



# Beyond WAste 2030 Roadmap

Western Australia's Waste Avoidance and Resource Recovery Strategy 2030











# Acknowledgement of Country

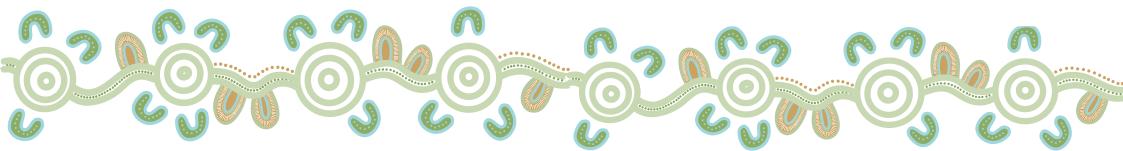
We acknowledge the Traditional Owners of the lands upon which we live and work throughout Western Australia and pay our respects to Elders past and present. We recognise the practice of intergenerational care for Country and its relevance to our work and working with the community.

We continue to move forward with a shared commitment to protect and conserve Country for our future generations.

\* Country is a term used by Aboriginal people to describe the lands, waterways, and seas to which they are intrinsically linked. This Acknowledgement of Country has been endorsed by the Department of Water and Environment Regulation's Yarning Circle and approved by its Aboriginal Empowerment Board.

#### P2, 3, 26, 27, 28, 29 Artist: Madeleine Edwards

Madeleine Edwards is a proud Jaru woman from the East Kimberley, with deep ties to Halls Creek and Kununurra. Surrounded by the vibrant landscapes of the Kimberley, her artistic journey has been influenced by her father's acrylic paintings and boab nut carvings. Madeleine's connection to her heritage is also shaped by her experiences camping in Purnululu National Park and learning about Country from her grandmother. A self-taught graphic designer and multi-disciplinary artist, she blends traditional and modern techniques to honour her cultural roots while exploring contemporary storytelling.





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#### Acknowledgements

The Waste Authority would like to acknowledge the contribution of Department of Water and Environmental Regulation staff to the development of this document.

#### Disclaimer

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This document is available in alternative formats and languages on request to the Waste Authority.

#### Statutory context

The Waste Authority is charged with promoting better waste management practices in Western Australia under the *Waste Avoidance and Resources Recovery Act 2007*. One of the Authority's functions under the Act is to draft, for the Minister for Environment's approval, a long-term waste strategy for the whole of the state for continuous improvement of waste services, waste avoidance and resource recovery, benchmarked against best practice and targets for waste reduction, resource recovery and the diversion of waste from landfill disposal. The strategy takes a 10-year and beyond view and must be reviewed at least every five years. This Discussion Paper supports the waste strategy review process.

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### Introduction

In February 2019, the Government of Western Australia published the previous Waste Avoidance and Resource Recovery Strategy 2030 (WARR 2030 Strategy; Waste Authority 2019). The strategy provided the vision, objectives, goals, targets and approach for transitioning Western Australia (WA) to a sustainable, low-waste, circular economy in which public health and the environment are protected from the impacts of waste.

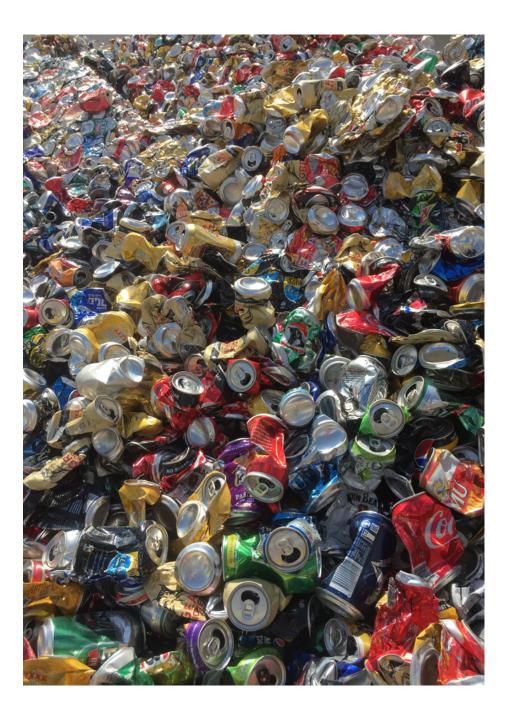
The Waste Authority reviews the waste strategy for the State Government every five years to assess progress against targets, determine strengths and identify new opportunities. This is a requirement under the *Waste Avoidance* and *Resource Recovery Act 2007* (WARR Act). This draft new waste strategy – Beyond WAste 2030 – provides an updated vision for waste management in WA. It sets the goals, targets and strategic priorities to take us to 2030.

Beyond WAste 2030 will be integral to WA's transition towards a circular economy. It recognises that WA needs waste and recycling systems that are robust, resilient and responsive to our unique geographic, economic and social context. We need to renew our focus, consider innovation and continue to invest in the sector to boost WA's transition to a thriving, resilient circular economy.

The **Waste Authority**, created under the WARR Act, advises the Minister for Environment on matters relating to the WARR Act, and develops the waste strategy for the Minister's consideration.

The Waste Authority, with support from the **Department of Water and Environmental Regulation** (DWER), develops annual business plans and position statements that support the waste strategy, and administers the Waste Avoidance and Resource Recovery Account (WARR Account) for project, program and policy development funding, and monitors and responds to existing and emerging waste issues.

**DWER** supports the Waste Authority, working with local governments, regional councils, stakeholder groups, the waste management sector and the community to promote understanding of waste avoidance and recycling and achieve the waste strategy's goals and targets.



# Beyond WAste 2030 Roadmap

Beyond WAste 2030 – Western Australia's Waste Avoidance and Resource Recovery Strategy 2030 (*Beyond WAste 2030*) describes the State's vision for a sustainable, low-waste future powered by a circular economy, where our communities, economy and environment thrive. It sets out the State's waste and recycling goals and targets and outlines five waste strategy priorities for the next five years, all of equal importance.

Beyond WAste 2030's goals, targets and priorities will be progressed through a wide range of actions to be undertaken over the next five years. This Beyond WAste 2030 Roadmap (the roadmap) sets out these actions, addressing the challenges that we face and taking advantage of the opportunities that we can benefit from. The roadmap should be read in conjunction with Beyond WAste 2030 which is available from here.

The 'Beyond WAste 2030 snapshot' (page 8) provides an overview and indicates where the roadmap fits in the context of the strategy.





### We invite your written feedback

A thorough stakeholder consultation process, held over the past two years, has informed and strengthened *Beyond WAste 2030*, particularly where it describes opportunities for government, industry and the community to work together. After the release of a <u>Directions Paper</u> in 2023 and <u>draft Waste Strategy</u> in 2024, this third phase of the consultation process marks the final step to gather feedback. It will ensure that the strategy and its roadmap have a strong base to build partnerships and implement actions. After the 28-day consultation period, *Beyond WAste 2030* and its roadmap (this doccument) will be finalised and published.

We welcome your input on *Beyond WAste 2030* and its roadmap. Both are now available for review until **16 December 2025**.

- Electronic written submissions can be emailed to wastestrategyreview@dwer.wa.gov.au.
- Hard copy submissions can be mailed to:

Waste Strategy Review

Department of Water and Environmental Regulation Locked Bag 10 Joondalup DC WA 6919.

If you have any questions or need further information, please email: <a href="mailto:wastestrategyreview@dwer.wa.gov.au">wastestrategyreview@dwer.wa.gov.au</a> or contact: (08) 6364 7000.

# Beyond WAste 2030 snapshot

# Beyond WAste 2030

A sustainable, low-waste future powered by a circular economy, where our communities, economy and environment thrive.

# Overarching government drivers

Premier's priorities

Net zero by 2050 target and WA's clean energy transition

Made in WA

Diversify WA

Closing the Gap

State Infrastructure Strategy and State waste infrastructure plan

Western Australia's 10-Year science and technology plan

## **Priorities**

- Intensify our focus on waste avoidance and reuse
- Realise the economic potential of recycling and the circular economy
- Foster a resilient recycled organics sector
- Support the circular management of clean energy technologies and electronics
- Improve outcomes for regional and Aboriginal communities

### **Foundations**

Legislation, assurance and administration

Waste data collection, analysis and publication Behaviour change and consistent communications

Intra and interjurisdictional collaboration

Leadership, policy and programs

Infrastructure planning and support

Figure 1: Beyond WAste 2030 snapshot

# Our 2030 goals and targets

Beyond WAste 2030 has maintained the goals of the previous WARR strategy 2030 (Waste Authority 2019) to avoid, recover and protect. These goals are important to guide the community and industry towards a sustainable, low-waste circular economy. They also frame the priorities that will contribute to delivering the Beyond WAste 2030 vision:

- Avoid: Western Australians generate less waste
- Recover: Western Australians recover more value and resources from waste.
- Protect: Western Australians protect the environment by managing waste responsibly.

Beyond WAste 2030 builds on the targets in the WARR 2030 strategy (Waste Authority 2019) and introduces new ones to address emerging challenges and community expectations.

The targets for *Beyond WAste 2030* are set out below. The targets will be measured against a 2014–15 baseline, unless stated otherwise. The targets that are italicised are new and those that are not italicised have been adopted from the previous WARR 2030 strategy.



Table 1: Beyond WAste 2030 targets

2030 goals	<b>Avoid</b> Western Australians generate less waste.	Recover Western Australians recover more value and resources from waste.	Protect Western Australians protect the environment by managing waste responsibly.	Avoid - Recover - Protect cutting across each of the three goals
2030 targets	Reduce total waste generated per person by 10%	<ul> <li>Recover energy only from residual waste</li> <li>Increase the recycling* rate to 75%</li> <li>► MSW: increase the recycling rate to 70% in Perth and Peel, 60% in major regional centres</li> <li>► C&amp;D: increase the recycling rate to 80%</li> <li>► C&amp;I: increase the recycling rate to 80%</li> <li>• All local governments in the Perth and Peel regions implement better practice FOGO collection systems</li> </ul>	<ul> <li>No more than 15% of waste generated in Perth and Peel is sent to landfill</li> <li>Work towards eliminating illegal dumping</li> <li>All waste is managed and/or disposed of using better practice approaches and facilities</li> <li>A 20% reduction in litter (on a 2024 baseline)</li> </ul>	Reduce disposal of organic waste to landfill by 50% (from 2019–20 levels)

<sup>\*</sup> To avoid confusion and align with the terminology used by other jurisdictions, *Beyond WAste 2030* uses the term 'recycling' to replace 'materials recovery' used in the previous strategy. The term 'energy recovery' is commonly used to describe the energy recovered from waste processed via energy recovery (waste-to-energy) facilities, while resource recovery includes energy recovery and recycling.

## A five-year action plan

Through a range of actions, this roadmap seeks to deliver the *Beyond WAste 2030* goals, targets and priorities. The actions are grouped under the strategy's priorities, which are all equally important:



Intensify our focus on waste avoidance and reuse

Avoid waste generation by encouraging reuse and repair and maintaining the value of products and materials for as long as possible.



Realise the economic potential of recycling and the circular economy

Transform waste into a valuable resource to create an efficient and profitable circular economy.



Foster a resilient recycled organics sector

Increase the recycling of organic material and facilitate the development of quality recycled organics and end markets.



Support the circular management of clean energy technologies and electronics

Develop end-of-life solutions for the management and recycling of clean energy technologies and increase the recycling of and value from electronic waste.



Improve outcomes for regional and Aboriginal communities

Develop and deliver fit-for-purpose waste infrastructure and services to meet community needs.

Actions identified under one priority may also provide benefits under other or multiple priorities.

The roadmap includes another category of actions: **foundational actions.** These are actions that cut across or support the delivery of most or all of the priorities; or the strategy's vision, goals and targets; or are required to support the development of policy and programs or improve waste management across the state in other ways.

The timeframe for implementation of actions under the roadmap is as follows:

- Ongoing action: action to start and run through the five-year life of the strategy.
- Short term: action to start and finish in one to two years.
- Medium term: action to start and finish in three to five years.
- Long term: action to start in five years and finish after 2030.

This roadmap is designed to remain flexible so that actions can be adapted, expanded or refined in response to emerging challenges, new opportunities and lessons learned. This adaptability will ensure the strategy and roadmap continues to deliver meaningful outcomes over its five-year life. We will provide a progress update at the mid-point of the strategy to assess achievements, highlight areas for adjustment, and confirm the actions remain on track to achieve the *Beyond WAste 2030* goals, targets and priorities.

### Priority 1: Intensify our focus on waste avoidance and reuse



**Our aim:** Avoid waste generation through reuse and repair and maintaining the value of products and materials for as long as possible

Meeting our 2030 target of reducing our waste generation by 10 per cent means a reduction from 2,452 to 2,207 kilograms of waste per capita. However, reducing waste is not just a numbers game. Every tonne of waste avoided, reduced or recycled lightens the pressure on our environment, cuts emissions, protects community health, and frees up resources for future generations.

We can reduce our waste generation by transitioning to a circular economy model, which aims to keep materials in use for as long as possible. To achieve this, we must undertake higher-order waste hierarchy outcomes such as avoidance, reuse and repair. This approach will involve modifying government policies, infrastructure development (also discussed under Priority 2), and encouraging behaviour changes in individuals and businesses.

Industry has an important role to play in avoiding waste. Industry can incorporate circular economy objectives throughout the lifecycle of their products by minimising waste and environmental impacts during the design, manufacture, use and disposal phases of their products. Innovative

and smart systems, as well as technological advances to improve product design, can reduce a product's material footprint and create longevity by making the product durable, repairable and recyclable.

Extended producer responsibility and product stewardship schemes support industry to take responsibility for their products to end-of-life and can encourage circular product design that avoids and reduces waste. We will continue to work with the Australian Government and other jurisdictions on national product stewardship schemes, reforms to packaging, and improving the 'right to repair' for consumers.

Education and behaviour change programs will encourage shifting patterns of consumption and encourage Western Australians to consume fewer resources, donate responsibly to charitable organisations, and choose reuse or repair options where possible.

Many local governments and charitable organisations already play a key role in the reuse and repair of products in WA through initiatives such as charity shops and repair hubs.

Supporting these initiatives can provide greater community access and, therefore, an opportunity to empower Western Australians to reuse and repair products. Research into higher-order initiatives of reuse and repair is important to quantify their environmental, economic and social benefits. This will enable better integration of these initiatives into circular economy policies and programs.

At a national level, there is an increased focus on waste avoidance: the National Food Waste Strategy has a target to halve Australia's food waste by 2030 (Australian Government 2017).

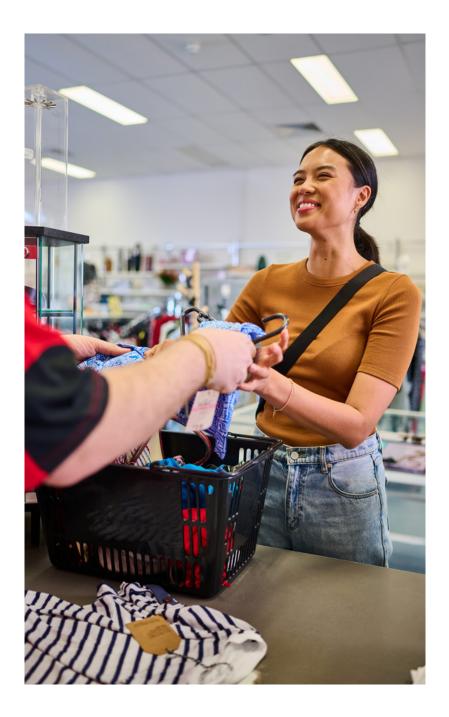


#### What success looks like

- Research, innovation and the development of new technologies and systems
  will facilitate increased waste avoidance, reduction and circularity: We will
  partner with other jurisdictions, industry and academia to undertake research and
  support innovative approaches to increase waste avoidance, reduction and circularity.
- Businesses and government agencies will be supported to avoid and reduce waste: We will collaborate with different levels of government, industry, research institutions, and academia to foster innovation and identify new technologies and systems that avoid and reduce waste and encourage circularity.
- Western Australians will be empowered to avoid, reuse and reduce waste: We will develop and implement evidence-based behaviour change programs and support organisations and initiatives to empower Western Australians to avoid unnecessary waste, donate responsibly to charitable organisations, and choose reuse or repair options where possible.
- Charities, social enterprises, local governments and commercial operators will be supported to increase reuse and repair: We will work with charities, social enterprises, local governments and commercial operators to undertake research and identify and trial options to increase reuse and repair.

### Relevant 2030 targets

- **AVOID**: Reduce per capita waste generation by 10 per cent
- RECOVER: Increase the recycling rate to 75 per cent
- PROTECT: No more than 15 per cent of waste generated in Perth and Peel is sent to landfill
- AVOID RECOVER PROTECT:
- > Reduce disposal of organic waste to landfill by 50 per cent (from 2019–20 levels)
- > All waste is managed and/or disposed of using better practice approaches and facilities



### Priority 1 actions: How we will intensify our focus on waste avoidance and reuse

Outcome	Action	Lead agency	Timing
	1.1.1 Implement the Sustainable Infrastructure Policy and online knowledge hub  Establish a mandate for use of lower-carbon, reuse and recycled products through the Sustainable (Transport)	Transport	Short term
	Infrastructure Policy. Share knowledge, research and opportunities with industry partners via the CircleZero knowledge hub.	portfolio	Onor Ctorm
1.1 Encourage	1.1.2 Establish a systems-wide understanding of product and material circularity in transport infrastructure	Transport	Short term
research, innovation and the development	Assess material flows, built stock data, material forecasts and regional supply chain networks as the basis for identifying circularity opportunities in transport infrastructure.	portfolio	
of new technologies and systems that avoid and reduce waste and	1.1.3 Invest in research and trials to support reuse and use of recycled and low-carbon materials across transport infrastructure and assets	Transport	Ongoing
encourage circularity	Continue to partner with industry and academia to undertake research, product development and trials to support use of sustainable materials in transport infrastructure and assets.	portfolio	Origoing
	1.1.4 Investigate applying national circular economy metrics and targets in WA and support a methodology to measure circularity in WA	DWER	
	Where feasible and appropriate for WA's context, adapt national metrics to measure avoidance and circularity, develop measures and targets consistent with national targets, and support a new WA-specific circularity measurement methodology.		Ongoing
	1.2.1 Develop and implement systems to increase waste avoidance in food and beverage manufacture and agribusiness	DPIRD	Ch out towns
	DPIRD, End Food Waste Australia and Curtin University will continue to implement a project with food and beverage manufacturers (post farm gate) to reduce waste.		Short term
	1.2.2 Continue to implement the Plan for Plastics, using evaluation, research and national harmonisation to inform future plastic policy		
1.2 Support businesses and government agencies	Continue to support stakeholders and the community to adjust to nation-leading bans on single-use plastic items and materials. Be involved and stay abreast of emerging information and needs to inform design of future actions targeting plastics.	DWER	Ongoing
to avoid and reduce	1.2.3 Implement the Department of Health's Strategy for an environmentally sustainable, low carbon and climate resilient healthcare system 2024–2030	Department of	
	Focus on sustainable procurement; optimise opportunities to reuse, refurbish and recycle medical devices and equipment where appropriate; reduce single-use consumables and develop interventions to minimise food waste in healthcare facilities.	Department of Health	Ongoing
	1.2.4 Pursue options to improve waste management across State Government agencies		
	Identify and implement options and mechanisms to improve waste management, avoidance, reuse, recycling and recovery across-government to ensure waste managed according to the waste hierarchy, principles of a circular economy and the waste strategy.	DWER	Ongoing

Outcome	Action	Lead agency	Timing
105	1.3.1 Support Plastic Free July Support the work of the globally recognised Plastic Free July campaign which empowers communities, businesses and governments to reduce plastic waste.	DWER	Short term
1.3 Empower Western Australians to avoid, reuse and reduce waste	1.3.2 Implement targeted consumer/community education on responsible charitable donations Support charitable recyclers, through implementing a public education campaign focused on improving donation behaviours.	DWER	Medium term
	1.3.3 Support the Nationwide Consumer Behaviour Change Campaign for Food Waste Support local adoption of the national End Food Waste Australia campaign, launched in 2024.	DWER	Ongoing
1.4 Work with charities, social enterprises, and commercial operators to increase reuse and repair	1.4.1 Support research that accelerates reuse and repair in WA Support Charitable Reuse Australia to quantify reuse and its impacts, to support policy and program development.	DWER	Short term
	1.4.2 Support local repair, reuse and share centres  Develop and implement a program and funding model to increase access to repair, reuse and share options, capitalising on existing local government infrastructure.	DWER	Medium term
	1.4.3 Support reuse through the Charitable Recyclers Rebate Program  Continue to rebate the landfill levy paid by charitable recyclers on unusable material.	DWER	Ongoing



### Priority 2: Realise the economic potential of recycling and the circular economy



**Our aim:** Transform waste into a valuable resource to create an efficient and profitable circular economy.

Waste represents a significant economic loss to the state's economy. In 2023–24, 35 per cent, or around 2.5 million tonnes of WA's waste was disposed of to landfill. With the right approach, infrastructure and technology, many waste streams can deliver greater economic value and create new jobs for the state.

At present, about 4.8 million tonnes of the waste generated in WA is recycled. Three-quarters (77 per cent) of this is circulated back into the state's economy through local markets (mainly C&D and organic waste), while the remainder is transported overseas (20 per cent) or interstate (3 per cent). This demonstrates the significant opportunity to expand local processing, grow WA-based recycling industries, and strengthen end-markets for recovered materials.

In a circular economy, materials that would once be disposed of are treated as valuable commodities, creating new jobs, stimulating investment, and providing a sustainable source of raw materials. Creating robust markets for recycled materials is crucial for making recycling a financially viable industry. By developing a strong market for recycled materials, we encourage businesses to innovate and create new products from recycled content when

they know there is a profitable market for them. From there they can scale-up their operations, increasing both the capacity to recycle materials and to manufacture goods from them.

The Recovered Materials Framework is WA's key mechanism for reclassifying waste into valuable resdources, unlocking new markets and driving innovation in recycling and reuse.

Investing in research and development will unlock innovative and efficient ways to recycle materials, including those that are difficult to process and recycle such as soft plastics, and address the key economic barriers to recycling. Support for advanced recycling technologies help make recycled products and materials more competitive against new, or raw materials.

Government procurement is another influential market driver and there are opportunities to create and increase market demand for recycled products and circular and sustainable products and services within the WA Government procurement system. We can also provide leadership for businesses and the community by demonstrating our commitment to sustainable procurement practices.

The State waste infrastructure plan (DWER 2024) highlights the need for investment in local recycling and consolidation infrastructure to optimise waste as a resource. Stakeholders have highlighted the need for more viable, local recycling options in WA.



Dam covers made 30 per cent recycled material, later reused in rail extension project

#### What success looks like

- Strong and stable markets for recycled products and materials are created: Through the Recovered Materials Framework, we are building strong, stable markets for recycled products working with industry to set clear standards, drive innovation, and share success stories that accelerate progress toward WA's recovery targets.
- Government procurement and use of recycled products and materials is increased: We will drive market growth for sustainable products and materials, build confidence in local markets, and demonstrate environmental and social responsibility by using our purchasing power (where feasible) to prefer and support waste avoidance, reuse, recycling and the use of recycled and recyclable products.
- Innovation and research that unlocks the value of circularity is supported: We will undertake and support research and innovation that develops effective solutions to address specific waste challenges and increases circularity.
- Infrastructure planning will incorporate circularity principles and foster the development of circular ecosystems: We will pursue opportunities to better encourage the development of circular ecosystems and outcomes within our strategic and infrastructure planning and development processes and expand our successful Container Deposit Scheme to collect even more uncontaminated recyclable materials.

### Relevant 2030 targets

- AVOID: Reduce per capita waste generation by 10 per cent
- **RECOVER**: Increase the recycling rate to 75 per cent

#### PROTECT

- > No more than 15 per cent of waste generated in Perth and Peel is sent to landfill
- > All waste is managed and/or disposed of using better practice approaches and facilities
- > A 20 per cent reduction in litter (on a 2024 baseline)

#### • AVOID - RECOVER - PROTECT:

- > Reduce disposal of organic waste to landfill by 50 per cent (from 2019–20 levels)
- > All waste is managed and/or disposed of using better practice approaches and facilities



Rail ballast reused as drainage in road construction

### Priority 2 actions: How we will realise the economic potential of recycling and the circular economy

Outcome	Action	Lead agency	Timing
2.1 Work with industry	2.1.1 Develop and implement the Recovered Materials Framework  Further develop the Recovered Materials Framework: amend the <i>Environmental Protection Act 1986</i> to include a mechanism to reclassify specific wastes as recovered material, as well as regulations and material declarations to formally acknowledge recovered materials.	DWER	Medium term
and government to create markets for recycled products and materials	2.1.2 Transition the Roads to Reuse program into the Recovered Materials Framework Review the specifications, application and model of the existing Roads to Reuse program and transition it to operate under the Recovered Materials Framework.	DWER	Medium term
	2.1.3 Investigate options for use of recycled plastics in transport and ancillary infrastructure  Trial recycled plastic in noise walls and other products in road and rail projects to determine product effectiveness, maintenance requirements and asset life.	Transport portfolio	Ongoing
2.2 Use government purchasing power to develop and create market stability, build economic resilience and drive innovation	2.2.1 Support waste avoidance, reuse, recycling and use of recycled/recyclable products, where feasible, in new or redeveloped Common Use Agreements (CUAs) and other procurement tools and mechanisms  Where feasible, incorporate initiatives into new or redeveloped CUAs that support waste avoidance, reuse, recycling and use of recycled/recyclable products including FOGO-derived products, and explore opportunities available under other procurement tools and mechanisms.	DTF	Ongoing
	2.2.2 Support State Government agencies to use the Recycling and Waste Redirection CUA Support State Government agencies to access services through this CUA to achieve outcomes consistent with the waste strategy.	DTF	Ongoing
2.3 Support innovation and research that unlocks the value of circularity	2.3.1 Pursue opportunities to support circular economy research under the state's science plan Support circular economy research under Western Australia's 10-year science and technology plan 2025–2035 (JTSI 2024).	DEED	Short term
	2.3.2 Facilitate and support innovation to improve waste outcomes through Department of Energy and Economic Diversification programs  Collaborate with government, industry, research institutions, and academia to foster innovation and develop creative solutions to address specific waste challenges.	DEED	Short term

Outcome	Action	Lead agency	Timing
2.4 Ensure that infrastructure planning and development fosters circularity, industrial symbiosis and the development of circular ecosystems	2.4.1 Incorporate waste management considerations into strategic planning instruments Investigate the possible incorporation of waste management considerations into strategic planning instruments, including investigating opportunities for the consolidation and regionalisation of landfills and recycling infrastructure.	DPLH	Short term
	2.4.2 Expand and continue to provide oversight and system governance support for the Container Deposit Scheme (CDS)  Develop the necessary regulatory mechanisms and package of work with industry and the scheme coordinator to expand the scope of the CDS to include wine and spirit bottles and oversee and provide ongoing governance support for the CDS.	DWER	Short term/ Ongoing
	2.4.3 Review, update and build on the findings of the State waste infrastructure plan  Review, update and build on the findings of the State waste infrastructure plan (DWER 2024) to guide decision-making for the planning and development of waste infrastructure and pursue options to improve strategic planning for liquid waste infrastructure.	DWER	Long term
	2.4.4 Investigate the barriers and opportunities for developing waste precincts and industrial symbiosis  Undertake research and prepare a report to identify the barriers and opportunities to develop waste precincts which facilitate recycling and support industrial symbiosis.	DWER	Long term
	2.4.5 Design, deliver and support infrastructure grants programs for high-impact materials (including batteries, solar panels, organics)  Use the existing WasteSorted grants program to target high-impact materials and support the implementation of Commonwealth grant programs.	DWER	Ongoing





**Our aim:** Increase the recycling of organic material and support the development of quality recycled organics products and end markets.

Organic waste (food organics, garden organics, wood and timber) makes up about 18 per cent of the waste generated in WA and 50 per cent of waste in the general waste bin (in a two-bin system). When organics end up in the general waste stream (red-lidded bin), they are sent to landfill where they decompose and release methane (contributing to the state's greenhouse gas emissions).

The rollout of FOGO services to 63 per cent of Perth and Peel local governments (21 of 33) marks strong progress; however, this result falls short of the WARR 2030 strategy (Waste Authority 2019) target for full coverage in Perth and Peel by 2025. Whilst the FOGO kerbside collection system is well established in Perth and Peel, challenges exist within the broader recycled organics system. Continued support is needed to move towards a system that effectively manages contamination and produces consistent, high-quality recycled products, unlocks new markets, increases infrastructure capacity, and ensures a strong, local recycling industry. Growing the recycled organics industry in WA supports the State Government's ambitions to innovate, diversify and foster a circular economy and local jobs. It also diverts valuable materials from landfill, reduces greenhouse gas emissions, and regenerates soils.

Beyond WAste 2030 builds on the previous WARR 2030 strategy (Waste Authority 2019) FOGO target by recommitting all local governments in the Perth and Peel regions to implement better practice FOGO collection systems. This target acknowledges the significant effort of the local governments that have already implemented FOGO. To support his target, we will work with stakeholders to investigate the measures required to facilitate FOGO system readiness and improve the quality and reliability of feedstock supply required to support the growth of, and investment in, the FOGO industry. This could include a potential future FOGO mandate for the local governments in the Perth and Peel regions.

Our focus on organic waste is also driven by state and national policy:

The Western Australian Climate Policy (DWER 2020b) and its aspiration of net zero emissions by 2050 has increased our focus on the impacts of putrescible waste on climate. In 2020, solid waste management contributed 2 per cent of the state's greenhouse gas emissions. Of this, putrescible waste disposal to landfill contributed to about 86 per cent of waste emissions (DCCEEW 2023).

- The Sectoral Emissions Reduction Strategy for Western Australia (DWER 2023) highlights that circular economy principles are central to meeting net zero by 2050 and supports emissions reduction opportunities within this strategy. The avoidance and recycling of organic waste can contribute to reducing these greenhouse gas emissions.
- The National Food Waste Strategy (Australian Government 2017) has a target to halve food waste by 2030, while the National Waste Policy Action Plan (Australian Government 2024) has a target to halve organic waste to landfill by 2030.



Better practice three-bin kerbside collection system, including FOGO bin

#### Emerging contaminants

The presence of emerging and long-lasting contaminants like per- and polyfluoroalkyl substances (PFAS) in waste streams can complicate recycling processes, contaminate landfill sites, and pose risks to human health and ecosystems as these products do not break down naturally. They are commonly found in firefighting foams, non-stick coatings, water and stain-resistant products, and paper coatings, including some types of food packaging.

The State Government is taking action to prevent contaminants like PFAS entering the waste stream by:

- participating in the Intergovernmental Agreement on a National Framework for Responding to PFAS Contamination
- supporting work on national packaging design standards to prevent harmful chemicals like PFAS being added to food and product packaging
- providing input into the *PFAS National environment* management plan
- adopting the Industrial Chemicals Environmental Management Standard (IChEMS) to reduce the impacts of industrial chemicals, including PFAS, on people and the environment.



#### What success looks like

- The quality of FOGO-derived recycled organics is improved: We will work with local governments and processors to support the production of high-quality FOGO-derived products by addressing contamination and developing product specifications and quality assurance.
- End markets for recycled organic products are supported: We will support the growth and development of sustainable end markets for recycled organic products through research, promotion and funding.
- Industry certainty and growth is facilitated: We will work with the organics sector to ensure adequate FOGO processing capacity, develop guidance and an assurance regime that facilitates stability and growth.
- Recycling of organic waste from municipal sources is increased: We will work with local governments to implement FOGO across Perth and Peel, addressing some of the current challenges associated with implementation.

### Relevant 2030 targets

• AVOID: Reduce per capita waste generation by 10 per cent

#### RECOVER:

- > Recover energy only from residual waste
- > Increase the recycling rate to 75 per cent
- > Initiate mandatory provision of a separate FOGO kerbside collection service by all local governments in the Perth and Peel regions

#### PROTECT.

- > No more than 15 per cent of waste generated in Perth and Peel is sent to landfill
- > All waste is managed and/or disposed of using better practice approaches and facilities
- AVOID RECOVER PROTECT: Reduce disposal of organic waste to landfill by 50 per cent (from 2019–20 levels)

### Priority 3 actions: How we will foster a resilient recycled organics sector

Outcome	Action	Lead agency	Timing
	3.1.1 Undertake research and review the materials accepted in kerbside FOGO to help prevent compost contamination.  Work with industry and local governments to review materials currently accepted in kerbside FOGO bins and support local governments to educate households if changes are made.	DWER	Short term
	3.1.2 Support local governments with better-practice kerbside contamination management for two-or three-bin kerbside services.  Work with local governments to create better-practice kerbside contamination management guidance and support the development and implementation of local government contamination management plans.	DWER	Medium term
3.1 Support local governments and processors to	3.1.3 Develop 'fit-for-purpose' specifications and guidelines for use of recycled organic products and quality assurance.  Support research and develop fit-for-purpose product specifications and guidelines for uses of recycled organics products and consider the role of the Recovered Materials Framework in quality assurance.	DWER	Medium term
processors to produce high-quality FOGO-derived recycled organics	3.1.4 Identify and develop a holistic approach to waste management processes in locations and facilities identified as 'hotspots' for contamination.  Work with stakeholders to identify locations with continuously high kerbside-bin contamination and test behaviour change and other policy interventions.	DWER	Long term
	3.1.5 Investigate barriers and safe pathways for certified compostable food packaging in organics recycling.  Investigate end-of-life pathways for certified compostable food packaging, including consideration of supporting actions such mandatory labelling of certified products and independent compliance testing.	DWER	Long term
	3.1.6 Support local governments to audit and analyse contamination and potential material recycling opportunities in kerbside bins, with a focus on FOGO.  Work with local governments to support the collection of consistent data through kerbside waste audits and use the data to inform behaviour change initiatives, policies and programs.	DWER	Ongoing



Outcome	Action	Lead agency	Timing
	3.2.1 Promote the use of recycled organic products via awareness campaigns and supporting trade events  Facilitate increased awareness of the applications for and the benefits of using recycled organic products, connecting producers with end users.	DWER	Medium term
3.2 Provide grants support and research to develop sustainable end markets for	3.2.2 Provide targeted funding to support market development for recycled organics, including FOGO-derived products.  Design and implement a targeted grants program to support the production of quality FOGO-derived products, expand existing and develop new markets for recycled organic products including potentially providing incentives for uptake, research and development, trials and evaluation.	DWER	Ongoing
recycled organic products	<b>3.2.3 Relaunch FOGO campaign to support the adoption of the agreed FOGO list of inputs.</b> Implement a public awareness campaign and produce supporting resources, as part of the WasteSorted toolkit, to support better waste sorting and the increased uptake of FOGO.	DWER	Short term
	3.2.4 Implement the Western Australian Bioeconomy Strategy, including the Western Australian Advanced Biofuel Strategy.  Draft, consult and implement the Western Australian Advanced Biofuel Strategy and engage with DWER on opportunities to incorporate organic waste within the plan.	DPIRD	Ongoing
3.3 Facilitate industry certainty and growth through system	3.3.1 Develop guidance on emerging contaminants in recycled organics to support better-practice organics recycling.  Develop guidance on contaminants in recycled organics as evidence and research emerges, starting with per and polyfluoroalkyl substances (PFAS).	DWER	Medium term
assurance and regulation	3.3.2 Continue to implement the Better practice organics recycling guideline.  Provide industry certainty and foster sector growth through clear regulatory frameworks and system assurance that is adequately resourced.	DWER	Ongoing
3.4 Work with local governments and industry to increase the recycling of organics from municipal sources	3.4.1 Investigate measures required to support all local governments in the Perth and Peel regions to implement better practice FOGO collection systems.  Work with stakeholders to investigate the measures required to support the uptake of better practice FOGO systems across the local governments in the Perth and Peel regions. This could include a potential future FOGO mandate for the local governments in the Perth and Peel regions.	DWER	Long term
	3.4.2 Implement an infrastructure grant program focused on supporting investment in processing and recycling organic waste.  The program will support the construction or purchase of infrastructure and equipment, to decontaminate and recycle organic waste for use in the circular economy.	DWER	Ongoing

# Priority 4: Support the circular management of clean energy technologies and electronics



**Our aim:** Develop end-of-life solutions for the management and recycling of clean energy technologies and increase the recycling of and value from electronic waste.

With WA's commitment to net zero emissions by 2025 and as the state accelerates its renewable energy transition, we are seeing rapid growth in home and grid-scale solar photovoltaic (PV) systems, battery energy storage systems and wind turbines. We are also seeing the replacement of older PV systems with new and more efficient models. This transition is essential for decarbonisation, but it also brings a new generation of complex waste streams that require proactive management. Technology and infrastructure to ensure the valuable materials from these waste streams can be recovered and recycled will be needed. At present there are several challenges associated with the end-of-life management of clean energy technologies. including:

- Some panels contain toxic materials which require specialised handling to prevent environmental release and harm.
- While steel and other metals from wind turbine towers can be recycled, the turbine blades are generally made of composite materials, which are challenging to recycle. In addition, the size and weight of turbine components (including the blades and towers) make decommissioning and transport to a recycling or disposal facility logistically complex and costly.

The industry for recycling solar panels is still developing, and large-scale facilities are required to handle the massive volume of panels expected to reach the end of their lifespan in the coming years. Similarly, while recycling technologies currently exist to recycle wind technologies, they are not yet at the scale required to handle the volume of blades that need to be retired across the country.

E-waste – which includes batteries, computers, mobile phones and other electronic equipment used across households, businesses and industry – has become one of the fastest growing waste streams. The complexity of this waste stream makes it difficult to manage due to challenges such as:

- Many electronic devices contain toxic substances like lead, mercury, cadmium, and beryllium. If not properly managed, these can leach into the soil and groundwater, causing long-term environmental contamination and posing severe health risks to humans.
- Electronics are made of a mix of materials, such as metals, plastics, glass, and valuable rare earth elements, which are often integrated in complex ways. This makes manual and

- mechanical separation for recycling a difficult and costly process.
- The limited scope and relatively low levels of consumer use of national product stewardship schemes (e.g. B-cycle for removable batteries; Mobile Muster for mobile phones; National Television and Computer Recycling Scheme for laptops and tablets) leaves gaps in collection and recycling of these materials.

In addition, lithium-ion batteries are severely impacting the waste sector because of the risk of fire when the batteries are damaged. The Australian Council of Recycling estimates that lithium-ion batteries cause about 10,000 to 12,000 fires and heat events around Australia, including about 1,000 per year in WA. Addressing this challenge is a high priority for governments and industry, recognising that this will require multiple complementary actions across the system.

The Clean Energy Council projects that the value of materials recovered from end-of-life solar panels alone in Australia will surpass \$1 billion by 2033. Developing end-of-life management and recycling industries for technologies such as solar panels, wind turbine blades and batteries

and e-waste could turn this looming waste crisis into economic opportunities aligned with *Made in WA* and *Diversify WA*. Support for new industries to recover, reuse and recycle solar panels and wind turbines and blades is needed, as well as solutions to ensure the valuable materials from these technologies are recovered and recycled, including the logistics for collection, sorting and transportation. Reusing still-functional solar panels provides another key economic and environmental opportunity with secondary markets for panels potentially providing affordable energy solutions for off-grid applications such as caravans, tiny homes, and rural properties.

Similarly, in relation to e-waste, more needs to be done to prepare for the increased volumes as the various classes of waste – particularly batteries – begin to reach their end of life and are disposed of. This includes developing opportunities and systems for safe collection, reuse, recovery and recycling infrastructure, and educating consumers about safe disposal pathways for all types of e-waste and batteries. This presents WA with the opportunity to foster innovation in new technologies and approaches, and establish new industries and jobs (including in regional areas) while supporting the development of a circular economy.



#### What success looks like

- The risk from end-of-life batteries is reduced: We will continue to advocate for nationally harmonised solutions and national leadership while engaging with industry and the community to identify and progress meaningful efforts to reduce the instances and impacts of battery fires.
- Options to recover and recycle resources from clean energy technologies are identified: We will work with industry to identify end-of-life options for solar panels and wind energy technologies.
- Recycling of e-waste and batteries is increased: We will work with waste service
  providers and local governments to plan for and develop a collection network and
  product stewardship arrangements for batteries that will facilitate increased battery
  recycling.
- The value from end-of-life e-waste is recovered and risks are reduced: We will continue to implement the e-waste to landfill ban to mitigate the environmental and fire risks posed by e-waste in landfill and support the development of markets for the recycling and recovery of valuable materials from e-waste.

### Relevant 2030 targets

- AVOID: Reduce per capita waste generation by 10 per cent
- RECOVER:
- > Increase the recycling rate to 75 per cent
- PROTECT.
- > No more than 15 per cent of waste generated in Perth and Peel is sent to landfill
- > All waste is managed and/or disposed of using better practice approaches and facilities

### Priority 4 actions: How we will support the circular management of clean energy technologies and electronics

Outcome	Action	Lead agency	Timing
4.1 Work with industry to recover and recycle	4.1.1 Identify recycling opportunities as a complementary action to the Wind Turbine Manufacturing Initiative  Identify opportunities to enhance the capacity and capability of WA businesses to participate in wind energy decommissioning and recycling, as part of wind energy supply chains.	DEED	Short term
resources from clean energy technologies	<b>4.1.2 Investigate options for end-of-life solar panels</b> Establish a project to investigate recovery, reuse and recycling options for end-of-life solar panels to inform a possible future national product stewardship scheme.	DWER	Medium term
4.2 Collaborate with governments and industry to increase recycling and safe and effective collection of e-waste and batteries*	<b>4.2.1 Facilitate the development of a collection network for embedded batteries</b> Work with waste service providers and local governments to provide accessible consumer collection options for devices with embedded batteries such as vapes and e-scooters.	DWER	Short term
	<b>4.2.2 Forward planning for battery recycling infrastructure</b> Forecast WA's end-of-life battery volumes and use the results to target policies which enable local battery recycling capacity to meet emerging critical needs for key battery types.	DWER	Medium term
	<b>4.2.3 Develop Western Australian product stewardship arrangements for batteries</b> Develop and implement product stewardship arrangements for battery collection and recycling (in the absence of a national scheme).	DWER	Medium term
4.3 Support the recovery of value and mitigate the risks from e-waste	4.3.1 Continue to implement the e-waste to landfill ban  Continue the existing e-waste to landfill ban that prohibits the disposal of regulated e-waste to landfill.	DWER	Ongoing

<sup>\*</sup> Including PV, lithium-ion batteries, small, embedded batteries, and batteries from houses, e-scooters, cars and mobility scooters.



### Priority 5: Improve outcomes for regional and Aboriginal communities



**Our aim:** Develop and deliver fit-for-purpose waste infrastructure and services to meet community needs.

Of WA's 139 local government areas, 106 are located outside of the Perth and Peel regions. In these regional areas, excluding Aboriginal communities, local governments are responsible for delivering solid waste management services and associated infrastructure. In addition, regional community groups, schools and volunteer organisations play a valuable role by acting as key connectors, supporting engagement and helping to communicate consistent waste messaging across the state.

About 15,000 people, or around 12 per cent of WA's Aboriginal population, live in 239 permanently occupied and 68 seasonal remote Aboriginal communities and Aboriginal town-based reserves, primarily in the Kimberley and Pilbara regions. Government-funded waste management services in Aboriginal communities are primarily delivered by Aboriginal Community Controlled Organisations (ACCOs). These services support 138 communities across 20 local government areas with services such as waste collection, road and airstrip maintenance, fire breaks and landfill management.

However, service delivery remains uneven. Many communities lack coordinated support, and unclear responsibilities continue to create service gaps and funding challenges, thus hindering consistent and effective waste management outcomes.

WA's vast and diverse geography, dispersed population, and poor road conditions present significant waste management challenges. These include:

- high cost and logistical challenges in collecting and transporting waste and recoverable materials to waste-compliant landfills or recycling facilities
- smaller and informal landfills, common in Aboriginal communities, are often not constructed to modern standards, increasing the risk of groundwater and soil contamination and posing threats to human health and the environment
- limited infrastructure for sorting, processing or recycling materials, combined with absent local markets for recycled products, makes it logistically difficult and uneconomic to turn waste into a resource

- illegal dumping is widespread, with contaminated sites containing hazardous materials such as asbestos, batteries and chemicals from disposal of cars, white goods and tyres – these pose significant health risks to communities and pollute the environment
- regional communities face resource constraints and staffing challenges, limiting their ability to improve waste management systems.

We recognise that a 'one size fits all' approach for regional WA is impractical. Regional and Aboriginal communities need appropriate waste infrastructure and culturally appropriate, economically viable and tailored services to improve waste management and recycling along with environmental and health outcomes. Strengthening partnerships between communities, local governments, Aboriginal corporations and State Government agencies is essential for improving waste management outcomes. In addition, collaboration with industry and investment in innovative technologies can help build resilient regional economies, create local jobs, incentivise recycling, and reduce the reliance on raw materials by closing the loop where possible. This priority recognises the State Government's role in providing the necessary foundations to contribute to the structural, economic and social changes required for improved life outcomes for Aboriginal people in WA.





This priority and related actions align with other important State Government commitments, such as:

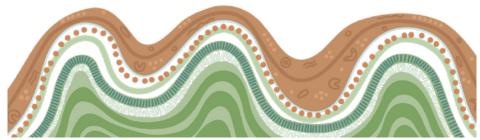
- The National Agreement on Closing the Gap aims to enable Aboriginal and Torres Strait Islander people and governments to work together to overcome the inequality experienced by Aboriginal and Torres Strait Islander people, and achieve life outcomes equal to all Australians.
- Closing the Gap target 9b aims to ensure all Aboriginal households receive essential services, that meet or exceed the relevant jurisdictional standard, including for solid waste management, by 20311.
- The Aboriginal Empowerment Strategy recognises that the foundations of Aboriginal people's empowerment have been eroded by past policies and must be restored to achieve better outcomes. It provides a high-level framework for future state government policies, plans, initiatives and programs that contribute to better outcomes for Aboriginal people, built around genuine partnerships and engagement with Aboriginal stakeholders, strong accountability, and culturally responsive ways of working.
- The State Infrastructure Strategy outlines a framework for upgrading essential infrastructure in regional and remote communities.
- 1 Closing the Gap was established in response to longstanding inequalities faced by First Australians. Since 2008, governments have worked together to improve living standards, health, education and employment outcomes, aiming to eliminate disparities between Indigenous and non-Indigenous Australians. Target 9b aims to ensure all Aboriginal households have access to essential services, including solid waste management, by 2031.

#### What success looks like

- Community-led solutions for managing waste are developed: We will establish strong collaborations to enable the co-design of policy and programs that are community-owned to improve waste management in Aboriginal communities, enhance community health and protect Country.
- Waste management initiatives demonstrate economic and environmental benefits for regional
   WA: We will work with local partners to develop and implement initiatives that deliver tangible economic
   and environmental benefits, thereby creating a more sustainable and prosperous future for regional
   communities and the state.
- Increased recycling and markets for recycled products are developed in regional WA: We will
  collaborate with industry and local governments to increase recycling rates and create sustainable, local
  markets for recycled products across regional Western Australia. This will transform waste from a liability
  into a valuable resource, fostering a more resilient, circular economy and delivering clear environmental
  benefits.

### Relevant 2030 targets

- AVOID: Reduce per capita waste generation by 10 per cent
- RECOVER:
- > Increase the recycling rate to 75 per cent
- PROTECT
- > All waste is managed and/or disposed of using better practice approaches and facilities
- > A 20 per cent reduction in litter (on a 2024 baseline)
- > Work towards eliminating illegal dumping



### Priority 5 actions: How we will improve outcomes for regional and Aboriginal communities



Action	Lead agency	Timing
5.1.1 Develop culturally-appropriate waste and litter education and behaviour change resources for community and school to encourage improved litter prevention and waste sorting in Aboriginal communities  Work with stakeholders to develop and trial culturally-appropriate waste and littering communications and behaviour change resources for local governments, as well as for WasteSorted Schools and CleanSchools in regional and Aboriginal communities.	DWER	Short term
5.1.2 Help local government to build and share capacity and resources using an alliance model Implement an alliance model to deliver additional capacity to local government including to support waste sorting, action on repairs, litter and illegal dumping.	DWER	Medium term
5.1.3 Collect data on existing waste management infrastructure, systems and services related to communities identified under Closing the Gap target 9b <sup>2</sup> Collaborate with government agencies and communities identified under Closing the Gap to collect data and undertake baseline assessments of existing waste management infrastructure, systems and services, to determine what is needed to meet Closing the Gap targets.	DWER	Medium term
5.1.4 Work with a regional or remote community, together with the relevant local government, to co-design, develop and implement a culturally informed initiative that identifies local waste management priorities and needs, with a focus on improving related health and wellbeing outcomes. Work closely with the community to collect waste data and assess existing service delivery models. Use these insights to co-develop culturally appropriate and responsive policies and programs, including behaviour change initiatives that support effective waste management. Prioritise higher-order waste recovery options and investigate approaches to identify what works best in the context.	DWER	Long term
5.2.1 Review Container Deposit Scheme (CDS) services, participation and engagement in the Kimberley region to help address challenges faced in remote and regional communities  Review CDS services, participation and engagement in the Kimberley to help address challenges particular to the region.	WARRRL	Short term
5.2.2 Include waste management clauses in Housing Authority contracts to ensure that contractors are accountable and comply with waste disposal requirements in the regions  Develop and enforce contract clauses and guidance for Department of Housing and Works contractors providing services in regional communities to ensure any waste generated is either recycled or disposed of in line with their legal obligations.	Department of Housing and Works	Ongoing
	5.1.1 Develop culturally-appropriate waste and litter education and behaviour change resources for community and school to encourage improved litter prevention and waste sorting in Aboriginal communities  Work with stakeholders to develop and trial culturally-appropriate waste and littering communications and behaviour change resources for local governments, as well as for WasteSorted Schools and CleanSchools in regional and Aboriginal communities.  5.1.2 Help local government to build and share capacity and resources using an alliance model Implement an alliance model to deliver additional capacity to local government including to support waste sorting, action on repairs, litter and illegal dumping.  5.1.3 Collect data on existing waste management infrastructure, systems and services related to communities identified under Closing the Gap target 9b²  Collaborate with government agencies and communities identified under Closing the Gap to collect data and undertake baseline assessments of existing waste management infrastructure, systems and services, to determine what is needed to meet Closing the Gap targets.  5.1.4 Work with a regional or remote community, together with the relevant local government, to co-design, develop and implement a culturally informed initiative that identifies local waste management priorities and needs, with a focus on improving related health and wellbeing outcomes  Work closely with the community to collect waste data and assess existing service delivery models. Use these insights to co-develop culturally appropriate and responsive policies and programs, including behaviour change initiatives that support effective waste management. Prioritise higher-order waste recovery options and investigate approaches to identify what works best in the context.  5.2.1 Review Container Deposit Scheme (CDS) services, participation and engagement in the Kimberley to help address challenges particular to the region.  5.2.2 Include waste management clauses in Housing Authority contracts to ensure t	5.1.1 Develop culturally-appropriate waste and litter education and behaviour change resources for community and school to encourage improved litter prevention and waste sorting in Aboriginal communities.  Work with stakeholders to develop and trial culturally-appropriate waste and littering communications and behaviour change resources for local governments, as well as for WasteSorted Schools and CleanSchools in regional and Aboriginal communities.  5.1.2 Help local government to build and share capacity and resources using an alliance model Implement an alliance model to deliver additional capacity to local government including to support waste sorting, action on repairs, litter and illegal dumping.  5.1.3 Collect data on existing waste management infrastructure, systems and services related to communities identified under Closing the Gap target 9b²  Collaborate with government agencies and communities identified under Closing the Gap to collect data and undertake baseline assessments of existing waste management infrastructure, systems and services, to determine what is needed to meet Closing the Gap targets.  5.1.4 Work with a regional or remote community, together with the relevant local government, to co-design, develop and implement a culturally informed initiative that identifies local waste management priorities and needs, with a focus on improving related health and wellbeing outcomes.  Work closely with the community to collect waste data and assess existing service delivery models. Use these insights to co-develop culturally appropriate and responsive policies and programs, including behaviour change initiatives that support effective waste management. Priorities higher-order waste recovery options and investigate approaches to identify what works best in the context.  5.2.1 Review Container Deposit Scheme (CDS) services, participation and engagement in the Kimberley region to help address challenges faced in remote and regional communities  Evelop and enforce contract clauses and guidance for Depar

<sup>2</sup> Closing the Gap was established in response to longstanding inequalities faced by First Australians. Since 2008, governments have worked together to improve living standards, health, education and employment outcomes, aiming to eliminate disparities between Indigenous and non-Indigenous Australians. Target 9b aims to ensure all Aboriginal households have access to essential services, including solid waste management, by 2031.



Outcome	Action	Lead agency	Timing
5.3 Work with local partners to increase recycling of and develop markets for recycled products in regional WA	5.3.1 Improve understanding of the barriers to a circular economy for recovered resources in regional WA  Investigate, manage, and provide financial assistance for research into understanding the barriers to applying circular economy approaches to waste and recovered resources in the mining sector, supporting better outcomes for stakeholders including miners, local and state government, and regional and Aboriginal communities.	Minerals Research Institute of Western Australia	Short term
	<b>5.3.2 Support, where possible, the use of recycled content in regional road and civil works</b> Continue to investigate ways to increase regional recycling of C&D waste through the use of recycled C&D products in road building, transport infrastructure and other civil infrastructure projects.	Transport portfolio	Medium term
	<b>5.3.3</b> Establish targets for the use of recycled products in local road projects, including in the regions Establish systems and processes to monitor, report and advance the use of recycled materials focusing on (but not being limited to) works funded under the Local Governments Agreement and identify options for increasing the use of recycled materials through the agreement.	Main Roads Western Australia	Ongoing

The State waste infrastructure plan (DWER 2024) identifies that:

- Higher recovery rates are needed in every region of WA to meet waste strategy targets.
   We need to further investigate region-specific gaps, challenges and opportunities to improve recycling infrastructure and services.
- Many regions could benefit from an increased ability to locally recover C&D materials and organic waste from both MSW and C&I sources. Developing local capacity to recover these materials, and local markets for recycled products, can increase regional recovery rates without the cost and emissions associated with transporting waste over long distances to recovery infrastructure in Perth.



### Our foundations

As previously discussed, there are six levers or foundations with which the State Government influences waste and recycling in WA. These are:

- 1. Legislation, assurance and administration
- 2. Waste data collection, analysis and publication
- 3. Behaviour change and consistent communications
- 4. Intra and interjurisdictional collaboration
- 5. Leadership, policy and programs
- 6. Infrastructure planning and support

These foundations describe the type of actions developed to support delivery of the waste strategy. The actions under the first four foundations generally cut across and contribute towards multiple priorities in the waste strategy and are set out in the table below. Actions under the fifth and sixth foundations, tend to be more specific to a particular priority and have therefore been included under the priority to which they relate – for example, an action related to supporting the development of recycled organics infrastructure is included under Priority 3: Foster a resilient recycled organics sector.

As with the other actions in the waste strategy, the actions that follow are intended to inform or respond to emerging waste issues, overcome challenges, and seize opportunities related to sustainable waste and resource management, while also fostering the development of a circular economy for future generations.



Tyrecycle East Rockingham facility

### Foundational actions

All of these actions will be implemented or led by DWER.

Outcome	Action	Timing
F.1 Legislation, assurance and administration	<b>F.1.1 Review the effectiveness of the waste levy and consult on any proposed changes</b> Analyse and consult on the effectiveness of the waste levy, the impacts of any potential changes on households and businesses, and risk of increased levy evasion.	Ongoing
	F.1.2 Develop a model waste local law under the Local Government Act 1995  As part of reforming the Local Government Act and regulations, develop a model waste local law, which is informed by the revised template waste local law developed by DWER, to ensure consistency and best practice across local governments.	Short term
	F.1.3 Undertake legislative review and reform as required  Continue to review and implement approved changes to the regulatory framework for waste to ensure it is appropriate, reduces the environmental impacts and risks from waste management, and facilitates adequate processing facilities to process collected materials. Implement the Recovered Materials Framework as the primary mechanism to reclassify waste as a resource, clarifying existing legislative ambiguity.	Ongoing
	F.1.4 Undertake compliance and enforcement  Continue to implement compliance and enforcement mechanisms to reduce levy evasion, prevent waste stockpiling and protect the environment from the impacts of illegal dumping.	Ongoing
	F.1.5 Continue to support the implementation of the Household Hazardous Waste (HHW) program  Fund the Western Australian Local Government Association (WALGA) to manage the HHW program to collect and dispose of, or recycle HHW from local government HHW drop-off facilities.	Ongoing
	F.1.6 Develop an Illegal Dumping Strategy for WA  Work with key stakeholders to develop an Illegal Dumping Strategy to identify actions to address illegal dumping, including the clean-up of illegal dumping sites, and to develop and implement tools and resources to track and address illegal dumping.	Ongoing
	F.1.7 Use artificial intelligence (AI) technology to implement targeted action related to illegal dumping of tyres  Use AI technology to identify illegal dumping of tyres and initiate intelligence-led investigations.	Ongoing
	F.1.8 Develop and implement better-practice guidelines for waste facilities and services  Develop and implement better-practice guidance for waste facilities and services and review existing guidance to ensure it is fit-for-purpose: increasing recycling and recovery and reducing contamination.	Ongoing
	<b>F.1.9 Administration of grants and programs</b> Undertake the required administration of grants and programs including best-practice systems, review, auditing and management of software.	Ongoing

Outcome	Action	Timing
	F.2.1 Conduct regular C&I waste landfill audits to improve data	Medium
	Conduct surveys/audits to improve C&I-related waste data to support the development of policy and programs.	term
	F.2.2 Administer waste and recycling reporting under the Waste Avoidance and Resource Recovery Regulations 2008 and the Waste Avoidance and Resource Recovery (e-waste) Regulations 2024	Ongoing
	Administration of data reporting includes data collection, analysis, reporting processes, data integrity, improvement of Waste Data Online, data publication and compliance.	
F.2 Waste data	F.2.3 Administration of the waste levy under the Waste Avoidance and Resource Recovery Levy Act 2007 (Levy Act)	
collection, analysis and publication	Administration of the waste levy includes levy collection, analysis of levy returns, assessment of applications for exemption and review of financial assurances.	Ongoing
	F.2.4 Implement and administer local government waste plans and waste plan annual reporting under the Waste Avoidance and Resource Recovery Act 2007	Ongoing
	Facilitate the development of waste plans, the development of guidance and support for local governments, online reporting and the review and validation of annual waste plan reports.	
	F.2.5 Annual public reporting on State Government waste avoidance and resource recovery actions	Ongoing
	Report on State Government agency implementation of actions and other actions aligned with the waste strategy.	Ongoing
	F.3.1 Develop and deliver Keep Australia Beautiful litter implementation plan 2025–2030  Develop and implement policy and programs to achieve the litter target and other objectives.	Short term
	F.3.2 WasteSorted Bin-Tagging program	Ongoing
	Support existing bin-tagging program, encouraging behaviour change through inspection and tagging of residential kerbside bins.	
	F.3.3 WasteSorted Grants – community education	Ongoing
EQ Dahayiaya ahanga	Implement a grants program to support community waste education projects.	
F.3 Behaviour change and consistent	F.3.4 WasteSorted Schools	Ongoing
communications	Continue to deliver the WasteSorted Schools program throughout the state.	Ongoing
	F.3.5 WasteSorted Awards	
	Continue the annual awards ceremony to celebrate innovation and waste management achievements among waste industry enterprises, local governments and the community.	Ongoing
	F.3.6 Maintain and expand statewide WasteSorted behaviour change interventions, tools and programs	
	Continue to deliver, and expand, evidence-based behaviour change interventions, tools, resources and education campaigns to support local government household-waste-sorting education.	Ongoing

Outcome	Action	Timing
F.4 Intra and	<b>F.4.1 Participate in national, state and local forums on waste and recycling and related matters</b> Collaborate on and implement policies and projects in partnership with other jurisdictions and the Australian Government, in areas such as textiles, plastics, packaging and kerbside harmonisation.	Ongoing
interjurisdictional collaboration	F.4.2 Progress the State Emergency Management Committee (SEMC) emergency waste management project to develop state-level arrangements for emergency waste management  The SEMC's Community Resilience and Recovery Subcommittee will coordinate the review and development of state-level arrangements to manage complex emergency waste management events.	Ongoing



### Governance

The WARR Act is the primary legislation for waste management in WA. The Act establishes the Waste Authority as an independent statutory authority and sets out its roles and responsibilities. One of the Waste Authority's primary functions is to draft the state's long-term waste strategy and update it every five years. The Act also provides the Waste Authority with the power to require reporting on compliance with the waste strategy.

The Minister for the Environment has the responsibility to approve the waste strategy drafted by the Waste Authority.

The Department of Water and Environmental Regulation supports the Waste Authority to achieve the waste strategy's goals, priorities and targets by working to:

- regulate the industry, and develop and implement waste policy, guidance and programs
- manage economic instruments like the state's waste levy
- collaborate with stakeholders such as other state and local government agencies, other Australian jurisdictions and waste sector enterprises – to influence community and business attitudes and to support innovation
- review the WARR Act
- update data collection and reporting systems.

# Reporting

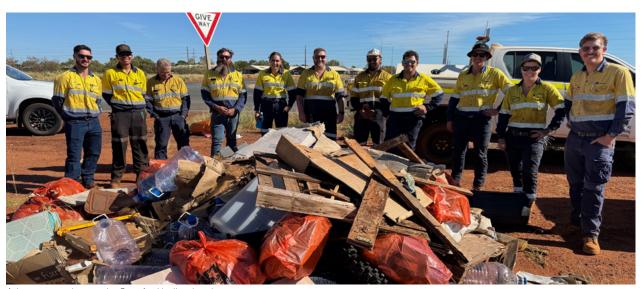
The Waste Authority will continuously monitor progress on the actions in this strategy and share the results in its annual report. Furthermore, it will share progress towards achieving the strategy's targets in the annual *Waste and recycling in WA* report.

State Government agencies must report on how they are implementing their actions toward the strategy each year. Annual reporting enables the monitoring of progress, while also revealing achievements and opportunities for further policy and program development.

All the relevant reports will be made available on the Waste Authority website: <a href="https://www.wasteauthority.wa.gov.au">www.wasteauthority.wa.gov.au</a>.

### Review

The Waste Authority will undertake a formal five-yearly review of the waste strategy, according to the WARR Act's requirements. We will provide a progress update at the mid-point of the strategy to assess achievements, highlight areas for adjustment, and confirm the actions remain on track to achieve the 2030 goals, targets and priorities. As part of our annual business planning process, we will update the priorities and actions in the roadmap, if required, to ensure they align with the government's priorities, changing circumstances and resourcing.



Adopt-a-spot clean up by Care for Hedland and corporate partners

# Abbreviations

Abbreviation	Agency title
DEED	Department of Energy and Economic Diversification
DPIRD	Department of Primary Industries and Regional Development
DPLH	Department of Planning, Lands and Heritage
DTF	Department of Treasury and Finance
DWER	Department of Water and Environmental Regulation
Transport Portfolio	Department of Transport, Main Roads Western Australia, Public Transport Authority, METRONET, Westport, Office of Major Transport Infrastructure Delivery
WALGA	Western Australian Local Government Association
WARRL	Western Australia Return Recycle Renew Limited



# Glossary

Term	Definition
Better practice	Practices and approaches that the Waste Authority considers to be outcomes-focused, effective and high performing, based on evidence and benchmarking against comparable jurisdictions. Better-practice guidelines, measures and reporting frameworks are being developed to reflect the different capacities and challenges faced by waste generators and managers. Better practice is synonymous with the term 'best practice' but captures the dynamic nature of best practice.
Circular economy	An alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible – extracting the maximum value from them while in use, reusing where possible, then recycling products and materials. Three core principles underpin a circular economy: design out waste and pollution, keep products and materials in use, and regenerate natural systems.
Commercial and industrial (C&I) waste	Waste produced by institutions and businesses, including schools, restaurants, offices, State Government agencies and facilities, retail and wholesale businesses and industries, including manufacturing.
Construction and demolition (C&D) waste	Waste produced by demolition and building activities, including road and rail construction and maintenance, and excavation of land associated with construction activities.
Drop-off facility	A site where residents can bring their waste or recyclables for disposal.
Energy recovery	Energy recovery refers to the process of converting waste materials into some form of energy, usually as solid, liquid or gaseous fuels or as heat. Energy recovery options are also referred to as 'waste-to-energy' (or energy from waste) and can include both thermal and non-thermal technologies such as incineration, anaerobic digestion or gasification.
Food organics and garden organics (FOGO)	Mixed food and garden organic waste, which generally comes from the municipal solid waste stream. Food organics include waste food, inedible food and parts of food that are not consumed and/or are considered undesirable (such as seeds, bones, coffee grounds, skins and peels). Garden organics include organic wastes that arise from gardening and maintenance activities, such as lawn clippings, leaves, cuttings and branches. Food organics and garden organics can also include other compatible organic wastes such as paper and cardboard.
Food organics (FO)	Organic waste, generally sourced from the commercial and industrial waste stream, which includes waste food, inedible food and parts of food that are not consumed and/or are considered undesirable (such as seeds, bones, coffee grounds, skins and peels).
Garden organics (GO)	Organic waste, generally sourced from the municipal solid waste or commercial and industrial waste streams, which arises from gardening and maintenance activities, such as lawn clippings, leaves, cuttings and branches.
Greenhouse gas emissions	Greenhouse gas emissions refer to the release of gases into the earth's atmosphere that contribute to the greenhouse effect. These gases trap heat and contribute to global warming. Common greenhouse gases include carbon dioxide, methane, nitrous oxide and fluorinated gases.

Term	Definition
Household hazardous waste	Products used in and around the home that have at least one hazardous characteristic (flammable, toxic, explosive or corrosive).
Hazardous waste	Waste that, by its characteristics, poses a threat or risk to public health, safety or the environment.
Illegal dumping	Premeditated littering where people go out of their way to dump waste in public places illegally, typically for commercial benefit or to avoid disposal fees.
Kerbside collection	A regular containerised service that collects waste from a resident's kerbside.
Litter	Waste that is left in public places and not deposited into a bin.
Liquid waste	Wastes that are not solid or gaseous. May refer to sludges and slurries, or other liquids discharged to sewer. May also refer to wastewater.
Major regional centre	Major regional centres are the cities of Albany, Busselton, Bunbury, Greater Geraldton and Kalgoorlie-Boulder, which are local governments outside the Perth and Peel region that have both a relatively large population and reasonable access to markets. Other major regional centres may be identified by the Waste Authority during the life of the waste strategy.
Material recovery	The materials extracted from processing waste (does not include recovered energy). Also commonly referred to as recycling.
Municipal solid waste (MSW)	Waste primarily collected from households and local governments through waste and recycling collections.
Organic waste	Waste materials from plant or animal sources, including garden waste, food waste, paper and cardboard.
Perth and Peel region	The Perth region, or Perth metropolitan region, is the area defined by the Metropolitan Region Scheme. The Peel region is the area defined by the Peel Region Scheme. Municipal solid waste targets are set for the Perth and Peel region to reflect current urbanisation trends and to align with waste infrastructure servicing and planning needs.
Product stewardship	Product stewardship is an approach to managing the impacts of different products and materials. It acknowledges that those involved in producing, selling, using and disposing of products have a shared responsibility to ensure that those products or materials are managed in a way that reduces their impact, throughout their lifecycle, on the environment and on public health and safety.
Putrescible waste	A component of the waste stream likely to become putrid, including wastes that contain organic materials such as food wastes or wastes of animal or vegetable origin, which readily biodegrade within the environment of a landfill.

Term	Definition
Recovered Materials Framework	A regulatory framework enabling the safe and beneficial reuse of waste-derived materials through a formal approval process, while safeguarding human health and protecting the environment, and clearly defining when materials cease to be waste and become a resource.
Recycling	The use of recovered waste materials as substitutes for extracted raw materials. It involves taking waste materials or products and reconstituting them into items that have a market value. Replaces the term 'material recovery' used in the 2019 waste strategy (Waste Authority 2019).
Reprocessing	Using an item or material that might otherwise become waste during the manufacturing or remanufacturing process.
Repurpose	Refers to the process of taking an item or resource that was originally intended for one use and adapting it for a different purpose.
Residual waste	Waste that remains after the application of a better practice source separation process and recycling system, consistent with the waste hierarchy as described in s.5 of the WARR Act. Where better practice guidance is not available, an entity's recycling performance will need to meet or exceed the relevant stream target (depending on its source – municipal solid waste, commercial and industrial or construction and demolition) for the remaining non-recovered materials to be considered residual waste under this waste strategy. The State Government policy position is that only residual waste should be sent to energy recovery facilities.
Reuse	Refers to using a material or item again. It is the most preferable form of recovery under the waste hierarchy because it requires no (or minimal) resources and therefore has no (or minimal) environmental impact.
Waste avoidance	Refers to the prevention or reduction of waste generation, or the prevention or reduction of the environmental impacts (e.g. toxicity) of waste generation.
Waste Avoidance and Resource Recovery (WARR) Account	In accordance with the WARR Act, each year the Minister for Environment must allocate not less than 25 per cent of the forecast levy amount to the WARR Account. Funds in the WARR Account are applied to programs for the management, reduction, reuse, recycling, monitoring or measurement of waste and to support implementation of the waste strategy.
Waste Avoidance and Resource Recovery (WARR) Levy	Also known as the 'waste levy'. A levy on waste received at landfill premises in the metropolitan region and on waste collected in the metropolitan region and received at landfill premises outside the metropolitan region, administered under the Levy Act and Waste Avoidance and Resource Recovery Levy Regulations 2008. The waste levy acts as an economic instrument to reduce waste disposed of to landfill by increasing the price of landfill disposal and generates funds for a range of waste and environmental purposes. In accordance with the WARR Act, each year the Minister for Environment must allocate not less than 25 per cent of the forecast waste levy amount to the Waste Avoidance and Resource Recovery Account.

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