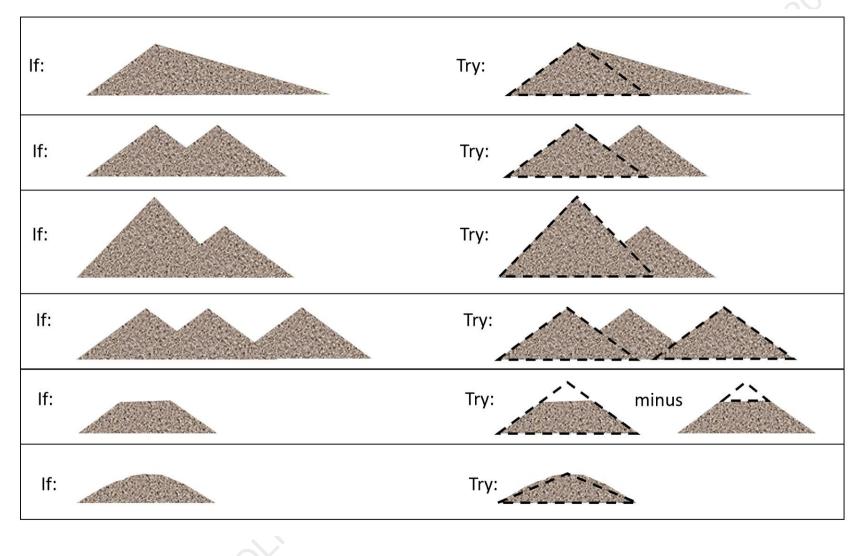
## Regulating litter and other waste: toolkit

Conical piles with a circular base	Dumped soil or clippings	Height of pile Radius of pile (half the width)		The volume of a cone with a circular base is calculated by multiplying the area of the base by the height of the pile and then dividing by three. • multiply the radius by itself (e.g. if the radius is 4.5, multiply 4.5 by 4.5) • multiply by the height • multiply by 3.14 • divide by 3 • multiply by 1,000 Formula: $(V = (\pi r^2 h)/3)$ Volume = 1/3 x 3.14 x (radius x radius) x height	What if only part of the pile is conical shaped? See examples below on how you can estimate the minimum volume by imagining a symmetrical cone shape within the pile.
		5-001/4	I GINTERNOT		61

# Regulating litter and other waste: toolkit

<ul> <li>multiply by 1,000</li> <li>Formula: (V = (πR1R2h)/3)</li> <li>Volume = 1/3 x 3.14 x short axis x long axis x height</li> </ul>	of the pile is conical shaped? See examples below on how you can estimate the minimum volume by imagining a symmetrical cone shape	The volume of a cone with an oval base is calculated by multiplying half the long axis (R1) by half the short axis (R2), then multiplying by 3.14. This gives you the area of the base. Then multiply the area of the base by the height and divide by three. • multiply the two axis measurements • multiply by the height • multiply by 3.14 • divide by 3		Height of pile Long axis of pile Short axis of pile	Dumped soil or clippings	Conical piles with an oval base
	within the pile.	Formula: ( $V = (\pi R 1 R 2 h)/3$ ) Volume = 1/3 x 3.14 x short	IS MITHON			





## Different approaches to calculating volume of waste



### Strategy:

- measure volume of one bag (consider retaining as evidence)
- count number of bags.



### Strategy:

- use cone calculation for loose rubbish
- use box calculations for furniture
- add the volumes.



### Strategy:

- measure volume of mattress, chairs and bucket
- calculate total volume.

Image from Yarra Ranges Council



## Strategy:

- use cone calculation for larger cone
- photograph from each angle.



### Strategy:

- use cone calculation
- photograph from each angle.



# Strategy:

- use cylinder calculation
- count number of tyres
- photograph from each angle.



### Strategy:

- use box calculation for mattress and whitegoods
- count number of bags and measure volumes
- add the volumes.



## Strategy:

- use cylinder calculation for the cans, unless volume is on the label
- photograph from each angle.



### Strategy:

- use box calculation
- undertake a rough count number of visible bricks
- photograph from each angle. OR

Estimate using a total volume approach for the whole pile.

# Photographing waste using reference objects



