



Auto Recyclers Guideline

Auto Recyclers Guideline

For further information please contact:

Information Officer
Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

Telephone: (08) 8204 2004
Facsimile: (08) 8124 4670
Free call (country): 1800 623 445

Website: <https://www.epa.sa.gov.au>

Email: epainfo@sa.gov.au

ISBN 978-1-876562-72-4

November 2022

Acknowledgments

This guideline has been developed in collaboration with the Motor Trade Association of South Australia (MTA SA).

The EPA gratefully acknowledges the Environment Protection Authority Victoria and the Victorian Automotive Chamber of Commerce (VACC) for their permission to use their Auto Recyclers Guideline (publication 1810) as the basis for this publication.

Disclaimer

This publication is a guide only and does not necessarily provide adequate information in relation to every situation. This publication seeks to explain your possible obligations in a helpful and accessible way. In doing so, however, some detail may not be captured. It is important, therefore, that you seek information from the EPA itself regarding your possible obligations and, where appropriate, that you seek your own legal advice.

© Environment Protection Authority

This document may be reproduced in whole or part for the purpose of study or training, subject to the inclusion of an acknowledgment of the source and to it not being used for commercial purposes or sale. Reproduction for purposes other than those given above requires the prior written permission of the Environment Protection Authority.

Contents

1	About this guideline	1
1.1	Who should use this guideline	1
1.2	About this guideline	1
2	Legislation	2
2.1	Environment Protection Act 1993	2
2.2	Local Nuisance and Litter Control Act 2016	3
2.3	Other related legislation	3
3	Risk management	4
3.1	Assessing risk	4
3.2	Common environmental hazards in the auto recycling industry	5
4	Setting up a site and business	7
4.1	Site design	7
4.2	Environmental records management	8
4.3	Stormwater system management	8
4.4	Preparing for fire	9
5	Managing recycled materials	11
5.1	EPA WasteTracker system	11
5.2	Storage of auto bodies	12
5.3	Waste oil/used oil	12
5.4	Coolant	13
5.5	Fuel	13
5.6	Liquid petroleum gas (LPG) cylinders	13
5.7	Tyres	14
5.8	Batteries (lead acid and electric vehicle)	14
5.9	Air conditioning refrigerant	15
5.10	Scrap metal	16
5.11	Bumpers and other plastics	16
5.12	Trade waste	16
6	Managing work areas	18
6.1	Temporary storage area for vehicles	18
6.2	Vehicle drainage area	18
6.3	Vehicle decommission area	19
6.4	Parts washing area	20
6.5	Parts and vehicle body storage area	20
6.6	Baled vehicle area	21
7	Other considerations	22
7.1	Noise	22
7.2	Air	22
7.3	Odour	23

Appendix 1	Additional guidance	24
-------------------	----------------------------------	-----------

List of figures

Figure 1	Model for how pollution and waste from auto recycling activities can reach people and the environment.....	4
Figure 2	Example of bunding for drums and containers	9

List of tables

Table 1	Steps in controlling hazards and risks	4
Table 2	Common activities, pollutant sources and associated pollutants at auto parts recycling facilities.....	5

1 About this guideline

This document provides guidance on practical measures that can be taken to prevent or minimise risk of harm to the environment and human health, as a result of auto recycling operations.

This guideline has been developed to support the *Environment Protection Act 1993* (EP Act). The Environment Protection Authority (EPA) requires that auto recycling is conducted in an appropriate manner so that the risk of harm to the environment and human health is prevented or minimised

1.1 Who should use this guideline

This guideline outlines best practice that should be employed by all auto recyclers whether or not licenced by the EPA.

If you are an operator of a business involved in all forms of 'vehicle' parts recycling (ie cars, trucks, motorcycles, farm machinery and other industrial vehicles except boats), this guideline is relevant to you. Use this guideline to help inform the decisions and steps to minimise and manage potential risks to human health and the environmental risk.

This guideline also applies to a range of different sized operations; from small to large businesses. Some examples of industries that should refer to this guideline include:

- motor vehicle wrecking yards
- auto dismantlers or recyclers
- businesses that break down or dismantle vehicles and warehouse the parts
- auto wreckers that take vehicles directly for crushing and sorting
- scrap metal dealers that handle end-of-life vehicles (ELVs)
- support services for the auto recycling industry (eg waste oil collectors and waste removers)
- full service and self-service yards
- metal recycling and scrap yards
- vehicle export operations.

1.2 About this guideline

This guideline provides guidance on reasonable steps businesses can take to prevent harm to the environment and human health. Taking steps to implement the principles described in this guideline will enable businesses to demonstrate that appropriate measures have been adopted to prevent real or potential harm.

The guideline outlines requirements in the [Environment Protection Act 1993](#) and its subordinate legislation and policies, and the EPA's expectations of industry.

2 Legislation

2.1 Environment Protection Act 1993

The Objects of the [Environment Protection Act 1993](#) (EP Act) are to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment while having regard to the principles of ecologically sustainable development.

In accordance with the general environmental duty (GED) as per Section 25 of the EP Act, the EPA requires that businesses and individuals conducting activities that pollute, or might pollute the environment, must take all reasonable and practicable measures to prevent or minimise any resulting environmental harm.

Waste reprocessing is a prescribed activity of environmental significance under Section 3(2)(e) of Schedule 1 of the EP Act which states:

‘Waste recovery’

‘the conduct of a waste recovery facility, being a depot, facility or works (including but not limited to, a transfer station or material recovery facility) that, during a 12-month period, receives for preliminary treatment, or has the capacity for the preliminary treatment of—

(a) more than 100 tonnes of solid waste or matter; or

(b) More than 100 kilolitres of liquid waste or matter...’

Auto recyclers that trigger the threshold will require an environmental authorisation from the EPA in the form of a licence.

This guideline applies to both licensed and unlicensed sites. Applying the measures outlined in this guideline will help demonstrate understanding of obligations and requirements under both the EP Act and the [Local Nuisance and Litter Control Act 2016](#).

2.1.1 Environment Protection (Water Quality) Policy 2015

The [Environment Protection \(Water Quality\) Policy 2015](#) (Water Quality Policy) offers more specific protection for the state’s waters. It prohibits the pollution of the stormwater system and our natural waters. The policy has general obligations which every person, business and industry must comply with as well as specific obligations for particular activities.

Listed pollutants include:

- engine coolant, oil, grease or lubricants, petroleum products
- wash down water from cleaning vehicles, plant or equipment
- cleaning agents, detergents and their by-products
- hazardous waste such as acidic solutions or acids in solid form and tyres described in Schedule 2 of the [Environment Protection \(Movement of Controlled Waste\) Policy 2014](#).

2.1.2 Environment Protection (Waste to Resources) Policy 2010

In addition, the [Environment Protection \(Waste to Resources\) Policy 2010](#) (Waste to Resources Policy) requires that in Metropolitan Adelaide some wastes are prohibited from being disposed to landfill including:

- lead acid batteries
- oil
- tyres
- vehicles
- metals – aluminium, copper, steel or iron or a blend or alloy of any such metals aggregated for resource recovery (whether alone or with other recyclables), other than metal products with components of different metals that cannot be readily separated.

2.1.3 Planning, Development and Infrastructure Act 2016

The EPA may be referred development applications under the [Planning, Development and Infrastructure Act 2016](#) for assessment. Through the development assessment referral process, the EPA examines how issues relating to auto recyclers will be addressed by the applicant including the risk of harm to the environment and human health relating to air quality, noise, site contamination, waste, waste water and water quality.



Further
information

Refer to the EPA website on [legislation](#)

2.2 Local Nuisance and Litter Control Act 2016

The [Local Nuisance and Litter Control Act 2016](#) seeks to protect the community from nuisance, prevent littering and promote the creation and maintenance of a clean and healthy environment.

Nuisance is any adverse effect on the amenity value of an area caused by dust, odour, noise, smoke fumes, aerosols, animals (whether dead or alive) and unsanitary conditions from domestic or commercial premises. Litter is described as any solid or liquid domestic or commercial waste and this Act specifies that litter must not be disposed onto any land or into any waters.

Local councils undertake various roles and actions that interact with this guideline. These include planning decisions, stormwater management, waste, the transition towards a circular economy and regulatory responsibilities contained in the *Local Nuisance and Litter Control Act 2016*.

This guideline outlines various actions to mitigate the environmental risks associated with stockpiling which, in turn, address unsightly conditions and other issues that are generally handled by local government authorised officers.

Local councils are the principal authority for administering this Act and for investigating littering offences and activities that cause nuisance.

2.3 Other related legislation

Local councils are the regulatory authority when planning the layout of a site. Some local councils have specific instructions, for example on landscaping, carpark areas and fencing.

SafeWork SA administer the [Dangerous Substances Act 1979](#) and [Work Health and Safety Act 2012](#) which have requirements for hazard controls within the workplace including a number for hazardous chemicals. These include licence requirements if storing quantities of LPG or fuel and waste; as well as chemical management including registers and manifest as well as chemical waste labelling, storage and handling requirements.

SA Water regulate the discharging of trade waste under the *Water Industry Act 2012*. For further information go to [SA Water – Trade Waste](#).

Also refer to scrap metal dealers and auto recyclers' obligations under the [Second-Hand Dealers and Pawnbrokers Act 1996](#) and the [Motor Vehicles Act 1959](#).



Further
information

Work and safety guidance when working with vehicles is provided in this SafeWork SA publication:

https://www.safework.sa.gov.au/_data/assets/pdf_file/0005/143951/Automotive-workshop-safety-guidebook.pdf

3 Risk management

Risk is present in all business activities and understanding and managing risk is crucial. Assessing and controlling risk in a structured way will help a business prevent harmful impacts to the environment and human health, comply with their legal obligations (assessing worker health risk is legally required under [Work Health and Safety Act 2012](#)), and meet community expectations.

Every auto recycling business is different, so risks may vary. By understanding the risks on site, the right actions can be taken to control them.

When assessing the risk of harming the environment, it is helpful to think about how pollution and waste can travel off site and reach neighbouring people and the environment – noise, air, land, and water (Figure 1).



Figure 1 Model for how pollution and waste from auto recycling activities can reach people and the environment (diagram courtesy of the Environment Protection Authority Victoria)

3.1 Assessing risk

Aspects and impacts (A&I) registers are a common risk assessment tool used by businesses. A&I registers and risk assessments are used to document aspects (a type of hazard) and impacts (on the environment or human health) and develop a management system that reduces risks through better controls (Table 1).

A businesses A&I register will contain aspects and impacts that are outside the scope of the EPA's regulatory role.

Table 1 Steps in controlling hazards and risks

Step	Action	Description
1	Identify hazards	An aspect is a type of hazard ie what could go wrong. Identify what hazards are present that might cause harm.
2	Assess risks	What is the level or severity of risk based on likelihood and consequence. Harmful impacts to the environment or human health are types of consequences.
3	Implement controls	What measures are suitable and available to eliminate or reduce a risk?
4	Check controls	Review controls to ensure they are effective

	Further information	Further information on how to fill out A&I registers can be found in the EPA's 'aspects and impacts' approach to regulation Environmental regulation using a risk-based approach – a guideline for EPA staff. Managing the common risks to worker health and safety can be found in SafeWork SA's Automotive workshop - Work health and safety guidelines
---	----------------------------	---

3.2 Common risks to the environment arising from the auto recycling industry

Activities undertaken by the auto recycling industry can adversely impact the environment and human health if not managed correctly.

Below are examples of common problems that may arise from auto recycling activities:

- Contamination of groundwater, surface water and soil from oils, grease, fuel, solvent and other chemicals (battery acids) due to poor management practices:
 - the discharge of listed pollutants into any waters, or onto land in a place where it is reasonably likely to enter any waters is prohibited under the Water Quality Policy. Listed pollutants include engine coolant, oil, grease or lubricants, petroleum products, washdown water from cleaning vehicles, plant or equipment cleaning agents and detergents.
 - the lack of impervious surfaces, covered areas and appropriate stormwater infrastructure can lead to contaminants such as fuel, oil, coolant and other chemicals from entering soil and surface water. Many sites also store oily engine parts outside on unsealed surfaces or leave the parts adjacent to or in close proximity to a stormwater drain.
 - the lack of proper spill control management allows liquid spills to enter stormwater systems or contaminate soils
 - improper drainage of fuel and other liquids from ELVs release into the environment during processing of the vehicles.
- Impacts on neighbouring properties due to:
 - increased noise and vibration from activities that generate high impact high-intensity noise and vibration.
 - air pollution and odour issues as a result of dust, fumes and particulates, as well as fuel odours from vehicle processing.
- Increased fire risk due to:
 - the flammable nature of vehicle fluids
 - stockpiling of combustible material such as waste tyres and unprocessed auto bodies
 - use of equipment such as oxy cutters which generate sparks.

The table below summarises the common activities, pollutant sources and associated pollutants at auto parts recycling facilities.

Table 2 Common activities, pollutant sources and associated pollutants at auto parts recycling facilities

Activity	Pollutant source	Pollutants
Temporary storage area (outdoor vehicle and equipment storage)	Leaking engines, chipping paint, galvanised metals, mechanical components and damaged batteries	Oil and grease, organics, metals, total suspended solids, acids, lead
Air conditioning and refrigerated gas recovery	Leaking air conditioning units	Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs), Hydrofluorocarbons (HFCs)
Vehicle dismantling	Oil, antifreeze, batteries, fuel, hydraulic fluids, electrical switches	Oil and grease, ethylene glycol, metals,
Used parts storage	Batteries, tyres, filters, radiators, engine blocks, doors, drivelines, galvanised metals, mufflers	Sulfuric acid, oil and grease, metals, petroleum hydrocarbons, total suspended solids

Activity	Pollutant source	Pollutants
Vehicle equipment and parts washing area	Washing and steam cleaning waters	Washdown water (from cleaning vehicles, plant or equipment), oil and grease, detergents, metals, chlorinated solvents, chlorine and chloramines, phosphorous, salts, suspended solids

**Further information**

Refer to the EPA website for information on [Water quality](#) and [Air quality](#).

Section 6 [Managing work areas](#) of this guideline will assist in identifying some of the hazards and risks in different work areas within a work site.

4 Setting up a site and business

4.1 Site design

Anyone wanting to undertake an auto recycling type of business should contact their local council to determine if Development Approval will be required.

	Further information	Refer to EPA environmental planning .
---	----------------------------	---

When designing a site, it is important to identify the potential environmental risks associated with each aspect of auto recycling so that preventative controls can be included in the site layout and design (Figure 2). In particular, manage and store oil, coolants and other substances so they do not enter the stormwater system, particularly in the case of a spill.

	Further information	Refer to the EPA's Liquid storage guidelines – bunding and spill management Section 6 Managing work areas of this guideline will assist in identifying some of the hazards and risks in different work areas within a work site.
---	----------------------------	---

4.1.1 General precautionary measures

- When planning a new site, consider the site set-up and if possible locating activities with similar risks together. For existing facilities, consider relocating activities within the site to facilitate good risk management.
- When planning a new site, ensure that thought is given to the need for installing an appropriate oil/water separator. These are hard to retrofit.
- Consider the potential risk of fire, and work health and safety when allocating activities to designated areas.
- Allocate enough space to store flammable material such as fuel, tyres and batteries, away from ignition sources.
- Provide access for forklifts to reach all vehicles stacked within the site. In larger sites, provide enough space to allow movement of fire-fighting equipment.
- Consider developing a traffic management plan to ensure the correct flow and management of material handling equipment and pedestrian interaction on site. Ensure that dangerous goods are not stored in high vehicle/pedestrian trafficked areas.

	Further information	Also refer to: • Information provided by SafeWork SA for licences relating to storage and transporting of dangerous substances, Dangerous substance – Transport & storage licences. • Information on fire safety for businesses at the Metropolitan Fire Service (MFS) website.
---	----------------------------	--

4.1.2 Amenity

Consider strategies to avoid or minimise amenity impacts on neighbouring sites and the surrounding environment including litter, noise, dust, odour and stormwater. Due care should be given to where activities are located on the site, the possible impacts to amenity and the impact on neighbouring properties.

4.2 Environmental records management

Auto recyclers are required to keep records under legislated requirements where applicable. Records to be maintained include:

- tracking of controlled wastes
- waste management services
- trade waste agreements (Regulated by SA Water)
- environmental incidents and procedures followed in response to regulatory advice.



Further information

Refer to section 5.1 [EPA Waste Tracker system](#) in this guideline for information on tracking the transport of controlled wastes.

4.3 Stormwater system management

Every business has legal obligations not to pollute stormwater.

The Water Quality Policy specifies that a number of pollutants cannot be discharged to the stormwater system including many that relate to auto recyclers.

Contaminants or water from a site that is potentially contaminated with oil, grease and other chemicals should not enter into the stormwater system. Any runoff from the premises should be treated before it leaves the site and enters the stormwater infrastructure or the environment.

On-site stormwater drains that connect to the public stormwater system will eventually connect into larger water bodies such as rivers and marine waters. Stormwater contaminants such as oil, grease and other chemicals, can be extremely toxic and dangerous to the organisms living in these water bodies.

It is important that a readily accessible and available drainage map is created and maintained that details activity areas, sewerage system, stormwater drains, stockpiles and their contents, fire hoses, fire extinguishers, entrances and exits, and other waste storage areas.

Identifying the location of stormwater drains will assist during an emergency where the site may need to be isolated to prevent contaminants entering the stormwater system.

Consider the following for stormwater management:

- identify where stormwater drains are
- divide sites into different risk levels such as:
 - lowest risk – roof runoff (which could be captured and re-used on site if possible or discharged direct to stormwater without treatment)
 - moderate risk – carpark and driveway
 - high risk – operational area.

The different areas will need different levels of treatment prior to stormwater being discharged off site:

- Use suitable treatment systems that ensure only clean water enters the stormwater system, specifically an appropriate oil/water and litter separator, such as a triple interceptor pit.
- Divert stormwater away from storage areas, vehicle dismantling areas and any other areas where pollutants may be stockpiled.
- Stormwater cleansing systems should be regularly cleaned to ensure contaminants do not build up in the system and potentially end up in stormwater drainage systems.

Sites that use or store liquids should refer to the EPA guideline [Liquid storage guidelines – bunding and spill management](#) which provides information on bunds or spill containment systems to minimise the risk of environmental harm from liquid spills and leaks.

	Further information	Refer to the EPA website Stormwater pollution prevention for more information on precautions that can be taken to prevent stormwater pollution and Liquid storage guidelines – bunding and spill management. For the full list of pollutants that must not be discharged into the stormwater system, or onto land where they may reach the stormwater system see Listed pollutants Also refer to section 4 Setting up a site and business.
---	-----------------------------------	---

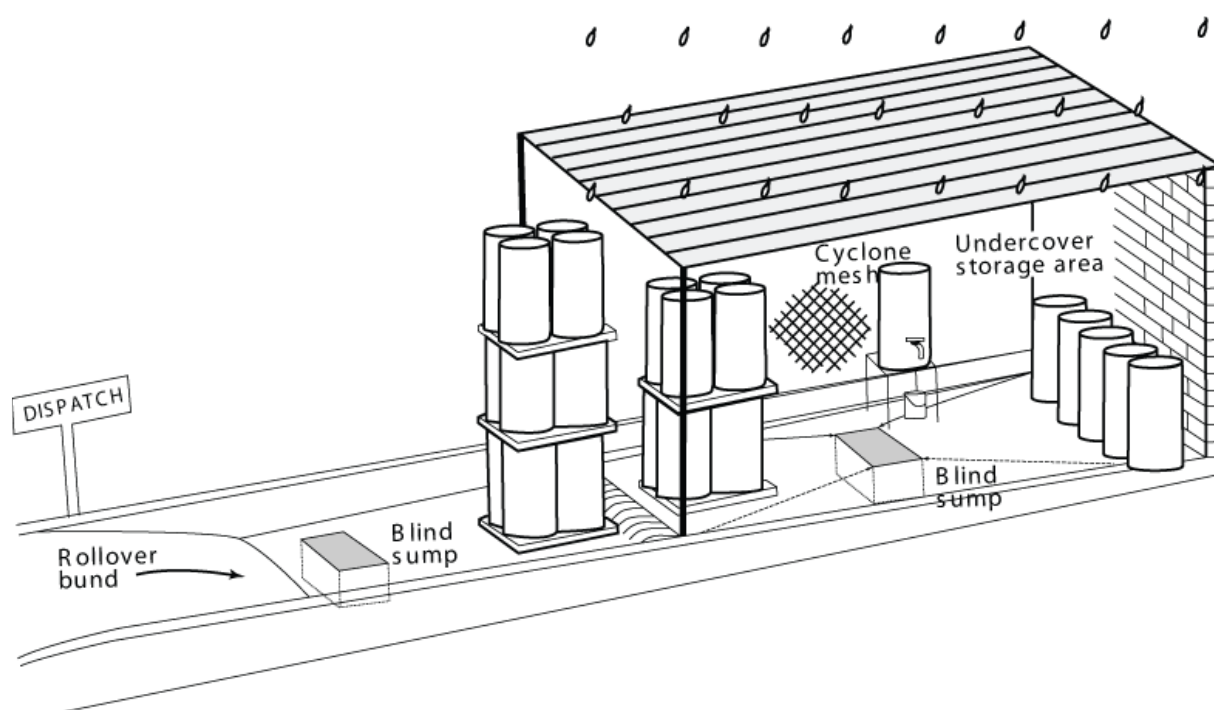


Figure 2 Example of bunding for drums and containers found in the [Liquid storage guidelines – bunding and spill management](#) (adapted from Victorian and NSW EPA)

4.4 Preparing for fire

The possibility of a fire at an auto recycling yard is high mainly due to the flammable nature of vehicle fluids, gases and other combustible materials that are handled and stored. The environmental consequences of a fire can be significant. Firewater runoff, combustion products and fire-fighting chemicals can contaminate surface water and ground water. Smoke, which is likely to be toxic, can have significant adverse impact on air quality.

It is important to prevent the occurrence of fire (fire prevention) and have procedures in place to extinguish and prevent the spread of a fire if it does occur (fire mitigation). Taking these precautions and being prepared will help to reduce the impact of fire on a business as well as the environment and human health.

	Further information	For further information on preparing for fire refer to: • Safe Work Australia website on storage of flammable liquids • MFS Guideline G021 Fire Risk Strategy for Recyclable Metal Stockpile Management • legal requirements in the Dangerous Substances Act 1979 and Work Health and Safety Act 2012 Further information can also be found in section 5.2 Storage of combustible materials.
---	-----------------------------------	--

4.4.1 Fire prevention and mitigation

Controls for preventing and mitigating fires at a site can include (but are not limited to) the following types of engineering and administrative controls.

Effective storage management

- Store flammable material away and separate from ignition sources.
- Ensure that LPG tanks are appropriately degassed as they are a significant fire risk.
- Implement recommended storage dimensions to prevent oversized and hard-to-manage piles. See section 5.2 [Storage of combustible materials](#).

Monitoring hazards

- Install security systems such as closed-circuit television (CCTV) to monitor the sites for illegal dumping, vandalism, and arson.
- Install early fire detection devices such as external thermal alarms and/or sensors, video smoke detection and flame detection.

Site arrangement

- Designate and maintain separate areas for different activities depending on the level of risk.
- Designate and maintain areas for flammable material away from ignition sources such as hot works.
- Secure the property and perimeter fence, install quality gates and bollards, install CCTV and static covert cameras that deter and reduce the chances of criminal activity at a site.
- Install hot works response equipment as required (eg permanent or temporary heat shielding to contain sparks and flames within the designated area).
- Create and maintain a readily accessible and available site map that clearly details activity areas, stockpiles and their contents, fire hoses, fire extinguishers, entrances and exits, and other waste storage areas.

Fire protection systems

- Install appropriate fire protection systems such as hydrants, fire water monitors, and fire sprinklers to respond to fire hazards on the site.

Fire water containment (Liquid water runoff management)

- Install bunding, drainage basins or catchment pits to contain fire-fighting water within the premises.
- Have contingency plans in place to divert fire-fighting water from storm drains to sewers.
- Consider using sand instead of foam/water to extinguish fire.
- Consider using eductor pumps to pump firewater off site for disposal.

5 Managing recycled materials

Stored vehicles and vehicle parts are the most likely source of pollution on sites. Pollution can accumulate over time from slow drips and leaks. Drain all liquids from vehicles before they are stored on site or transported, including removing gas and liquid from cylinders.

Managing recycled materials from vehicles is an important part of the transition towards a circular economy – a self-sustaining system which aims to keep materials in use, or “circulating”, for as long as possible.

When managing recycled materials mitigation techniques involving storage and transport should include control methods to reduce risks associated with fire and liquid pollutants.

Good storage of vehicles and vehicle parts, can contribute towards a more rigorous circular economy by supporting higher order material recovery (as by implementing these practices the vehicles or vehicle parts do not degrade).

All car bodies and recycled materials generated on a site should be managed to reduce fire risks.

	Further information	This section 5 covers the management of a range of recycled materials that are either hazardous chemicals or a fire hazard. For further information refer to: • SafeWork SA's Dangerous substance – Transport & storage licences • SafeWork SA's Managing risks of hazardous chemicals in the workplace code of practice SafeWork SA's Flammable liquid storage and transport • SafeWork Australia Storage of flammable liquids • MFS website with information for businesses on fire safety • MFS Guideline G021 Fire Risk Strategy for Recyclable Metal Stockpile Management for material control/separation, storage and ongoing management to lessen the effects of fire outbreak, fire magnitude and assist in its containment • Safework Australia National Guidance for storage of flammable liquids
--	-----------------------------------	---

Outlined below are some of the storage and transport control methods to assist in managing the risks of different types of recycled materials generated at auto recycling sites.

5.1 EPA WasteTracker system

The transport of some wastes presents a high risk to the environment. Tracking requirements for waste being transported between SA and other states and territories are legislated under the [Environment Protection \(Movement of Controlled Waste\) Policy 2014](#).

Waste that must be tracked when transported includes:

- tyres
- acidic solutions or acids in solid form
- waste oil/water, hydrocarbons/water mixtures or emulsions
- surface active agents (surfactants).

These wastes must be tracked when transported into, within or out of SA. The waste producer, transporter and receiving facility all have obligations to ensure that the waste is properly tracked.

	Further information	Refer to the EPA WasteTracker.
---	-----------------------------------	---

5.2 Storage of auto bodies

Auto recycling facilities store combustible materials such as tyres, plastic body parts and internal fittings which include rubber, carpet, seats and dashboards. All are required to take all reasonable steps to manage and store combustible material in a way that minimises the risk to human health and the environment from fire.

When a car has been fully stripped of all combustible materials and consists purely of metal, is no longer a combustible and recyclable waste material (CRWM).

The MFS Guideline G021 [Fire Risk Strategy for Recyclable Metal Stockpile Management](#) provides stockpile storage limits for unprocessed and processed auto bodies.

5.3 Waste oil/used oil

Waste oils are a class 1 pollutant and must not be tipped down stormwater drains or sewers, tipped onto soil or burned. Disposing of waste liquids and solids into stormwater drains or onto land where it is likely to end up in stormwater drains (waters) is an offence under the EP Act's Water Quality Policy and is likely to result in regulatory action.

It is the responsibility of the auto recycling site operator to ensure that all waste (including waste oil) generated at the site is transported, recycled or disposed appropriately at an EPA licenced site that is authorised to receive this type of waste.

Examples of waste oils include:

- used engine (sump) oil
- gear oil
- differential oil
- automatic transmission fluid/hydraulic oil
- brake fluid and other related products, eg used oil filters.

5.3.1 Potential hazards

Waste oils contain materials and properties that may harm human health and the environment if not managed properly. Examples of potential hazards:

- fire and explosion due to combustible nature
- potentially toxic chemicals that can cause skin irritation or other health issues
- contamination of stormwater, land, surface water and groundwater.

5.3.2 Storage

- Store waste oils:
 - In clearly labelled, good-quality bulk tanks or drums in an enclosed (bunded) area, preferably under a roof, or on spill containment pallets or other self-bunded storage units. If a roof is not provided, the containers should be enclosed to ensure that rainwater is not able to get in. Fit tanks with a graduated dipstick or a similar device that would allow the operators to assess the volume of liquid stored in the tank easily.
 - The bund should be big enough to contain 120% of the volume of the largest tank to allow for the full capacity of that drum/tank, plus rainwater, to be captured and contained.
 - In a double-skinned tank which already has integrated bunding and offers appropriate spill protection.
 - In a separate designated area with a flat, impervious surface.
 - Away from heat and potential ignition sources and stormwater drains.
- Ensure that waste oil containers are not cut with any heat-producing equipment.
- Spill kits should be readily available in the waste oil storage area.

- Ensure that the waste oils are regularly collected by waste oil contractors to avoid build-up of large volumes of oil on site.
- Display Hazchem sign at front of the entrance.

5.3.3 Transport, recycling and disposing of waste oils

- Use an appropriately licensed transporter to remove the waste for proper disposal or recycling of waste oil. Licensed transporters have an obligation to take waste oil to an appropriately licenced waste depot for disposal or treatment.
- Check that any waste transporters have an appropriate licence
- Recycle used oil filters, do not dispose into landfill.

5.4 Coolant

Coolants (including radiator fluid) contain different types of glycol and other chemical compounds such as rust inhibitors, pH buffers and anti-foaming agents. Some of these chemical compounds can contain metals such as lead and copper.

Coolant needs to be collected from the vehicles and stored appropriately to minimise environmental risk.

5.4.1 Potential hazards

If released to the environment:

- The metals in coolants can cause significant contamination of soils, groundwater and other water bodies.
- Glycols present in coolant will use an excessive amount of readily available oxygen in soil and water for their biodegradation process and this will reduce the oxygen available for plants and animals.

5.4.2 Storage

- Store all coolant liquids collected from the vehicles in good quality containers in a secondary containment (bunded) area, preferably under a roof, or on spill containment pallets or other self-bunded storage units. If a roof is not provided, the containers should be enclosed to ensure that rainwater is not able to get in. See [Liquid storage guidelines – bunding and spill management](#) for more information.
- Collect and treat coolant separately from other liquid waste.

5.4.3 Transport, recycling and disposal of coolant

- Coolants should never be allowed to enter stormwater systems, any other water body or dumped on the ground.
- Transportation of coolant wastes, should include the requirements for licenced transportation and be tracked under the EPA [online tracking system](#). Coolants are listed under waste oil (J120) in the table of waste codes.
- Contact SA Water, regarding the ability to dispose of coolant into the sewer.

5.5 Fuel

Drain fuel tanks completely before they are recycled. Fuel that is collected from vehicles can be re-used on site.

However, gasoline can oxidise ('go off') after some time making it unusable and should be treated as liquid waste and managed accordingly.

5.6 Liquid petroleum gas (LPG) cylinders

LPG is stored inside tanks under high pressure. Cylinders must be free of all gas and liquid before they are shredded.

LPG gas cylinders are generally manufactured using plate steel and depending on the condition of the bottle, it can either be re-used or recycled as scrap metal.

5.6.1 Potential hazards

- Due to the high-pressure nature of the gas cylinders and the flammability of LPG, discarded gas cylinders may leak and catch fire if there is an ignition/spark, explode or propel at high speed if punctured.

- LPG can leak and mix with other potentially dangerous chemicals.

5.6.2 Storage

- Until the gas cylinders are rendered safe by a trained professional, treat gas containers as full. Store such containers in:
 - a secure, outside area that is well ventilated
 - away from other hazardous material such as waste oil or equipment that may pose a risk of explosion or fire.
- Degas gas cylinders by a suitable contractor or a person trained in the safe disposal method of gas cylinders.
- Once rendered safe, puncture and tag the cylinders to indicate they are gas-free.
- The 'gas-free' cylinders can be stored in a separate area until collected/sent for scrap metal recovery.

5.7 Tyres

Tyres unfit to be used on a vehicle are classified as 'waste tyres' and such tyres should be recycled. The [Waste to Resources Policy](#) prohibits whole tyres from being disposed to landfill.

5.7.1 Potential hazards

- Tyres can cause significant fire hazards, and act as breeding sites for vermin that can spread diseases.
- Leachate from tyres that have broken down can contaminate soil and groundwater.

5.7.2 Storage

- When storing tyres on site, ensure that they are stacked in a manner to prevent vermin from breeding in them and reduce the risk of fire.
- Tyre fires are very difficult to extinguish and are dangerous to firefighters. Environmental impacts to soil, watercourses and stormwater are likely, and clean-up costs can be extremely high.

	Further information	Visit the EPA website for more information on waste tyres refer to Guidelines on waste tyres and the Guideline on stockpile management. Also refer to: • MFS Guideline G013 General guidelines for rubber tyre storage • Tyre Stewardship Australia Best practice guidelines on tyre storage and tire and emergency preparedness.
---	-----------------------------------	--

5.7.3 Disposal

- Tyres are banned from disposal at landfills under the [Waste to Resources Policy](#).
- Tyres should never be burned to dispose of them.
- If tyres are not suitable for reuse or recycling, a specialist contractor (accredited through [Tyre Stewardship Australia](#)) can be engaged to remove them from the site.
- If tyres are shredded into pieces less than 250 mm, they may be accepted by a landfill licensed to receive them.

5.8 Batteries (lead acid and electric vehicle)

- Lead acid batteries and electrical or electronic equipment, including electric vehicle batteries, are banned from disposal at landfills under the Waste to Resources Policy. All batteries can be recycled.

- Both lead acid and electric vehicle batteries can be found in ELVs. The management and handling of batteries should be similar to lead acid batteries and maximise the potential for resource recovery.
- Electric vehicle batteries are of a very high voltage and can cause electrocution if not handled according to manufacturer's guidelines. Safe storage and handling of electric vehicle batteries must also be done according to manufacturer's guidelines. Staff handling these batteries for recycling may require additional training to prevent serious accidents.
- The Battery Stewardship Council has undertaken initial consultation on an approach to product stewardship for electric vehicle batteries, however as at January 2022 consultation is ongoing.

5.8.1 Potential hazards

- Batteries contain various chemicals and metals, such as lead, cadmium, lead sulphate, lead dioxide and sulphuric acid that are toxic to human health and can cause ecological impacts.
- Batteries are a potential fire hazard.
- Pallet strapping of batteries using steel bands should be avoided to reduce the risk of fire.

5.8.2 Storage

- Store batteries under cool dry conditions in a roofed, bunded, well-ventilated area with an impervious surface.
- Metal objects should not be placed on top of batteries.
- Store away from flammable material and equipment that can create sparks.
- Clean up any spills from the batteries immediately.



Further information

MFS Guideline G021 [Fire Risk Strategy for Recyclable Metal Stockpile Management](#), provides guidance on the storage limits of vehicle batteries.

5.8.3 Transport and disposal

Lead acid batteries are banned from landfill disposal under the [Waste to Resources Policy](#). Metals inside the batteries can leach out into the environment over time.

Make sure that batteries are packaged securely to protect against damage and spills before handing over to the waste transporter.



Further information

More information on recycling batteries can be accessed through [Australian Battery Recycling Initiative website](#) and the Battery Stewardship Council website <https://bsc.org.au/>.

5.9 Air conditioning refrigerant

All types of vehicle refrigerants require analysis and recovery, and must not be discharged into the atmosphere under *The Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Ozone Management Act).

Discharge of gases that are hydrofluorocarbons (HFC), hydrochlorofluorocarbons (HCFC) and chlorofluorocarbons (CFC) is illegal according to section 45B(1) of the Ozone Management Act and can damage the ozone layer and impact the climate.



Further information

More information on recycling air conditioning refrigerant can be accessed through the [ARC website](#), specifically [the Australian automotive code of practice](#).

To report illegal discharge of refrigerant gases contact the ARC via <https://www.arctick.org/contact-us>.

5.10 Scrap metal

Scrap metal stockpiles include all types of unprocessed metal materials (excluding unprocessed and processed car bodies).

5.10.1 Potential hazards

- Leaching of fuel, oil and other contaminants into groundwater and soil from vehicle parts that have not been thoroughly drained.
- Release of particulate matter to air from cutting and shredding activities.
- Release of ozone-depleting substances into air.
- Potential fire hazard due to the presence of combustible contaminants.
- Unprocessed materials containing hazards such as exposed rust can increase the risk of combustion as oxidation of metals creates heat.

5.10.2 Storage

Metal with combustible contaminants is considered a combustible waste. Information related to the storage of combustible materials can be found in the [Guideline for stockpile management](#) and also refer to the Victorian EPA [Guideline on management and storage of combustible recyclable and waste materials – guideline](#) (Publication 1667).

5.10.3 Transport and disposal

Metals aggregated for resource recovery are banned from landfill under the [Waste to Resources Policy](#).

Contact a company that handles scrap metal to pick up and dispose of/recycle the materials appropriately.

5.11 Bumpers and other plastics

Bumpers and other plastics collected from vehicles can be recycled where possible but should be appropriately stored until they are transported to a recycling facility. Bumpers and plastics are susceptible to fire risk.

5.12 Trade waste

Trade waste from any type of vehicle washing businesses could harm the sewerage system.

Under the Water Quality Policy, washdown wastewater must not be discharged to stormwater drains. Isolate the activities that generate wastewater to an area where the wastewater can be contained prior to discharge to a trade water connection or removed from site

SA Water also requires appropriate management practices at each site. Businesses must apply for trade waste discharge authorisation before discharging any trade waste to sewer. The trade waste discharge authorisation details the conditions to meet before discharging to the sewer. Contact [SA Water](#) for more information.



Further information

For further information refer to the [SA Water website](#).

5.12.1 Oil/water separator units

Oil/water separators are devices that can be used to remove oils such as fuel and some solids from stormwater. It is preferable that stormwater does not become contaminated with oils/hydrocarbons from the activities undertaken at the site. Contamination can be avoided by undertaking removal of oils undercover and ensuring storage of oils in bunded and roofed areas will assist in minimising the contamination of stormwater with oil.

Treatment to remove any residual oil that may contaminate stormwater is usually recommended. Oil/water separators are devices that can be used to remove residual oils such as fuel from stormwater. A Class 1 oil/water separator should be installed. These devices are capable of treating water to consistently achieve an oil content of less than 5 mg/L at the outlet. If the treated water is to be pumped to trade waste then the requirements of the relevant authority accepting the waste should be confirmed.

5.12.2 Waste disposal

The EPA provides information on determining how to dispose of each type of waste. Please visit the [Waste and recycling](#) page of the EPA website for more information.

If you are unsure contact:

- [the EPA](#)
- Your local council
- Waste disposal facilities
- Waste disposal contractors.

6 Managing work areas

Auto recycling sites typically have designated areas for different types of activities, which in turn, have specific considerations and requirements about managing and controlling risks to human health and the environment.

6.1 Temporary storage area for vehicles

- Provide a designated area for temporary storage of vehicles intended for recycling or before receiving treatment.
- Avoid dismantling or removing hazardous material from vehicles in the temporary storage area.
- Inventory vehicles before they are moved from temporary storage.

What can go wrong?

- Liquid leaks (eg oil, fuel, coolant) from stored vehicles.
- Stormwater contamination.

What are the consequences?

- Contamination of land, surface water and groundwater.

What can you do to reduce or prevent risks?

- Have a hard surface that prevents any leaks and spills from leaching into the groundwater. If a vehicle is actively leaking liquid, place it on an impervious surface.
- Provide easy access to a spill kit to clean up any spills quickly.
- Locate the work area away from stormwater drains and ensure any runoff from this area is directed to a treatment device.
- Issue clear instructions to staff to not dismantle or depollute vehicles in this area.
- Equip the area with a blind sump to collect any accidental spills.

What ongoing actions can you take?

- Conduct regular site inspections.
- Consult with staff.

6.2 Vehicle drainage area

- Move vehicles to this area from temporary storage and then drain completely free from liquids such as fuel, engine oil, coolant and other liquids.
- Remove rubbish and hazardous materials such as batteries and refrigerant gas from the vehicles while stored in this area.
- Use a vehicle hoist and appropriate tools and equipment to make the work more efficient.
- Put controls in place to minimise the risk to environment and human health.



Further information

Refer to the EPA website [Stormwater pollution prevention](#) for more information on precautions that can be taken to prevent stormwater pollution.

Also refer to [Managing risks of hazardous chemicals in the workplace code of practice](#) (SafeWork SA).

6.3 Vehicle decommission area

What can go wrong?

- Liquid leaks (eg oil, fuel, coolant) from stored vehicles.
- Stormwater contamination.
- Dust.
- Noise and vibrations.

What are the consequences?

- Contamination of land, surface water and groundwater.
- Loss of amenity due to increased noise, vibrations and dust.
- Potential fire risk due to spilled fuel.

What can you do to reduce or prevent risks?

- Locate this work area to an undercover location with secondary containment or bunding to prevent contaminants from entering the stormwater system.
- Have an impervious surface to prevent any leaks and spills from leaching into the groundwater.
- Provide easy access to a spill kit to clean up any spills quickly.
- Locate away from the stormwater drains and ensure runoff outside this area does not flow into the area.
- Equip the area with an appropriate oil/water separator to collect any accidental spills.
- Collect liquids into clearly labelled, secure drums or tanks and store in bunded areas that are undercover until collected by a licenced waste transporter.
- Explore methods to reduce excessive noise and disturbance to community (eg controlled work hours). See EPA information sheet [General environmental noise](#).
- Put controls in place to manage the spread of oil outside containment areas from forklifts and foot traffic.
- Please see the [Liquid storage guidelines – bunding and spill management](#) and [Managing risks of hazardous chemicals in the workplace code of practice](#) (SafeWork SA).

What ongoing actions can you take?

- Conduct regular site inspections.
- Check the drainage machinery regularly for any leaks or malfunction.
- Check the containers that store the drained liquids regularly for any leaks or spills.
- Consult with staff.

6.4 Parts washing area

- Use parts washing area to hose down body parts and whole vehicles (if large enough). Parts may include engines, transmissions, alternators, radiators and body panels.
- Put control methods in place to minimise the risk to human health and the environment.

What can go wrong?

- Liquid contaminants such as oil, coolant, or fuel leaking into the environment.

What are the consequences?

- Contamination of land, surface water and groundwater.

What can you do to reduce or prevent risks?

- Locate this work area undercover.
- Provide an impervious surface to prevent any leaks and spills from leaching into the groundwater.
- Provide provisions to the wash basins to contain overspray (eg short walls along the periphery).
- Area should be bunded and drained to oil/water separator unit to capture all washdown wastewater.
- Floor should be sloped to ensure all wastewater drains towards the centre of the area to be collected in sumps.
- Liquid waste containing solvents, oil or grease must be appropriately disposed of.
- Liquid waste can be transported, treated and disposed of by appropriately permitted agents.
- Contact the local water authority for specifications and any requirements for trade waste agreements.
- Please see the [Liquid storage guidelines – bunding and spill management](#).

What ongoing actions can you take?

- Clean and maintain the oil/water separators regularly, in accordance with the manufacturer's specifications.
- Conduct regular site inspections.

6.5 Parts and vehicle body storage area

Store recovered auto parts appropriately in a designated area:

- Store parts (in particular, the engine block and running gear) undercover, and preferably racked off ground.
- Store the hull of the vehicle without the engine block and running gear outside and stacked to a maximum height of 6m (see section 5.2 [Storage of auto bodies](#)).
- Control methods should be put in place to minimise the risk to human health and the environment.

What can go wrong?

- Residue liquid contaminants such as oil, coolant and fuel in the parts leaking into the environment.

What are the consequences?

- Contamination of land, surface water and groundwater.

What can you do to reduce or prevent risks?

- Drain all parts completely of liquids before they are moved to the storage area to prevent release of contaminants to groundwater and stormwater through any leaks.

What ongoing actions can you take?

- The parts stored should be completely drained of all fluids.
- Where oil/water separators are used, clean and maintain regularly, in accordance with the manufacturer's recommendations.
- Conduct regular site inspections.

6.6 Baled vehicle area

Baled vehicles can be stored onsite until they are transferred to the scrap metal dealer.

What can go wrong?

- Flammable material contained in the bales can catch fire.
- Residue liquid contaminants in the spare parts can leak into the environment.

What are the consequences?

- Significant risk of fire.
- Contamination of land, surface water and groundwater.

What can you do to reduce or prevent risks?

- Implementing fire mitigating and fire management processes (for additional information refer to the MFS Guideline G021 [Fire Risk Strategy for Recyclable Metal Stockpile Management](#) and the [Guideline for stockpile management](#)).
- Store baled vehicles away from hot works areas and other ignition sources.

What ongoing actions can you take?

- Conduct regular site inspections and check the fire mitigation and management processes in place.

7 Other considerations

7.1 Noise

Auto recycling yards can generate excessive noise due to the nature of their operations. It is the responsibility of the operator to take steps to monitor and control the noise levels created by their business. Systems and processes can be managed to ensure the wellbeing of staff and the community occupying properties in the vicinity.

Most noise complaints are managed by local councils under the [Local Nuisance and Litter Control Act 2016](#). The EPA focuses on dealing with noise complaints from activities of major environmental significance. This includes sites with EPA environmental licences. The EPA's role in noise regulation is based on the [Environment Protection \(Noise\) Policy 2007](#).

When development applications are referred to the EPA, an acoustic report is required if the site is within 300 m of houses (based on the recommended evaluation distance in the [Evaluation distances for effective air quality and noise management](#)

Examples of how to reduce the impact of noise:

- Install or replace old and/or noisy equipment with quieter equipment.
- Maintain equipment by replacing or adjusting loose or worn parts, lubricating moving parts or modifying components to remove clatter.
- Reduce the number of noisy machines running at any one time.
- Avoid running noisy machines at night. This will help reduce disturbance caused to neighbours.
- Avoid using noisy equipment such as air chisels and air operated descenders where possible.
- Silence air-operated equipment such as impact wrenches.
- Use vibration absorbers and dampers.
- Isolate vibrating machines from noise-radiating structures.
- Locate entrance and exit points away from noise-sensitive areas, eg residential houses and parks.
- Modify activities to minimise the amount or duration of vehicles reversing that is required to perform a task, while not compromising safety.



Further information

Refer to the EPA webpage [Noise](#) and the [Evaluation distances for effective air quality and noise management](#).

Also refer to requirements under the [Work Health and Safety Act 2012](#).

7.2 Air

Auto recycling yards deal with volatile liquids such as fuel that can vaporise and can impact air quality and generate odour. Also, dust from unpaved areas can be a cause of air pollution.

It is important to know which of the substances that are drained from vehicles, stored or used in the premises could volatilise or have a volatile component. The volatile nature of some compounds can sometimes also depend on weather conditions. Some volatile liquids such as fuel will generate an odour which will help to detect a leak through vaporisation. However, there could still be other substances that are odourless. Inhaling toxic fumes could be dangerous for staff, other residents living around the site and the environment in general.

The EPA regulates South Australia's air quality under the [Environment Protection \(Air Quality\) Policy 2016](#).

	Further information	Refer to the EPA webpage Air quality and the Evaluation distances for effective air quality and noise management. Also refer to Work Health and Safety Act 2012 for requirements to register hazardous chemicals.
---	----------------------------	---

7.3 Odour

Due to the presence of volatile components, odour can also be a potential risk posed to human health and environment through auto recycling sites. Following the steps stated in section 7.2 [Air](#) will help mitigate this risk.

	Further information	Refer to the EPA webpage on odour management.
---	----------------------------	--

Appendix 1 Additional guidance

Refer to the following websites for further reading and information.

- Australian Battery Recycling Initiative: <https://batteryrecycling.org.au/>
- Australian Refrigeration Council Ltd (ARC): <https://www.arctick.org/>
- Australian Standards (AS): www.standards.org.au
- Battery Stewardship Council: <https://bsc.org.au/>
- Environment Protection Authority:
www.epa.sa.gov.au
www.epa.sa.gov.au/business_and_industry
www.epa.sa.gov.au/environmental_info
- Local Government Association: www.lga.sa.gov.au
- Metropolitan Fire Service:
www.mfs.sa.gov.au/site/community_safety/commercial.jsp
www.mfs.sa.gov.au/community-safety/commercial/guideline/
- Motor Trade Association of South Australia: <https://mtasant.com.au/>
- SafeWork SA:
www.safework.sa.gov.au
www.safework.sa.gov.au/industry/automotive
- SA Water: www.sawater.com.au
- South Australia's planning portal: plan.sa.gov.au
- South Australian Government webpage on written-off vehicles:
www.sa.gov.au/topics/driving-and-transport/vehicles/vehicle-inspections/written-off-vehicles