GOVERNMENT OF WESTERN AUSTRALIA

WASTE AUTHORITY
WA...TOO GOOD TO WASTE

Waste Avoidance and Resource Recovery Strategy 2030

Consultation draft May 2024

Waste Authority

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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.

Acknowledgement of Country

The Government of Western Australia acknowledges the Traditional Custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders both past and present.

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 Resource 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 must be reviewed at least every five years. This consultation draft strategy is part of the waste strategy review process.

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Contents

New Adopt-a-Spot group clean-up during Keep Australia Beautiful Week in Broome, 2023

Chair's foreword

Western Australia's *Waste Avoidance and Resource Recovery Strategy 2030* (waste strategy) is the state's forward-looking blueprint and policy direction, guiding our transition to a sustainable, low-waste, circular economy.

Since its release in 2019, there have been significant global shifts including the COVID-19 pandemic, extreme weather events, changes to international trade, and rising cost pressures. Yet so much has been achieved by community, industry and government working together to advance Western Australia towards a circular economy.

Some of the highlights include the:

- rollout of three-bin food organics and garden organics (FOGO) system to more than 215,000 households
- launch of the Containers for Change container deposit scheme (CDS), recycling three billion containers
- $70 million grants boost to plastic, tyre, paper and cardboard recycling investment for the state through the Recycling Modernisation Fund
- implementation of Stage 1 of *Western Australia's Plan for Plastics* (WA Plan for Plastics, DWER 2021), a national first, avoiding more than 5,000 tonnes of plastic waste
- accreditation of more than 400 WasteSorted Schools.

The *Sectoral emissions reduction strategy for Western Australia* (DWER 2023) highlights the impact of waste on the atmosphere, and emphasises the role that good waste management and increased recycling must play in achieving the State Government's climate policy of net zero (greenhouse gas) emissions by 2050. The release of the *State waste infrastructure plan* (DWER 2024) provides a strong foundation to support industry to identify and develop the waste and recycling infrastructure that the state needs.

Against this backdrop, and as we look to the future, it is time to reflect on our progress and achievements and shift our focus to future priorities. There is still much work to be done.

This document outlines five new proposed strategic priorities for 2030, informed by comprehensive community and stakeholder engagement and structured review against the waste strategy goals and targets set in 2019 (Waste Authority 2019a). It is a call to action for government, industry and community to engage collaboratively and with purpose to achieve our goals, building on the strong foundation established over the past five years.

We must increase our attention to waste avoidance, and to achieve our targets this will require a concerted focus on behaviour change and business practices. Simultaneously, we need to improve the management of priority materials and shift the narrative around waste to harness the economic opportunity of recycling.

Western Australia is a vast state encompassing more than 2,527,000 square kilometres, with a population density of 1.10 persons per square kilometre. This significant size and scale presents both opportunities and challenges to improve waste management, particularly in regional areas and remote communities. As an essential service, improved waste outcomes should be equitable and accessible for all. Achieving this is a key priority for the next five years.

Finally, contingency planning for significant climate and unforeseen events, with innovative waste management responses, is a necessary emphasis, ensuring human health and wellbeing is prioritised at all times.

I encourage everyone across industry, community and government who cares about the future of our state to provide feedback on this document ahead of the updated waste strategy being finalised in mid-2025. We all have a role to play.

Elizabeth Carr AM
Chair, Waste Authority

Section 1: Context and scene setting

Introduction and overview

In this ever-changing world, Western Australia needs waste and recycling systems that are robust, resilient and responsive to our unique geographic, economic and social context.

Renewed focus, innovation and investment is needed to facilitate a faster transition to a more circular economy.

The waste strategy is reviewed every five years to assess progress against targets, determine strengths and identify new opportunities.

The release of this document marks a key milestone in the review of the 2019 waste strategy (Waste Authority 2019a). The update has been informed by feedback received through a community and stakeholder consultation program run by the Department of Water and Environmental Regulation on behalf of the Waste Authority, in 2023. It includes a vision, goals, targets and strategic priorities along with a range of initiatives and opportunities for government, industry and community to work together.

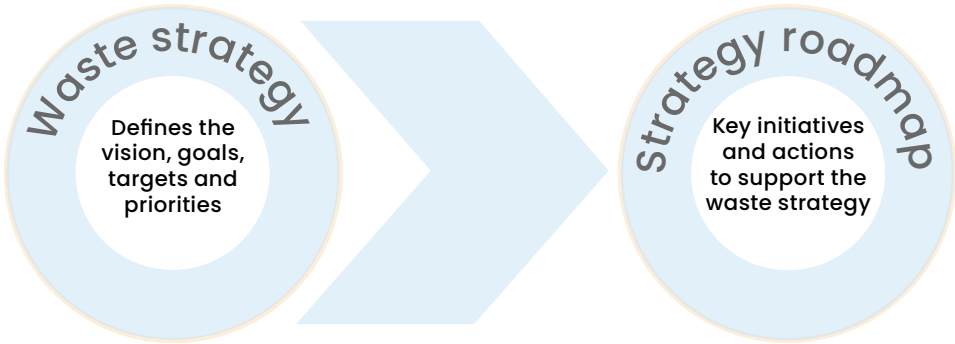
It is important that the waste strategy aligns with and supports the other Government of Western Australia (State Government) and Australian Government policies and strategies which contribute to a more circular economy, including:

- *Foundations for a Stronger Tomorrow: State Infrastructure Strategy* (Infrastructure WA 2022)
- *Western Australian Climate Policy* (DWER 2020b)
- *Native vegetation policy for Western Australia* (DWER 2022).

To achieve a more circular economy, a more strategic and landscape-scale approach to policy development and decision-making is needed, which takes into account planning, environmental, social, climate and waste impacts and outcomes.

Moving forward, the waste strategy will be supported by a waste strategy roadmap which will detail the key initiatives and actions required to achieve its goals and targets for the next five years. It will be co-designed with stakeholders to enable a collaborative effort and the flexibility to respond to emerging opportunities as they arise.

The Waste Authority is committed to engaging with stakeholders to understand diverse perspectives and capture new opportunities to work towards a shared vision.



The Waste Authority

The Waste Authority, created under the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act), advises the Minister for Environment on matters relating to the WARR Act, and develops the waste strategy for consideration by the Minister.

The Waste Authority develops annual business plans and position statements that support the waste strategy, and administers the Waste Avoidance and Resource Recovery Account, providing funding for projects, programs and policy development.

It also plays a key role in monitoring and responding to existing and emerging waste issues.

The Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation 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 goals and targets.

Collective responsibility and action

Government, business and the community all generate waste, and all have an important role to play in avoiding waste generation, recycling more, and protecting the environment and human health from the impacts of waste.

Government

The **Australian Government** handles national laws, strategies, and policies in line with global agreements and is responsible for the *Recycling and Waste Reduction Act 2020* and related product stewardship schemes. Along with the State Government, they establish platforms for collaboration across Australia.

The **State Government** regulates industry, sets policy and implements programs in alignment with national approaches. It also manages some economic instruments such as the state's waste levy.

The State Government collaborates with stakeholders, influences community and business attitudes and behaviour, and supports innovation in waste and recycling. It has an important role to play in demonstrating leadership and driving market development through the procurement of recycled products.

Local governments and regional councils influence important outcomes in their jurisdictions. They do this by providing household waste services, managing waste and recycling facilities, promoting behaviour change to their communities, and using recycled products in their operations.

Business

Business and industry generate waste through their operations. They have an important role to play in avoiding waste generation, recycling and making use of recycled products.

Recyclers collect, sort and process recyclable materials to create new products or the inputs to manufacturing processes.

They support government in making informed infrastructure and investment decisions to meet market needs and progress the transition to a circular economy.

Waste managers collect, sort, and recover energy from residual waste through waste-to-energy facilities, or dispose of it to landfill.

The way these facilities are developed and managed is critical to protecting the environment and community from the impacts of waste.

Community

The **community and households** play a crucial role by making mindful product and service choices, and in the way they sort and dispose of their waste.

These decisions normalise waste sorting as part of everyday life. They can drive grassroots change within communities whilst also significantly influencing the behaviour of government, business and industry.

Everyone has a role to play in waste avoidance and recovery, and in protecting people and the environment as we advance to a more circular economy.

The State Government's waste management functions

There are six core functions where the State Government has responsibility and powers to influence waste and recycling in Western Australia and can facilitate the achievement of the waste strategy's goals and targets. They will be incorporated into the waste strategy roadmap.

This draft waste strategy provides an opportunity to review which current State Government activities should be prioritised over the next five years and to identify those no longer fit for purpose.

Leadership, advocacy, policy, programs

- Lead by example, as both a consumer and a waste generator by using recycled products, avoiding waste, and recycling more, and through the design, construction and operation of State Government facilities.
- Represent the state in national discussions.
- Support recycling infrastructure capacity through strategic funding.
- Supported by Waste Avoidance and Resource Recovery Account funding, the Waste Authority and the Department of Water and Environmental Regulation develop and implement policy and programs that contribute to achievement of waste strategy goals and targets.

Education and behaviour change

- Deliver centralised and consistent evidence-based approaches to education and behaviour change through campaigns, programs, funding and awards.
- Play a leadership role in helping improve coordinated and integrated approaches across the waste industry, government and community.

Data and metrics

- Collect the high-quality waste and recycling data needed for effective decision-making and policy development, and to help support the achievement of waste strategy targets.
- Publish timely and accessible data annually.
- Implement the *Waste Data Strategy* (Waste Authority 2019b).

Legislation and regulation

- Operate compliance and enforcement systems so the community, industry and environment are not unfairly impacted by illegal waste management practices.
- Work alongside other Australian jurisdictions to develop and establish product stewardship regulation and schemes for priority wastes.
- Streamline and strengthen the state's legislative framework to ensure alignment between the *Environmental Protection Act 1986*, the *Waste Avoidance and Resource Recovery Act 2007* and legislation to support climate action.

Planning for collection and processing infrastructure

- Provide planning and development guidance and policy.
- Support collection and infrastructure through funding support and better practice guidance.
- Use the *State waste infrastructure plan* (DWER 2024) as a basis to develop policy and programs and to undertake further investigations into waste and recycling infrastructure needs across the state.

Innovation and technology

- Support innovation and new technologies which accelerate the state's transition to a circular economy.
- Foster the development of waste-derived product markets that underpin new sustainable industries.
- Collaborate with industry to enable knowledge sharing and cross-sector insights.

A materials recovery facility (MRF) recovering recyclables from yellow-topped bins.

Your invitation to shape the future waste strategy

The Waste Authority is committed to reflecting all Western Australians' views and aspirations in a shared vision for the future. It is now time to tell us what you think about the draft waste strategy.

This strategy review has been founded on a public consultation process that commenced with the release of a waste strategy directions paper (directions paper) in mid 2023, followed by a six-week feedback period for stakeholders and the community.

As an important next step, this consultation phase has been designed to gather feedback on the draft strategy, ensuring stakeholders can further inform the priority setting and decision-making. This will underpin the updated document, creating a strong platform for developing the waste strategy roadmap, building future partnerships and implementing actions.

Engagement and consultation overview

We are here

Phase 1: Informing the review

Late 2023 (complete)

A directions paper was released to summarise progress, highlight future opportunities and pose considerations for stakeholders.

Feedback was received from the State Government, local government, industry and the community. This has informed this draft waste strategy.

Phase one outcomes are highlighted on the next page.

Phase 2: Feedback on the draft

Mid-2024 (this phase)

It is now time to tell us what you think about the updates to the draft waste strategy.

The draft sets out a new vision, strategic priorities and targets for the five-year period 2024–29.

The updated waste strategy will be developed in two parts:

1. the strategy itself
2. a waste strategy roadmap.

Phase 3: Final feedback

Mid-2025 (future phase)

After the Waste Authority has considered feedback on the draft waste strategy, final updates will be made.

This will be shared with stakeholders who made a written submission or participated in workshops during Phase 2.

Stakeholders will be able to review and comment, ahead of final updating, consideration and adoption of the updated waste strategy.

How to provide feedback

The draft waste strategy is now available for stakeholders to review and provide feedback until **5pm on 21 August 2024.**

Electronic submissions (preferred) can be lodged:

- through the online consultation survey available on the department's website, and accessible through the Waste Authority website, or
- by email 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

For further information on this consultation please contact:
(08) 6364 6965.

Highlights and achievements: 2019–24

Food Waste for Healthy Soils Fund

$5.625 million
committed by the State Government with matched funding from the Australian Government.

3 organic recycling infrastructure projects.

Will divert up to

275,000 tonnes

of the state's FOGO waste from landfill each year and convert it into compost instead.

Will support

146 construction jobs and 98 ongoing positions.

Recycling Modernisation Fund

$70 million
grants boost to plastic, tyre, paper and cardboard recycling investment
for the state.

Will support

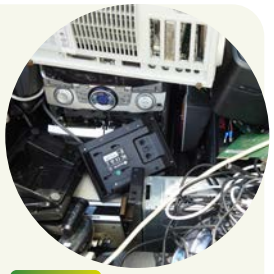
150 new full-time jobs

and provide the capacity to process

101,000 tonnes

of Western Australian plastic and tyre waste every year.

E-waste to landfill ban



The State Government is delivering a ban on e-waste disposal to landfill by 1 July 2024.

$10.1 million
grant funding made available
to increase e-waste collection and storage, recycling and processing technologies.

21 infrastructure projects have received $6.5 million in funding so far.

Plan for Plastics

Staged bans of sale or supply of these items started in 2022.

First stage changes alone are estimated to save up to

181 million plastic cups, 300 million plastic straws, 50 million pieces of plastic cutlery and more than 110 million thick plastic shopping bags

from landfill every year.

Bin tagging program

Between 2020–21 to 2023–24, the program has supported 28 local governments and engaged with nearly 50,000 households to improve waste disposal behaviour.

Better Bins Plus: Go FOGO

$6.687 million
committed towards
the delivery of better practice three-bin FOGO services.

Under the program, three-bin FOGO systems have been rolled out to 208,000* households throughout the Perth, South West and Great Southern regions. Another 195,000 households will receive FOGO under the program.

Roads to Reuse

Three accredited Roads to Reuse recyclers were operating at four sites in the Perth and Peel regions in 2022–23.

238,000 tonnes
of road base (sealed with asphalt) and recycled drainage rock has been produced by Roads to Reuse accredited recyclers.

Main Roads WA has used 165,000 tonnes of Roads to Reuse products since 2019 and commits to use more in its future projects.

GREATSorts waste sorting behaviour change campaign

The campaign has grown year on year, reaching

1.2 million
social media users and

6.5 million
online users in 2023.

Household Hazardous Waste program

Between 2019–20 and 2022–23 more than

1,870 tonnes
of materials were collected for safe recovery or disposal, including gas bottles, batteries, flammable liquids and cleaning products.

Containers for Change

Launched in October 2020

3 billion containers
collected for recycling

More than **810 jobs**
have been created by the scheme, with about 30 per cent of employment going to people living with disability, Indigenous Australians or long-term unemployed people.

Prior to the introduction of the CDS only 34 per cent of eligible beverage containers were recovered for recycling and by the 2022–23 financial year this had increased to 63 per cent.

WasteSorted Schools

Over the past five years, WasteSorted Schools has:

Accredited **406** schools

Run **69 workshops**
with 1500 attendees

Provided more than **$670,000**
for school waste infrastructure

Run **432** school incursions.

Keep Australia Beautiful WA

In the past five years:

1,116 new Adopt-a-Spot registered.

190 regional towns and remote communities entered the Tidy Towns Sustainable Communities awards.

More than **25,000** local volunteers undertook more than

36,000 hours
of litter and sustainability projects.

153 new schools registered for Clean Schools and

437 teachers
completed the professional development program.

WasteSorted Toolkit

38 local governments use the WasteSorted Toolkit for consistent communications.

* Local governments have delivered FOGO services to an additional 7,600 households outside of the Better Bins Plus: GO FOGO program.

Progress against our targets

Setting a clear, quantifiable future direction to 2030 requires a solid understanding of past performance and progress against the goals and targets set in the 2019 waste strategy.

The 2019 waste strategy (Waste Authority 2019a) used 2014–15 data as a baseline to establish targets for 2025 and 2030 in relation to municipal solid waste (MSW), construction and demolition (C&D) waste and commercial and industrial (C&I) waste. An evaluation of the 2025 targets has been undertaken to demonstrate progress against each target.

Avoid – Western Australians generate less waste

2025 targets in detail	Progress against the 2025 targets	
	10% reduction in waste generation per capita	▶ **Target will not be achieved** 2% reduction in waste generation per capita achieved
	➡ MSW: Reduction in generation per capita by 5%	▶ **On track** Sustained progress underway
	➡ C&D: Reduction in generation per capita by 15%	▶ **Limited progress**
	➡ C&I: Reduction in generation per capita by 5%	▶ **Uncertain** Slow/inconsistent progress

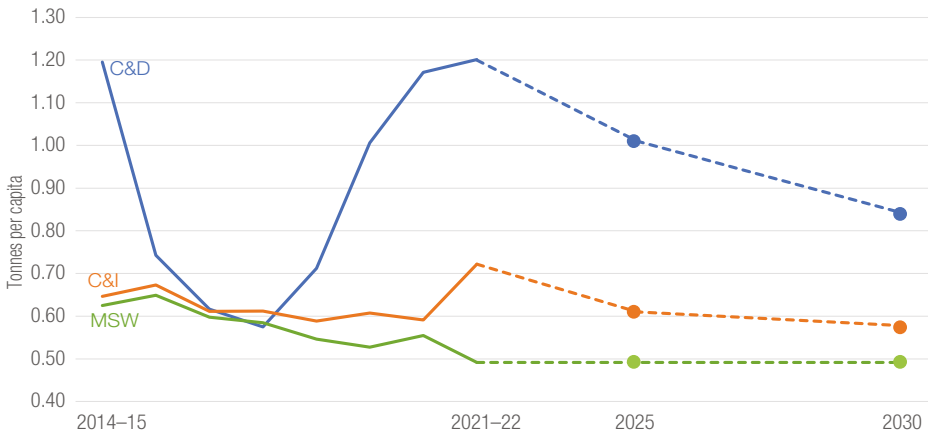


Figure 1: Western Australia's waste generation per capita, by waste stream

The headline target of 10 per cent reduction will not be achieved; however, sustained progress in MSW avoidance is underway. Avoiding waste is the optimum goal but is difficult to achieve and measure. The 2019 waste strategy set targets for waste avoidance based on reducing waste generation per capita. This can fluctuate in the short term because of changes in waste generation activity that is influenced, for example, by consumer behaviour, economic activity and climate-driven events.

The state's per capita waste generation is in line with the national average but has only decreased by 2 per cent since 2014–15. Achieving this target is heavily reliant on decreases in generation from the C&I and C&D sectors – particularly the latter, as the source of more than half of overall waste.

A notable achievement in the avoidance area has been the introduction of the WA Plan for Plastics in 2021 (DWER 2021).

The **WA Plan for Plastics** (DWER 2021) implements regulations to ban single-use plastic items. Surveys in 2020–21 found 430 million items of plastic waste (at least 5,000 tonnes) were avoided under Stage 1 of the bans, including thick plastic bags, straws and cups. The Stage 2 bans took effect in February 2023 and cover an additional 700 million single-use plastic items, which are to be phased out over a 28-month period.

Towards 2030

- ➞ More emphasis on waste reduction and avoidance is needed to achieve these ambitious targets, particularly in the C&I and C&D sectors.
- ➞ Collaboration from all sectors – government, industry and community – will be needed to support behaviour change in consumption and avoidance.
- ➞ Legislation and programs are needed at a national level to support the waste avoidance aims of states and territories.

Western Australia's recycling rate is higher than ever, up from 42 per cent in 2014–15 to 62 per cent in 2021–22.

The major cause of this increase was the Waste Avoidance and Resource Recovery Levy (waste levy), driving increases in C&D recycling. Other initiatives that have driven improvements for the recover objective include:

- **Roads to Reuse:** 238,000 tonnes of road base and recycled drainage rock produced
- **FOGO:** local government authorities rolling out the three-bin kerbside collection system to more than 215,000 households
- **Containers for Change:** introduced in 2020 and recycled 3 billion containers for recycling by June 2023
- **WasteSorted** behaviour change campaigns.

Whilst the MSW recycling rate has modestly increased over the past three years, we will not meet the 2025 target of 67 per cent. Continued strong local government uptake of FOGO will contribute significantly to achieving the target. This will be assisted by the continued focus on increasing FOGO processing capacity and market maturity. Further increases in the recycling rate of other materials such as paper and cardboard and plastics will also be required.

No consistent progress has been made in C&I recycling and this target is not on track be met by 2025.

Recover – Western Australians recover more value and resources from waste

2025 targets in detail	**Progress against the 2025 targets**	
	Increase recycling rate to 70%	▶ **Target will not be achieved** Increased from 42% in 2014–15 to 62% in 2021–22
	➡ MSW: Increase recycling rate to 67% in Perth and Peel, 55% in major regional centres	▶ **Uncertain** Slow/inconsistent progress; Perth and Peel decreased from 39% in 2014–15 to 36% in 2021–22; major regional centres remained unchanged at 30% in 2014–15 and 2021–22
	➡ C&D: Increase recycling rate to 77%	▶ **Target achieved** Exceeded target by 8% in 2021–22
	➡ C&I: Increase recycling rate to 75%	▶ **Limited progress** Recycling rate has decreased from 53% in 2014–15 to 45% in 2021–22
	All local governments in the Perth and Peel region provide consistent three-bin kerbside collection systems that include separation of FOGO from other waste categories.	▶ **Uncertain** Sustained progress underway; increased from three (of 33 total) local governments in 2019 to 11 in 2024. 20 local governments will have rolled out FOGO by the end of 2025-26.
	From 2020 recover energy only from residual waste	No waste-to-energy facility is yet operational

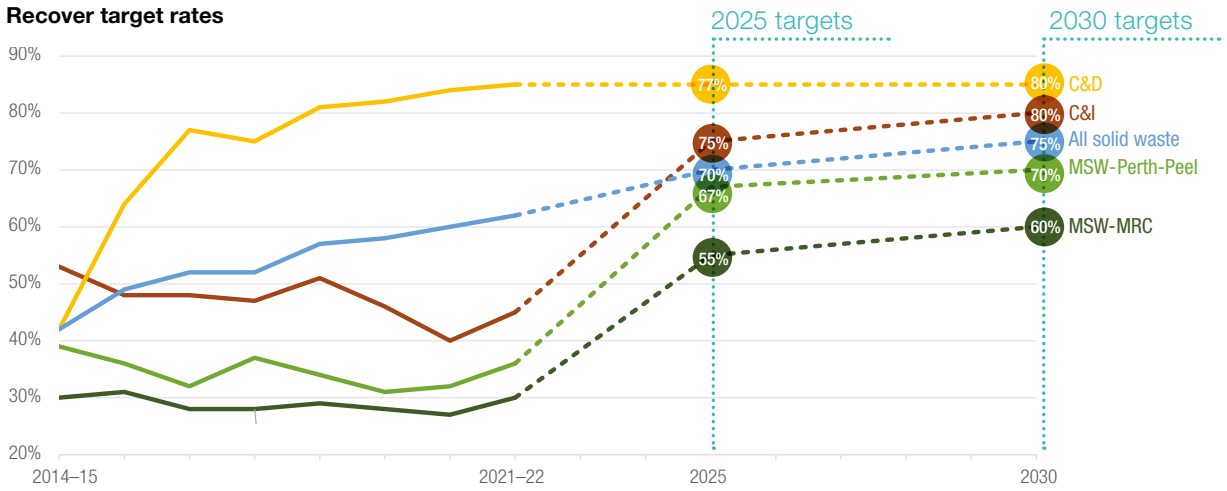


Figure 2: Western Australia's recovery target rates

Towards 2030

- ➞ A renewed focus is needed on C&I waste generation and management, including increasing recycling of organic C&I waste, and improved data is needed to clearly identify the C&I materials that provide avoidance and recycling opportunities.
- ➞ Industry development to support recycling is a priority. This is complex and requires collection mechanisms to be developed concurrently with processing capacity and markets for recycled products.
- ➞ The State Government's e-waste to landfill ban will support recycling of waste electric and electronic equipment
- ➞ New infrastructure funding through the Recycling Modernisation Fund, Food Waste for Healthy Soils program and WasteSorted grants will come online in coming years, increasing the state's recycling capacity.
- ➞ The Recovered Materials Framework, once developed, will encourage the use of waste-derived materials by building confidence in recycled products, increasing their demand and developing markets while protecting the environment.

Spotlight case study: FOGO

Significant progress has been made in FOGO service delivery, recycling and markets over the past five years, driven by the 2025 target for all local governments in Perth and Peel to provide a consistent three-bin kerbside collection system.

In 2019 nine local governments in the state provided three-bin FOGO systems to their residents, including three of the 33 local governments in Perth and Peel. By 2024 this had increased to 19 local governments, 11 in Perth and Peel. FOGO systems have now been rolled out to more than 215,000 households across the state, with another 10 local governments (nine in Perth and Peel) committed to rolling out FOGO by 2025-26.

In 2021–22 the best-performing kerbside systems for MSW recycling were those with a three-bin system – those with a FOGO or garden organics (GO) bins had an average kerbside recycling rate of 54 per cent, compared with 15 per cent for two-bin systems. Local governments have been committed to achieving this significant change, supported by $6.687 million in funding from the Better Bins Plus: Go FOGO program.

The development of organics recycling infrastructure is guided by the Department of Water and Environmental Regulation's *Guideline: Better practice organics recycling*, which provides guidance on environmental performance objectives and identifies benchmark controls for the planning, design and operation of organics recycling facilities.

In 2022–23 the WasteSorted Grants Organics Infrastructure Program provided $850,000 in grant funding to five projects to transition to better practice, aligned with the department's guidelines. In addition, through the Food Waste for Healthy Soils program, three organics recycling infrastructure projects are being funded a total of $11.25 million. This will divert up to 275,000 tonnes of FOGO waste from landfill each year by converting it into compost, while supporting 146 construction jobs and 98 ongoing positions operating these facilities.

Organic waste will continue to be a priority of the waste strategy.

Whilst there are no 2025 protect targets, progress has been made towards meeting the 2030 targets. Sustained progress has been made towards reducing the amount of Perth and Peel waste sent to landfill each year, and with two new waste-to-energy facilities scheduled for completion in coming years, progress to achieving this target will be significantly improved.

Progress is also being made towards the 2030 target to move towards zero littering.

After exceeding its 2015–20 litter reduction target (25 per cent reduction targeted, 41 per cent reduction achieved), Keep Australia Beautiful Council (KABC) has set a litter reduction target of 30 per cent in Western Australia between 2020 and 2025. Progress towards this target is still being measured. Initiatives that have driven decreases in littering include:

- **Containers for Change:** the scheme has seen a decrease in the littering of bottles and cans since its introduction in 2020. KABC data shows that beverage containers contributed 5.65 per cent of the volume of litter in 2022–23. Prior to the commencement of the scheme, eligible containers contributed more than 40 per cent of the volume of litter.
- **WA Plan for Plastics:** while it is too soon to measure the impact of the WA Plan for Plastics (DWER 2021) on the litter stream, data shows that materials subject to regulation contributed 8.38 per cent of the overall volume of litter in 2022–23 compared with 11.5 per cent in the May 2022 baseline.

The state's Household Hazardous Waste (HHW) program also contributes to protecting human health and the environment from the impacts of waste. The HHW program funds local governments and regional councils to collect, store, recover and safely dispose of flammable, toxic, explosive or corrosive hazardous waste generated by households. Since 2011, 6,463 tonnes of HHW materials have been collected from 15 permanent facilities and through temporary collection events.

Protect – Western Australians protect the environment by managing waste responsibly

2030 targets (no 2025 targets for this goal)	**Progress against the 2030 targets**	
	No more than 15% of waste generated in Perth and Peel is landfilled	In progress: 31% disposed of to landfill in 2021–22, decreased from 49% in 2014–15
	All waste is managed and/or disposed of to better practice facilities	In progress
	Move towards zero littering	In progress
	Move towards zero illegal dumping	In progress

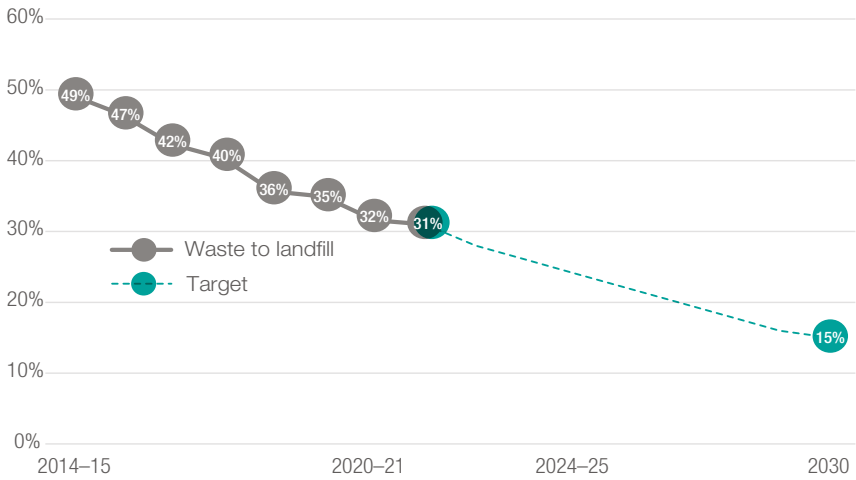


Figure 3: Waste to landfill in Perth and Peel

WWF (formerly known as World Wildlife Fund) Australia has recognised the WA Plan for Plastics. In the WWF State of Plastics in Australia scorecard in 2021, 2022 and 2023, Western Australia was ranked as leading the nation on banning single-use plastics.

Towards 2030

- ➞ Protecting the environment from the greenhouse gas emissions caused by the landfilling of organic waste will be a new focus for the waste strategy.
- ➞ A range of legislative reforms will be progressed with the aim of improving the state's waste management framework and supporting the waste strategy. These include:
  - ensuring waste facilities are appropriately regulated and subject to compliance and enforcement oversight
  - ensuring waste and recycling are considered essential services and can continue in the event of an emergency
  - targeting levy avoidance and illegal activities, which undermine efforts to reduce waste and improve recycling and reduce the effectiveness of the waste levy
  - developing better practice guidelines.

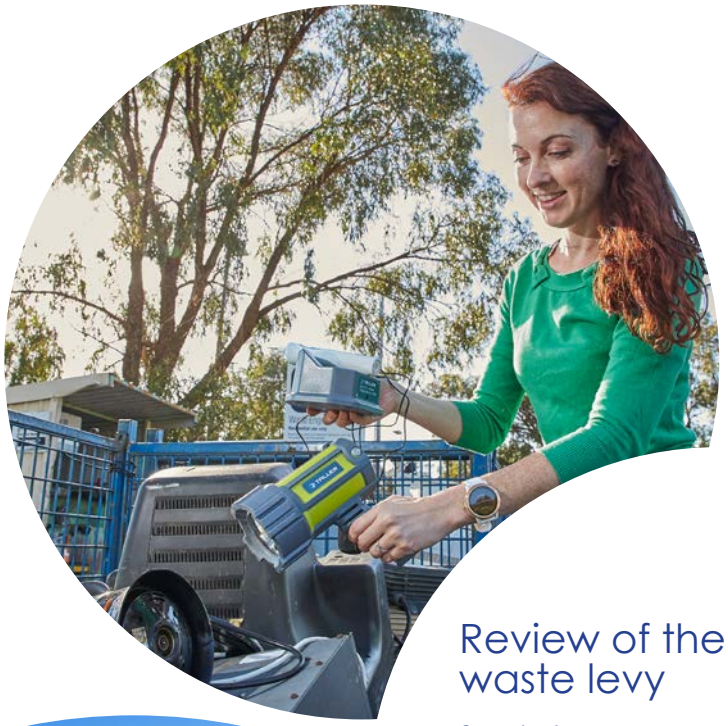
School students and Shire of Derby/West Kimberley and KABC staff at a clean-up in Derby, 2023

Other achievements

Other achievements of the past five years have included the introduction of local government waste plans for the metropolitan area and major regional centres (the Cities of Bunbury, Busselton, Kalgoorlie-Boulder, Albany and Geraldton). In line with the WARR Act, local governments are developing waste plans that align waste delivery services with the waste strategy's goals and targets.

The *State waste infrastructure plan* (DWER 2024) was released to provide a long-term framework to guide decision-making for planning and developing waste infrastructure. With an outlook to 2050, it focuses on the built waste and recycling infrastructure needed for the state to achieve the waste strategy's 2030 targets. The findings have contributed to this draft strategy.

A range of legislative reforms to improve the state's waste management framework are also progressing to ensure waste facilities are appropriately regulated and subject to compliance and enforcement oversight. This work will support the waste strategy and help to target levy avoidance and illegal activities, which undermine efforts to reduce waste and improve recycling.



Review of the waste levy

Consultation paper
February 2020

What our stakeholders have said

The waste strategy directions paper was released for public consultation on 30 May 2023. Over the six-week consultation period that followed, we received feedback through workshops, 66 responses to our consultation survey and 46 submissions on the directions paper. The table below summarises the key themes from the feedback we received. This feedback has informed the development of the draft waste strategy.

Key themes raised in consultation	Feedback provided
Consistency with waste hierarchy	• Need increased focus at the top of the hierarchy – avoid • Support for product stewardship and extended producer responsibility • Encourage better product design, reuse and repair
Circular economy	• Manage transition to reveal opportunities and reduce risks • Develop markets to sustain a circular economy
Climate change/greenhouse gas emissions	• Better consider and manage climate change mitigation and adaptation issues • Opportunities for innovative solutions and technologies
Government leadership	• Government procurement to support circular economy: reuse, recycling, recovery and increased purchasing of recycled/recyclable products, including in construction • Reduce and report on government waste • Support innovation and market development for recycled products and recycled content • Provide case studies and guidelines • Provide a strong framework, including clear definitions, for recovered materials
Waste streams and priority materials	• Better understand and manage the high-impact, low-volume hazardous waste and emerging wastes such as batteries, solar panels, vapes • Support for residential FOGO rollout • Further opportunities to improve organics recovery, focusing on food waste, including from businesses • Encourage source separation from businesses • Continued action to reduce and recycle packaging waste • Encourage recycling of C&D waste, textiles, mattresses and tyres
Infrastructure	• *State waste infrastructure plan* is important • Guidelines for siting infrastructure supported • Continue to improve access to CDS infrastructure including in public spaces • Consider examining other types of waste that could be collected at CDS facilities

Key themes raised in consultation	Feedback provided
Data and reporting	• Need a consistent framework and metrics for reporting on waste generation and circular economy • Support for regular reporting on assessment against waste strategy targets • Support for compositional waste audits, particularly related to the C&I sector
Planning	• Embed waste into state planning frameworks • Better consider waste issues in guidelines for new developments • Encourage the development of precincts, with appropriate buffers
Regions	• No one-size-fits all solution • Increase access to services, infrastructure and support in regions, especially in regional and Aboriginal communities • Need region-specific waste infrastructure plans • Support for more source separation and aggregation, including in regions • Need for consultative and collaborative action to identify regional issues and solutions • Manage legacy waste issues • Require innovative approaches to overcome transport issues and costs
Emergency management	• Need a better understanding of system constraints and capacity/contingency planning • Support for local government contingency planning
Waste levy	• Needs to support the transition to a circular economy and be consistent with the waste hierarchy • Clarity and certainty on future scope of levy • Better compliance programs to identify levy avoidance
Harmonisaton	• Where feasible, ensure consistency with the *National Waste Policy* • Consistency of services and communication, where possible, is desirable
General	• Shared responsibility for managing waste • Consider equity issues when developing responses • Education and behaviour change programs are important (for community and business) • Need data-driven and well consulted solutions • Support for collaborative action to overcome constraints and barriers • Need clear understanding of roles and responsibilities in relation to implementing waste strategy

Section 2: Draft waste strategy

Draft waste strategy

A strong waste strategy framework has been established to guide direction and implementation to 2030.

The draft waste strategy outlines the vision, guiding principles, goals and targets, objectives and strategic priorities to 2030. It has been updated in line with stakeholder feedback to include:

- a refreshed vision, centred on the collective benefits of a circular economy
- retention of existing goals: avoid, recover, protect
- retention of existing 2030 targets for each goal, with the introduction of new targets
- well defined five-year strategic priorities.

The waste strategy applies across Western Australia and to all sectors of the economy. While targets may be limited to MSW, C&D and C&I waste, the waste strategy goals apply broadly.

A waste strategy roadmap will be developed to set out the key initiatives, actions, roles and responsibilities against the waste strategy's strategic priorities.

The roadmap will be co-designed with key stakeholders during this consultation period.

The draft waste strategy on a page

Waste strategy vision

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

Our 2030 goals and targets

Avoid	Recover	Protect
Western Australians generate less waste.	**Western Australians recover more value and resources from waste.**	**Western Australians protect the environment by managing waste responsibly.**
⊙ 20% reduction in waste generation per capita ➡ MSW: 10% reduction in generation per capita ➡ C&D: 30% reduction in generation per capita ➡ C&I: 10% reduction in generation per capita ⊙ **New target:** Adopt national circular economy metrics (as they are developed) to measure avoidance and circularity ⊙ **New target:** Develop avoidance measures and targets for specific materials consistent with national targets	⊙ Recover energy only from residual waste ⊙ Increase the recycling rate to 75% ➡ MSW: Increase the recycling rate to 70% in Perth and Peel, 60% in major regional centres ➡ C&D: Increase recycling rate to 80% ➡ C&I: Increase recycling rate to 80% ⊙ **New target:** Continue to deliver household and commercial FOGO/FO collection and recycling services in Perth, Peel and major regional centres.	⊙ No more than 15% of waste generated in Perth and Peel is landfilled ⊙ Move towards zero illegal dumping ⊙ **New target:** Adopt the 2030 litter reduction target to be developed through the next litter prevention strategy (2025–30)

Avoid - Recover - Protect

⊙ All waste is managed and/or disposed of using better practice approaches and facilities

⊙ **New target:** Reduce disposal of organic waste to landfill by 50% (from 2019–20 levels)

Our 2030 strategy priorities

1. Better outcomes for regional and Aboriginal communities
2. Increasing our focus on waste avoidance
3. Better management of priority materials
4. Realising the economic potential of recycling
5. Contingency planning and climate resilience

Strategy roadmap

Actions and initiatives to be developed with stakeholders

The draft waste strategy is informed and supported by a range of State Government strategies and operational plans including the *State waste infrastructure plan* (DWER 2024), *Waste Data Strategy* (Waste Authority 2019b), and *Litter Prevention Strategy For Western Australia 2020–2025* (KABC WA 2020), together with the Waste Authority's position and guidance statements, codes of practice, and annual business and action plans.

A shared vision for Western Australia

Tell us

How well does the new vision reflect your intentions and aspirations for Western Australia's transition to a circular economy?

How well do the principles support this vision?

Vision:

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

Our vision is for a future where waste avoidance is a collective endeavour that unlocks shared benefits across our vast, beautiful state and sustains us for generations to come. Together, we can transition to a circular economy and low-waste society, leading with conviction to reduce carbon emissions and tackle climate change.

We all have a role to play – as individuals, communities, government and industry. Now is the time to harness sustainable technology, embrace innovation and provide strong leadership so our communities, economies and environment thrive, now and into the future.

The foundations of our vision

A circular economy has a broader reach than waste. An 'avoid, recover, protect' approach to waste, combined with emissions reductions, are essential to achieving a circular economy.

Developing a more circular economy will allow Western Australia to thrive economically in a sustainable way, with better outcomes for human health and the environment. It will promote more effective business models that prioritise efficient product use and foster innovation and productivity.

The interconnected nature of Australia's economic and waste management systems means engagement and alignment across government and industry sectors is essential. Circular economy principles underpin Australia's *National Waste Policy* and related action plan, the Australian Government's Circular Economy Ministerial Advisory Group, and jurisdiction-level strategies.

Effective national product stewardship is important in the transition towards a more circular economy, increasing recycling, supporting markets for recycled content, and driving innovation, investment and technology development.

Towards a more circular economy – four key principles:

1. **Reduce the impact of waste on the environment and climate.**
   To achieve Western Australia's target of net zero emissions by 2050, we need to reduce and avoid emissions created by waste generation, processing, transport and disposal. Avoiding waste, increasing the recovery of materials and value, and improving management protects both human and environmental health.
2. **View waste management as an essential service.**
   All communities need access to appropriate waste management to thrive. Our state is expansive and socially diverse. To strengthen intergenerational and geographic equity, waste and recycling services need to be context-responsive and meet community expectations across Western Australia.
3. **Share responsibility and empower everyone to make changes.**
   We all generate waste and are impacted by its recycling and disposal. Together, government, industry, households and consumers can drive better outcomes, including in regional and Aboriginal communities.
4. **Ensure circular economy benefits are felt by all communities.**
   Everyone benefits from a more circular economy. Reducing the cost and impact of waste, driving employment and investment, and improving community access to recycling will bring both economic and community benefits.

The circular economy and waste hierarchy

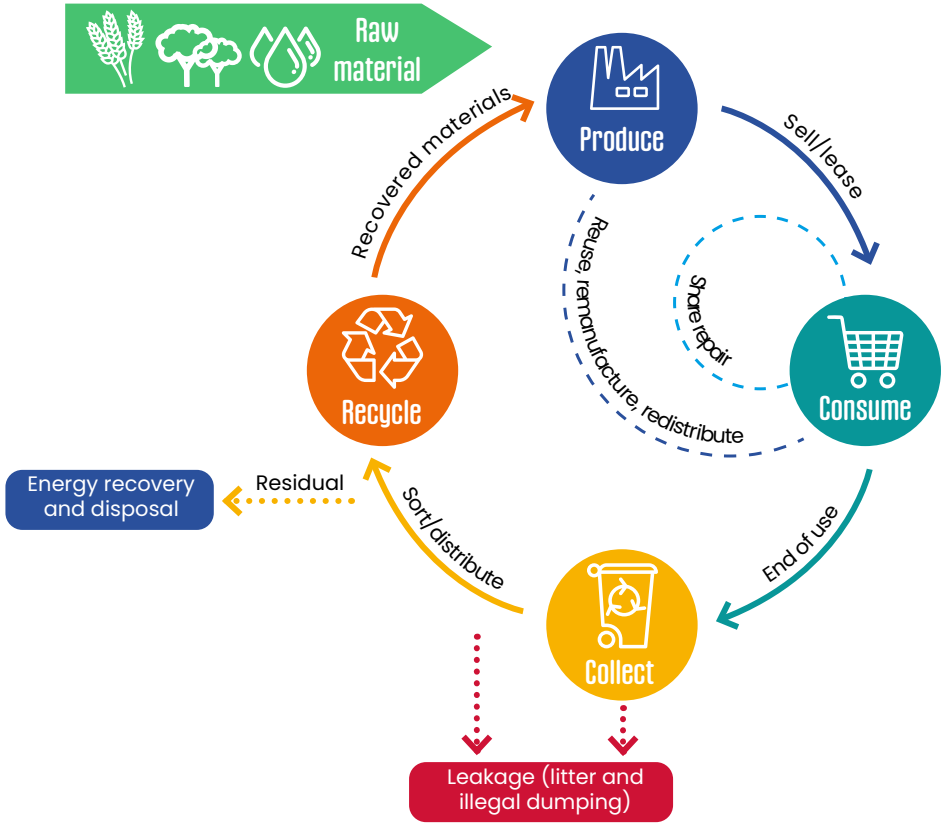


Figure 4: The circular economy

A circular economy aims to keep products and materials circulating in the economy for longer, at their highest value, and brings multiple economic, social and environmental benefits, including:

- reducing dependence on extraction and processing of raw materials
- supporting innovation in recycling collection and processing
- driving investment and creating new kinds of employment
- enabling new business models and sustainable markets
- capturing value and managing risk at a local level
- eliminating waste and pollution, including greenhouse gas emissions
- improving human health
- regenerating nature and the environment.

Moving towards a more circular approach presents opportunities to:

- drive further investment across the state
- create employment across the production and supply cycle, including the recycling sector
- create regional employment opportunities
- reduce impacts to the environment and climate.

Waste hierarchy principles are embedded in a circular economy. The hierarchy prioritises waste avoidance, followed by reuse, repair, and refurbishing, and preferences recycling over energy recovery.

Disposal is the least desirable treatment, only to be used when other options are not viable.

The *Sectoral emissions reduction strategy for Western Australia* (DWER 2023) highlights priority pathways for all sectors of the economy to transition to net zero emissions by 2050. The key pathways for emissions reductions from the waste sector include diverting organic waste from landfill, landfill gas capture, food waste avoidance, and circular economy initiatives.

Research estimates that 45 per cent of global climate-related emissions are associated with making products (Ellen Macarthur Foundation 2019). Therefore, implementing the principles of circularity – reducing virgin material inputs and increasing reuse and recovery – translates into reduced greenhouse gas emissions and reduced climate impacts.

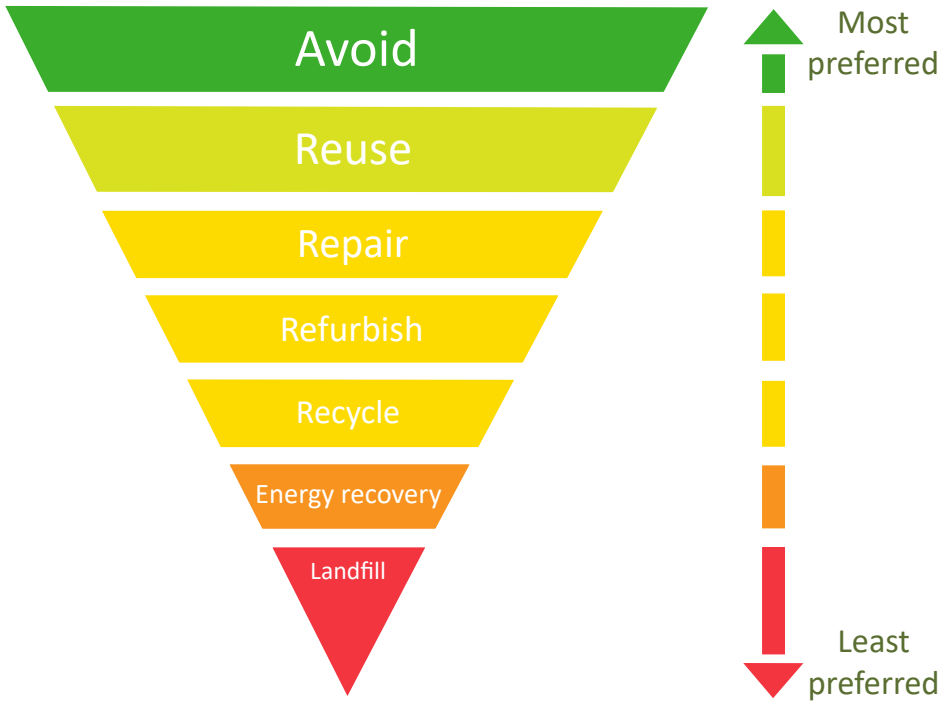


Figure 5: The waste hierarchy

Our 2030 targets

It is proposed that the 2030 targets established in the 2019 waste strategy will be retained and supplemented with new targets.

A note on terminology: This draft waste strategy uses the term 'recycling' to replace 'materials recovery' used in the previous strategy, aligning with terminology used in other jurisdictions. 'Energy recovery' is used to describe the energy recovered from waste processed via waste-to-energy facilities.

Existing and proposed new targets

Avoid

Western Australians generate less waste.

- 20% reduction in waste generation per capita
  - MSW: 10% reduction in generation per capita
  - C&D: 30% reduction in generation per capita
  - C&I: 10% reduction in generation per capita
- **New target:** Adopt national circular economy metrics (as they are developed) to measure avoidance and circularity
- **New target:** Develop avoidance measures and targets for specific materials consistent with national targets

Recover

Western Australians recover more value and resources from waste.

- Recover energy only from residual waste
- Increase the recycling rate to 75%
  - MSW: Increase recycling rate to 70% in Perth and Peel, 60% in major regional centres
  - C&D: Increase recycling rate to 80%
  - C&I: Increase recycling rate to 80%
- **New target:** Continue to deliver household and commercial FOGO/FO collection and recycling services in Perth, Peel and major regional centres.

Context and rationale

Measuring progress towards achieving a circular economy is complex and no jurisdictions currently measure and report on this. In Western Australia, waste generation per capita is used to measure waste avoidance; however, this is a broad metric, and a more nuanced, nationally comparable methodology is required.

The Australian Government is working with states and territories to develop consistent metrics and methodologies to measure and report progress towards waste avoidance and circularity. The State Government participates in these discussions and will consider how outcomes can best be implemented in Western Australia.

The 2019 waste strategy included the 2025 target that all local governments in Perth and Peel would implement three-bin kerbside collection services, including a FOGO bin. It is anticipated that by 2025–26, 24 of 33 local governments in Perth and Peel will have implemented FOGO. The Waste Authority and the Department of Water and Environmental Regulation continue to work with the nine local governments not yet committed to FOGO, to facilitate implementation.

While the recycling of MSW, FOGO and GO waste continues to increase, the recovery and recycling of organics from the C&I sector was only 14 per cent in 2021–22.

Most C&I organic waste is food organics (FO) – accounting for 55 per cent or about 250,000 tonnes in 2021–22. This means FO collection and recycling services aimed at businesses such as manufacturers, restaurants, supermarkets, hospitals and aged care facilities could significantly increase recycling rates and contribute to the avoid-recover-protect target of halving organic waste to landfill.

Tell us

How well do the existing and proposed targets align with the 2030 goals set out in this strategy? Please highlight:

- gaps in the targets
- any opportunities or challenges in achieving the targets
- how we can best support achievement of these targets.

Protect

Western Australians protect the environment by managing waste responsibly.

- No more than 15% of waste generated in Perth and Peel is landfilled
- Move towards zero illegal dumping
- **New target:** Adopt the 2030 litter reduction target to be developed through the next litter prevention strategy (2025–30)

Avoid - Recover - Protect

- All waste is managed and/or disposed of using better practice approaches and facilities
- **New target:** Reduce disposal of organic waste to landfill by 50% (from 2019–20 levels)

The 2019 waste strategy included the 2030 target of moving toward zero litter. In 2025, KABC will publish the state's 2025–30 litter prevention strategy, so the adoption of the new litter reduction target provides an opportunity to better align the waste strategy with the coming litter prevention strategy.

The most significant new target proposed is to reduce the disposal of organic waste to landfill by 50 per cent (from 2019–20 levels). In the context of this target, organic waste includes FO, GO, wood and timber but excludes paper and cardboard, consistent with the national approach.

In 2019–20 about 900,000 tonnes of organic waste was disposed of to landfill. By 2030, we are aiming to reduce the amount of organic waste landfilled by half, or 450,000 tonnes. To do this we need to raise the recycling rate of organic waste from 23 per cent in 2019–20 to about 62 per cent in 2030. However, the amount of organic waste sent to landfill by industry and business is not well quantified and we will need better data on the organic wastes generated by these sources.

Reducing organic waste to landfill contributes towards each of the goals of the draft waste strategy:

- **Avoid:** avoiding organic waste generation reduces landfill impact and food waste is a critical component of this.
- **Recover:** waste composition data indicates that recycling organic waste by composting provides the greatest opportunity to increase recycling rates, particularly in the MSW and C&I sectors.
- **Protect:** reducing organic waste to landfill decreases methane emissions – a byproduct of decomposition. Composting supports climate change mitigation by returning carbon to the soil rather than emitting it to the atmosphere. It also reduces the need for fertilisers and therefore reduces their impacts on the environment.

Meeting the 2030 targets

Achieving the 2030 targets requires every region of the state to contribute.

The *State waste infrastructure plan* (DWER 2024) models waste generation projections, and waste and recycling infrastructure needs, to meet the 2030 waste strategy targets (as set out in the 2019 waste strategy, Waste Authority 2019a).

Waste avoidance is key to achieving all waste strategy targets. The less waste generated, the less pressure is placed on recycling infrastructure, systems, human health, climate and the environment.

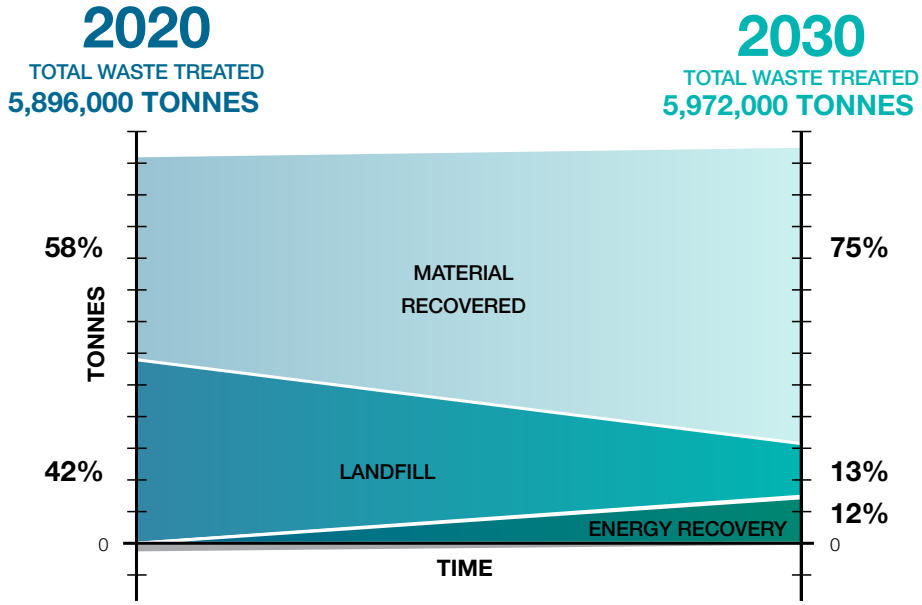


Figure 6: Projected changes to recycling, landfill and energy recovery needed to meet 2030 waste strategy targets (as modelled in the *State waste infrastructure plan*)

Achieving the 'avoid' targets will require waste generation rates to decrease to 1.88 tonnes per capita in 2030. This would result in total statewide waste generation of about 6 million tonnes per year – about the same as 2020 total generation, despite an estimated population growth of 16 per cent.

If current generation rates continue to 2030, Western Australia would generate and need to manage about 7 million tonnes of waste per year, requiring more than 1 million extra tonnes of recycling, energy recovery and landfill capacity to meet waste strategy targets.

The need for waste avoidance is clear.

Meeting the 'recover' targets and the 'protect' target of landfilling no more than 15 per cent of Perth and Peel's waste would mean increasing the state's overall recycling rate from 57 per cent to 87 per cent. This would require:

- an increase in the amount of waste recycled from 3.4 million tonnes in 2020 to 4.5 million tonnes in 2030 through:
  - an additional 760,000 tonnes of new aggregation, sorting and recycling infrastructure capacity
  - the use of the full licensed capacity of existing waste facilities (if the proposed new target for organics recycling is adopted, this capacity requirement will increase further)
- 164,500 tonnes of waste-to-energy capacity, in addition to the 760,000 tonnes already anticipated from the two waste-to-energy facilities due to become operational in Perth in coming years
- implementation of bottom ash recycling from waste-to-energy, which will contribute to recycling targets.

Waste-to-energy will have an important role to play in achieving the waste strategy targets. It delivers a range of benefits including minimising the quantity of residual waste and reliance on landfill and increasing the recovery of value from waste through energy recovery, where options higher up the waste hierarchy are not available. Waste-to-energy is preferred over landfill disposal for residual waste.

However, waste-to-energy must be used in the context of developing a circular economy, achieving consistency with the waste hierarchy and the target of recovering energy only from residual waste. It should also be noted that in coming years waste-to-energy processing, and increases in FOGO recycling, are expected to be successful in substantially reducing the waste disposed of to landfill. This could mean changes to waste levy revenue.

Development of waste and recycling infrastructure to meet waste strategy targets, in line with the principles of the *State waste infrastructure plan*, would mean prioritising local recycling and energy recovery options close to waste generation sources. This would decrease reliance on transporting waste long distances between regions or interstate.

The priorities of this draft waste strategy have been designed in alignment with, and support of, *State waste infrastructure plan* principles and findings. The same approach will be taken when designing the key initiatives and actions of the future waste strategy roadmap. The *State waste infrastructure plan* provides a foundation from which more detailed, region-specific analysis can be undertaken, to determine waste and recycling infrastructure needs and priorities (DWER 2024).

Waste strategy priorities – a five-year focus

Tell us

How well do the five strategy priorities support achieving the draft waste strategy's goals and targets?

Five strategy priorities have been developed, all of equal importance.

Together, they provide the focus for the waste strategy roadmap which will be co-designed with stakeholders – detailing the State Government's key initiatives and actions over the next five years.

Strategy priorities:

- **Better outcomes for regional and Aboriginal communities:** ensuring adequate and appropriate waste infrastructure and services to meet their needs
- **Increasing our focus on waste avoidance:** avoiding waste generation through reuse, repair and maintaining the value of products and materials for as long as possible
- **Better management of priority materials:** improved recycling of high-impact materials and priority waste streams
- **Realising the economic potential of recycling:** fulfilling the potential recovery of value and resources, increasing infrastructure investment
- **Contingency planning and climate resilience:** strengthening the waste sector's planning, adaptability and response to emergency events

The waste strategy roadmap – prioritising our resources

Once developed, the roadmap will outline the initiatives and actions required to achieve the waste strategy's goals and targets. A range of factors will impact what can be delivered over the next five years, including available funding, time and resources, so it is important to get the emphasis right.

Changes to Waste Avoidance and Resource Recovery (WARR) Account funding is expected in the coming years, as the operationalisation of Perth's two waste-to-energy facilities will see a decrease in waste disposed of to landfill. This could result in a decrease in waste levy revenue, impacting state budgets and resources. Stakeholder input is needed to ensure resources are directed where they are needed most.

For each priority, several key initiatives and potential actions have been proposed. The key initiatives outline what we want to achieve, and indicative actions have been proposed for each of these. These draft actions are not intended to be a final or exhaustive list of actions, but are a starting point for discussion during consultation.

METRONET has used Reconophalt™ – a road surfacing material with recycled content – in its Denny Avenue Level Crossing Removal Project

Priority 1: Better outcomes for regional and Aboriginal communities

Ensuring adequate and appropriate waste infrastructure and services to meet the needs of regional communities and Aboriginal communities.

Western Australia is geographically diverse, and its dispersed population presents waste management challenges. In place of a 'one size fits all' approach, waste management and recycling in the regions must be practical, economically viable and context responsive.

In many regional and Aboriginal communities, landfill remains the only viable waste management option. It is vital that landfill facilities are sited and managed in a way that protects human health and the environment. To meet the waste strategy targets, increased recycling is needed across all regions – not only Perth and Peel.

Community engagement is central to achieving better outcomes that best meet the unique needs of regional and Aboriginal communities. Communities, local governments, Aboriginal corporations and State Government agencies must be collectively engaged and empowered to improve waste management outcomes. Investment from government and industry in innovative approaches and technology may be needed to overcome some of the unique waste management and recycling challenges regional communities and Aboriginal communities face.

Improving waste and recycling outcomes for regional and Aboriginal communities is a critical priority, and a new area of focus for the waste strategy.

All communities should be empowered and enabled to contribute to the circular economy and be protected from the impacts of waste.

Aboriginal communities

About 12,000 people live in more than 270 Aboriginal communities across Western Australia, with 89 per cent in the Kimberley and Pilbara regions. Most of these communities have fewer than 200 residents, and 25 per cent are seasonal communities, with no permanent population.

Via the Department of Communities, 167 Aboriginal communities across 20 local government areas receive municipal services including rubbish collection, basic road and airstrip maintenance, fire breaks and landfill management. However, in Aboriginal communities, waste is often community-managed, with almost sole reliance on local landfills.

Aboriginal communities face several waste challenges, including:

- **Illegal dumping and contamination:** Materials such as cars, white goods, asbestos, tyres, C&D waste, chemicals/drums, conveyor belt rubber and general waste is often disposed of at informal dump sites. The Department of Planning, Lands and Heritage (DPLH) and the Department of Water and Environmental Regulation work with communities to identify and manage sites contaminated by asbestos or chemicals, which usually requires building on-site containment cells.
- **Barriers to development of landfills that protect human health and the environment:** Landfills in Aboriginal communities are generally not owned or managed by municipal service providers and are not licensed or registered. Typically, they are managed by community organisations that generally lack the infrastructure and resources for effective monitoring and maintenance. The Western Australian Planning Commission's State Planning Policy 3.2 requires that Aboriginal communities have a Layout Plan to guide land use planning and development. This includes promoting the separation of existing and proposed landfill sites from incompatible uses. Aboriginal community organisations generally have no rate base or other funding mechanism to own, develop and manage new, appropriately sited landfills.

Note: The draft revised strategy's priorities are equally important. The priority numbering is for reference purposes only.

- **Barriers to recycling:** Throughout Western Australia, there are several barriers which impact recycling, including vast distances and poor road conditions, limited transportation, irregular waste collection services, high costs of setting up and maintaining infrastructure and systems, unviable economies of scale, and limited access to markets for recyclables. These issues are particularly acute in Aboriginal communities, where communities may also lack the ongoing engagement and support that is essential to the success of initiatives such as increasing recycling and reducing litter.

Better access to waste infrastructure and services is critical for these communities, with a particular focus needed on waste avoidance and recycling – as highlighted in state and federal policy:

- Improving waste infrastructure for Aboriginal communities is a recommendation of *Foundations for a Stronger Tomorrow: State Infrastructure Strategy* (Infrastructure WA 2022), and aligns with the *National Waste Policy Action Plan* (Australian Government 2019), which calls for increased access to recycling and waste management infrastructure for regional and Aboriginal communities.
- Better waste management is fundamental to Closing the Gap. The *National Agreement on Closing the Gap* (Joint Council on Closing the Gap 2020) includes a 2031 target for 88 per cent of Aboriginal people to be living in appropriately sized (not overcrowded) households, and for all households in Aboriginal communities to receive essential services that meet or exceed the jurisdictional standard. Good waste and recycling services and facilities are needed to construct and maintain improved housing and other infrastructure in communities, as well as to meet the everyday waste management needs of residents.

Regional communities outside Perth and Peel

Of Western Australia's 139 local government areas, 106 are outside of Perth and Peel. These regional communities face unique challenges in waste management and recycling including:

- limited access to markets for recyclables
- long distances and poor road conditions between towns and waste facilities
- difficulties with staff recruitment and retention
- lack of economies of scale for purchasing/contracts or to make new facilities viable.

Although the overall recycling rate in major regional centres has remained the same since 2014–15 (about 30 per cent) there are several local governments striving to improve recycling outcomes for their communities. Eight local governments in the South West and Great Southern regions have implemented three-bin FOGO collection services for their residents. Many local governments run 'tip shops' and drop-off facilities to promote reuse and recycling in their communities, and six local governments outside Perth and Peel operate drop-off facilities as part of the Household Hazardous Waste Program. In 2022–23, 28 local governments participated in the KABC Tidy Towns program, four were awarded KABC Community Litter Grants, and eight of the 14 local governments participating in Containers for Change through the operation of refund points were outside Perth and Peel. There are also many community groups, schools and volunteer organisations actively improving waste management across the state.

No two regions in Western Australia are the same. Tailored solutions that respond to each region's unique context are needed to improve waste outcomes.

The role of landfill

Regional areas and Aboriginal communities often rely on landfill for the safe management of most, if not all, of their waste. The *State waste infrastructure plan* (DWER 2024) identified 96 registered facilities (Category 89 landfills) and 109 landfills in Aboriginal communities (operated under the Department of Communities' Remote Essential Municipal Services program outside Perth and Peel). In many of these places, landfill is the only viable waste management option, which means it is critical that all landfills are well located and designed and operated to a high standard that protects human health and the environment. Larger-scale, licensed, engineered landfills are more likely to be able to meet these standards than smaller facilities, so the consolidation and regionalisation of landfills is supported by the waste strategy where practical.

The *State waste infrastructure plan* identifies:

- Increases in recovery rates are needed in every region across Western Australia to meet waste strategy targets. Further investigation is needed into region-specific gaps, challenges and opportunities to improve recycling infrastructure and services.
- Many regions could benefit from 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.

Tell us

How well do these draft actions support our priority of achieving better outcomes for regional and Aboriginal communities?

Are there other actions that will support this priority?

Do current State Government activities support this priority?

Our current activities	Actions and ideas to build on in the waste strategy roadmap		
	Key initiatives – what we want to achieve	**Proposed State Government-led actions**	**Proposed collaborative actions**
Education and behaviour change • Support for the programs that contribute to the 'recover' and 'protect' goals in all regions, including: - Containers for Change - Keep Australia Beautiful programs and funding, including Tidy Towns, Keep Australia Beautiful Week, Adopt-a-Spot and Community Litter Grants • Statewide WasteSorted initiatives including WasteSorted Toolkit, GREAT Sorts campaign, WasteSorted Community Education grants, WasteSorted Schools **Leadership, advocacy, policy, programs** • Implementation of the *Litter Prevention Strategy For Western Australia 2020–2025*, and development of the 2025–30 litter prevention strategy	**1.1 Identifying priority service and infrastructure needs for Aboriginal communities and other regional communities**	• Collaborate across government to assess and improve data on waste generation, services and infrastructure needs in Aboriginal and other regional communities. • Investigate a rural landfill risk assessment of unlicensed landfills and Remote Essential Municipal Services landfills.	• Engage with Aboriginal communities to identify priorities for policy and program development. • Support Aboriginal communities to implement community-led improvements to waste services.
	1.2 Improving infrastructure planning for regional Western Australia	• Work with DPLH to better incorporate waste management considerations into regional planning strategies. • Investigate opportunities for the consolidation and regionalisation of landfills and recycling infrastructure. • Build on the findings of the *State waste infrastructure plan* (DWER 2024) to identify opportunities to support local regional employment/entrepreneurship and technology such as small-scale, modular or mobile plant.	• Identify priority regions and develop regional waste and recycling infrastructure plans with regional development commissions and key stakeholders.
	1.3 Improving the efficiency of transport of recyclables from regional areas	• Identify opportunities to consolidate different waste streams within regions to facilitate more effective transportation or local use.	• Investigate options for cost-effective transportation of recyclables from regional Western Australia through aggregation and backloading.
	1.4 Improving regional recycling and markets for recycled products	• Support, where possible, the use of recycled content in regional road and civil works.	• Investigate local opportunities for recycling and the use of recycled materials in regions outside Perth and Peel, with a focus on C&D waste and organics from MSW and C&I sources.

Priority 2: Increasing our focus on waste avoidance

Avoiding waste generation through reuse, repair and maintaining the value of products and materials for as long as possible.

Consultation on the waste strategy directions paper showed that a more circular economy was important to stakeholders. Attributes of a circular economy that were considered important included fostering innovation and productivity, reducing environmental impacts of production and consumption, using natural resources more productively, research and development, and a fit-for-purpose legislative environment. Stakeholders are seeking action on waste avoidance and higher-order outcomes in the waste hierarchy, including reuse and repair, to maintain product value. This is a priority and, where not possible, recycling and waste-to-energy is preferred over disposal to landfill.

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

Tell us

How well do these draft actions support our priority to increase waste avoidance?

Are there other actions that will support this priority?

Do current State Government activities support this priority?

Our current activities	Our focus for the next five years		
	Key initiatives – what we want to achieve	**Proposed State Government-led actions**	**Proposed collaborative actions**
Leadership, advocacy, policy, programs • Working with the Australian Government and other jurisdictions to: - develop circular economy targets and initiatives - develop and implement product stewardship • Charitable Recyclers Rebate program **Education and behaviour change:** • WasteSorted and GREAT Sorts initiatives **Legislation and regulation** • WA Plan for Plastics	**2.1 Increased reuse and repair**	• Support local reuse and repair centres that facilitate waste avoidance.	• Support the Australian Government's efforts to improve consumer's 'right to repair' options.
	2.2 Support for intelligent product design	• Support research and business innovation that reduces waste and increases recycling and reuse.	• Work with other states to support businesses to design for, and use, greater volumes of recycled materials across their supply chains. • Work with the Australian Government to develop national packaging regulations.
	2.3 Western Australia is empowered to avoid waste	• Implement waste avoidance education and behaviour change for businesses and the community. • Provide information on businesses and organisations that provide products or services to avoid waste.	• Work with local government to harmonise community messaging on waste avoidance. • Identify opportunities to work with businesses and industry to develop and support initiatives that avoid waste.

Note: The draft revised strategy's priorities are equally important. The priority numbering is for reference purposes only.

Priority 3: Better management of priority materials

Improving the management and recycling of high-impact materials and priority waste streams.

Our focus on organics, plastics and e-waste supports emissions reductions, targets emerging and hazardous wastes, recognises the potential for recovery of value and resources to support a circular economy, and contributes to the key goals of 'avoid, recover, protect'. The approach to priority materials will remain flexible, however, as new priorities may emerge driven by national policy and product stewardship schemes.

Progress towards the waste strategy 'recover' targets is measured in the percentage of waste recycled. High-volume wastes (such as C&D waste) have traditionally been the focus of the waste strategy, to drive up recycling rates. The priority materials of this draft waste strategy reflect a more holistic view of the impact of waste, including the risks it poses to the environment and human health, and the potential value and resources found within it.

Organics make up a significant proportion of domestic waste. To support national policy and the state's emissions reduction target, a new target of a 50 per cent reduction in organic waste to landfill by 2030 has been included in this draft waste strategy.

Priority material 1: Organic waste from the MSW and C&I waste streams

Organic waste (FO, GO, wood and timber) is a priority because it makes up about 18 per cent of the waste generated in Western Australia (or 28 per cent if paper and cardboard and other organics are included). Sending it to landfill contributes to the state's greenhouse gas emissions. The focus on organics is driven by state and national policy:

- The implementation of the *Western Australian Climate Policy* (DWER 2020b) and its aspiration of net zero emissions by 2050 has increased the focus on the impacts of putrescible waste on the climate. In 2020 solid waste management activities contributed 2 per cent of the state's total greenhouse gas emissions. Of this, putrescible waste disposal to landfill contributed 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 the net zero goal, and supports the review of the waste strategy with a focus on climate change and emissions reduction opportunities. Increased avoidance and recycling of organic waste can significantly contribute to reducing these greenhouse gas emissions.
- The *National Food Waste Strategy* (Australian Government 2017) has a target to halve food waste by 2030 and the *National Waste Policy Action Plan* (Australian Government 2019) has a target to halve organic waste to landfill by 2030.

FOGO from MSW continues to be a focus because of the impact of its disposal and the opportunity to increase recycling. Organic wastes (particularly FO) from the C&I waste stream will require increased focus to minimise its potential environmental and climate disposal impact and to recover lost value.

Note: The draft revised strategy's priorities are equally important. The priority numbering is for reference purposes only.

The focus on e-waste is driven by the implementation of the 2024 ban on e-waste disposal to landfill.

Priority material 2: Plastics

Plastics are a priority because, although they do not make up a high proportion of waste by weight (about 5 per cent), they can have a great environmental impact.

In 2022–23 KABC found that plastic represented the highest material found by count (57 per cent) and volume (28 per cent) of litter in Western Australia. Plastics are a focus of the *National Waste Policy Action Plan* (Australian Government 2019), and since July 2022 national restrictions on the export of some plastics has resulted in a focus on increasing local sorting and recycling.

Through the Recycling Modernisation Fund, the State and Australian governments provided $21.8 million to co-fund the development of five plastics recycling facilities in Perth. Western Australia will continue to be involved in the development and implementation of national product stewardship schemes for plastics and packaging, the implementation of the state's Containers for Change program, and the implementation of the WA Plan for Plastics (DWER 2021).

Plastic policy and actions will ensure the avoidance and reduction of unnecessary and problematic items, which are commonly found as litter, contaminate waste streams, and may have other emerging impacts yet to be identified.

Tell us

Do you agree organics, plastics and e-waste should be the strategy's priority materials for the next five years?

How well do these draft actions support our priority to better manage priority materials?

Are there other actions that will support this priority?

Do current State Government activities support this priority?

Priority material 3: E-waste and batteries

Waste electronic and electrical equipment, or 'e-waste', covers a range of items we all use and discard at work and at home. Data on e-waste generation is limited, though it was estimated to be about 69,000 tonnes in 2019–20 (or about 1 per cent of total generation). This is a priority waste because, while the volume of e-waste is currently relatively small compared to other waste streams, it is one of the fastest-growing waste streams in the world. E-waste and batteries should be managed responsibly as they may contain materials that are of high value, including rare metals, or that risk harm to the environment or human health, such as lithium-ion batteries.

E-waste includes, but is not limited to, televisions, computers, mobile phones, kitchen appliances and large household items like dishwashers and fridges.

A focus on the responsible management of e-waste has driven the State Government's commitment to a 2024 ban on e-waste disposal to landfill in Western Australia. The initial ban includes a broad range of items including televisions, screens, mobile phones, medical equipment, computers, lighting and lamps. Future phases of the ban are expected to capture small household items and photovoltaic (PV) systems. Several emerging e-waste streams such as lithium-ion batteries (large and small) and e-cigarettes (vapes) will be considered in future phases of the ban. State and territory governments are currently working with the Australian Government on the proposed development of a mandatory product stewardship scheme for small electrical products and PV systems. However, more needs to be done to prepare for the increased volumes of these materials and the increased recycling capacity required.

The national battery stewardship scheme, B-cycle, is in place to increase the recycling of end-of-life hand-held batteries (button batteries, AA, AAA, etc.). Lithium-ion batteries are being increasingly used in electric-powered vehicles (cars, scooters, mobility scooters), as well as household and commercial-scale solar electricity storage. These batteries pose significant risk to the environment, human health and the waste industry if improperly disposed of. According to the Australian Council of Recycling, lithium-ion batteries cause at least three fires in recycling streams every day in Australia, but the real number of blazes is suspected to be much higher. With the right collection systems and infrastructure in place, there is great potential to recover value and resources from batteries.

Our current activities	Actions and ideas to build on in the waste strategy roadmap		
	Key initiatives – what we want to achieve	**Proposed State Government-led actions**	**Proposed collaborative actions**
Legislation and regulation • Implementation of the e-waste to landfill ban • Containers for Change • Implementation of the WA Plan for Plastics **Collection and processing infrastructure** • Funding for infrastructure including the Recycling Modernisation Fund, WasteSorted Infrastructure Grants and Food Waste for Healthy Soils program • Providing funding, guidance and communication tools to local governments via the Better Bins Plus: Go FOGO program • E-waste Infrastructure Grants providing $10.1 million towards increasing capacity and capability for collection and processing of e-waste in Western Australia **Education and behaviour change** • Delivery of the FOGO rollout plan • Statewide WasteSorted initiatives including WasteSorted Toolkit, GREAT Sorts campaign, WasteSorted Community Education grants, WasteSorted Schools	**3.1 Improving outcomes in the C&I sector**	• Conduct audits to improve data on C&I waste composition, including State Government waste.	• Develop better practice guidance and case studies for using recycled materials in commercial and industrial settings.
	3.2 Increasing recovery of organic waste and reducing associated emissions from the MSW and C&I sectors	• Investigate the rollout of FOGO/FO collections for State Government agencies and assets. • Develop pilot program/case studies on C&I organics collection and recycling. • Provide support for and recognition of businesses that reduce food waste. • Build on *State waste infrastructure plan* (DWER 2024) findings and investigate options for increasing paper and cardboard collection and recycling.	• Investigate the potential modification of existing organics recycling facilities to accept FO in line with *State waste infrastructure plan*. • Identify opportunities for and barriers to reducing food waste in the C&I sector.
	3.3 Avoiding generation and increasing recycling of plastics	• Promote the avoidance of plastic waste and reduce consumption of problematic plastics. • Investigate options to promote the reduction in problematic and unnecessary plastics and use of soft plastics, including partnering with Australian Government reform on plastics design standards, collection and processing issues. • Investigate options for increased plastics recycling infrastructure in Western Australia. • Phase out the use of single-use plastic bags in KABC programs and other State Government programs where possible.	• Work with industry partners, the Australian Government and other jurisdictions to promote a reduction in soft plastics and other problematic and unnecessary plastics, and address plastics design standards, collection and processing issues.

Our current activities	Actions and ideas to build on in the waste strategy roadmap		
	Key initiatives – what we want to achieve	**Proposed State Government-led actions**	**Proposed collaborative actions**
	3.4 Improving recycling of e-waste and new energy systems (including PV, batteries from houses, scooters, cars and mobility scooters)	• Implement communications initiatives for managing e-waste. • Provide funding for infrastructure projects that increase capacity and capability to collect and manage e-waste. • Further develop a statewide digital platform to support community in understanding how and where to recycle e-waste and other items for specialist recycling.	• Work with the Australian Government, other jurisdictions, and the Future Battery Industries Cooperative Research Centre to facilitate the recycling of batteries, electrical and electronic products and PV systems (including product stewardship approaches).

Priority 4: Realising the economic potential of recycling

Fulfilling the potential recovery of value and resources, increasing infrastructure investment.

Waste is a significant part of the economy; however, with the right approach and technology, many waste streams can deliver economic value for Western Australia.

Currently, about three-quarters (77 per cent) of the material recycled in Western Australia 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). Source separation of waste enables more circular management of materials using current and emerging recycling and processing opportunities.

Key to successful waste management and the delivery of a circular approach is the:

- ability to aggregate waste flows into viable volumes for business
- facilitation of supply chains that are operationally efficient and environmentally effective
- collection and sorting processes that result in uncontaminated waste which retains its value as a resource and can be more easily treated higher up the waste hierarchy
- development of new markets and sustainable industries for recycled materials.

Two focus areas will drive action:

Leveraging State Government procurement: The use of recycled materials in State Government procurement is promoted through the Roads to Reuse program and the Waste Authority's C&D rollout plan, which both focus on locally recycled, high-volume waste streams. However, we can further leverage the state's substantial purchasing power and make it a driver in the circular economy.

Realising the economic potential of the C&I waste stream: Further investigations are required to more fully realise the economic potential of waste generated by the C&I sector. In 2021–22, 94 per cent of C&I scrap metal was recycled; however, the recycling rate for other material was much lower, particularly for food waste (6 per cent) and plastic (2 per cent). The overall C&I recycling rate was 45 per cent.

A key challenge for developing initiatives to support waste avoidance and recycling of C&I waste is lack of information about waste composition across such a wide variety of waste-generating sources.

This can create issues for developing effective policy responses, as priority actions could differ substantially between different industry and material types.

Although Western Australia collects sufficient information to provide overall estimates of C&I waste generation (with about 700 kilograms per capita of C&I waste generation in the state in 2021–22), more robust data on waste composition is required.

The *State waste infrastructure plan* highlights the need for investment in local recycling and consolidation infrastructure, to optimise waste as a resource, and stakeholders have highlighted the need for more viable, local recycling options in Western Australia.

Tell us

How well do these draft actions support our priority of realising the economic potential of recycling?

Are there other actions that will support this priority?

Do current State Government activities support this priority?

Note: The draft revised strategy's priorities are equally important. The priority numbering is for reference purposes only.

Our current activities	Actions and ideas to build on in the waste strategy roadmap		
	Key initiatives – what we want to achieve	**Proposed State Government-led actions**	**Proposed collaborative actions**
Legislation and regulation • Publish a rolling five-year schedule of anticipated waste levy rates which is updated annually. • Containers for Change • Development and implementation of the Recovered Materials Framework • Working with the Australian Government and other jurisdictions to develop a framework to accelerate product stewardship and to better coordinate work across governments **Leadership, advocacy, policy, programs** • Roads to Reuse program • C&D rollout plan • FOGO rollout plan • Collaboration with the Australian Government and other jurisdictions to: - align with the national agenda - support the development of a national recycled content traceability framework - enhance reporting on recycled content in procurement **Education and behaviour change** • Statewide WasteSorted initiatives including WasteSorted Toolkit, GREAT Sorts campaign, WasteSorted Community Education grants, WasteSorted Schools	**4.1 Increasing demand and developing markets for recycled products and products that contain recycled content**	• Investigate the development of targets for the use and reporting of recycled product in government construction projects of a specific size or value. • Explore options to further incorporate waste and sustainability considerations into government office builds and fit-outs. • Establish Common Use Arrangements preferencing waste avoidance, reuse, recycling and use of recycled/recyclable products. • Develop tools and guidelines for State Government procurement for the assessment of waste avoidance and the use of recycled content in tenders. • Expand the implementation of FOGO or FO collections for State Government agencies and assets. • Investigate the establishment of innovation funding to support new businesses turning waste into a resource.	• Develop case studies on the use of recycled materials in construction projects. • Explore options to support research and innovation that creates new markets and business opportunities for recycled materials.
	4.2 Building on the findings of the *State waste infrastructure plan* to ensure sufficient and appropriate recycling infrastructure	• Undertake detailed analysis to the determine food and organics waste processing needs outside Perth and Peel, with a focus on the South West and Great Southern regions. • Investigate the development of waste precincts and strategic industrial areas to facilitate additional recycling facilities, particularly in highly constrained areas such as northern Perth and the South West region. • Develop appropriate guidelines, a regulatory framework and specifications for the recovery and treatment of bottom ash.	• Investigate opportunities to increase the recycling of co-mingled recyclables through the development of regional materials recovery facilities and the consolidation and sorting of materials at transfer stations. • Support research into innovative recycling technologies and initiatives.

Priority 5: Contingency planning and climate resilience

Strengthening the waste sector's planning, adaptability and response to emergency events.

Waste management is essential in times of emergency.

Avoiding waste generation and increasing recycling of organic waste will help to decrease the state's greenhouse gas emissions. With climate-driven natural disasters such as floods, fires and cyclones expected to increase, planning for managing waste generated from these events is crucial for climate resilience. These events impact each region differently, with some locations likely to experience more acute effects – generating large amounts of waste immediately following the event and in the reconstruction phase. Recent emergency and disaster events in Western Australia showed that most of the waste generated was sent to landfill. This waste may be contaminated and difficult to sort, and it must be managed quickly. While protecting human health and the environment must be prioritised, there may be opportunity to increase the recycling of this waste.

Under the State Emergency Management Framework, the Department of Environmental Regulation has a role to play in providing advice on the management of waste in an emergency. During an emergency, while there will be regard to the waste hierarchy and principles in the waste strategy, the primary focus will be on mitigating the emergency and ensuring a quick recovery, with the requirements of emergency management legislation overriding the waste strategy and many *Environmental Protection Act 1986* and *Waste Avoidance and Resource Recovery Act 2007* requirements (State Emergency Management Committee 2019).

Other emergency events including pandemics (e.g. COVID-19) and biosecurity events (e.g. outbreaks of livestock diseases) can also generate large amounts of waste. In addition to emergency events, waste and recycling infrastructure (landfills, recycling facilities, transfer stations and drop-off facilities) can be impacted by fire, machinery breakdown, maintenance requirements, market failures or financial circumstances. In these events, it can be challenging to find alternative arrangements for recycling, with landfill often the most relied-on solution. Business continuity planning is important to mitigate the risks associated with waste facility shutdown.

State Government

In 2020 the State Government released *Management of waste during the COVID-19 pandemic* (DWER 2020a) which identified the waste and recycling industry as providing an essential service. The document provided guidance for the management of waste in relation to disease transmission during the disposal of medical waste, and for the management of clinical waste, as well as applications for temporary amendments to activities at waste management premises.

The State Emergency Waste Management Working Group, established by the State Emergency Management Committee (SEMC) in response to major incidents including the Yarloop and Wooroloo bushfires and cyclone Seroja, provides a mechanism to report on key issues, lessons learned and future recommendations for emergency waste management. The Department of Water and Environmental Regulation is working with the Department of Fire and Emergency Services to consolidate these findings and will report them to SEMC through the working group.

Planning to manage waste should be a key consideration across emergency prevention, preparedness, response and recovery – in line with the state's Emergency Management Framework and the *WA Community Disaster Resilience Strategy* (DFES 2023).

Note: The draft revised strategy's priorities are equally important. The priority numbering is for reference purposes only.

Local government

At a local government level, waste management services and infrastructure are often significantly impacted by emergency events, and local governments face significant financial and resource implications in the response and recovery phases. Furthermore, local landfills can be overwhelmed by the volume of waste generated during emergency clean-up and reconstruction. In some regions, landfills are the dominant waste management option; however, they may not be suitable, or large enough, to manage the large volumes of hazardous waste generated by an emergency event. Any actions that improve landfill in regional and remote areas will also help support communities to manage waste following an emergency event.

The Western Australian Local Government Association (WALGA) has developed a framework to embed waste management considerations into local emergency management planning and response (WALGA 2018) and is working to establish a Preferred Supplier Panel for Hazardous and Emergency Event Services.

How well do these draft actions support our priority of contingency planning and climate resilience?

Are there other actions that will support this priority?

Do current State Government activities support this priority?

Our current activities	Actions and ideas to build on in the waste strategy roadmap		
	Key initiatives – what we want to achieve	**Proposed State Government-led actions**	**Proposed collaborative actions**
Leadership, advocacy, policy, programs • Department of Water and Environmental Regulation representation in the State Emergency Management Committee **Data and metrics** • Providing data and advice as needed during emergency response events	**5.1 Local government is supported to develop climate resilience and emergency preparedness**	• Support local governments to plan and prepare for waste management following an emergency or natural disaster.	• Progress SEMC Emergency Waste Management project to better support Hazard Management Agencies, local and state governments/departments for disaster response and recovery.
	5.2 Improved data and information on emergency waste disposal options	• Progress a statewide approach to Emergency Waste Management including updates to plans and guidance to aid in disaster response and recovery actions.	• Progress SEMC Emergency Waste Management project to better support Hazard Management Agencies, local governments, and Government Departments for disaster response and recovery needs. • Investigate alternative landfill contingency opportunities between Perth and Peel, as identified in the *State waste infrastructure plan.*

Next steps: finalising the waste strategy and waste strategy roadmap

In parallel to the development of the waste strategy, we will also be progressing the waste strategy roadmap. During the Phase 2 consultation period, we will be seeking not only feedback on the draft waste strategy, but your ideas and input on the key initiatives and actions that will be included in the roadmap.

Some examples of these key initiatives and actions have been included under each of the five waste strategy priorities, but we need your feedback on what needs to be done in each priority area to meet the targets and goals of the waste strategy.

We encourage everyone to give their feedback. Please see page 11 for information on how to participate in the consultation process.

After the consultation period closes on 21 August 2024, we will collate and analyse all the feedback received and use this to update the draft waste strategy and develop the roadmap. The modified draft waste strategy will undergo a further 28-day consultation period (Phase 3), and all feedback received will be used to finalise the waste strategy in mid-2025.

To stay in touch with the activities of the Waste Authority, go to www.wasteauthority.wa.gov.au.

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Glossary

Term	Definition
Better practice	Better practice refers to practices and approaches that are considered by the Waste Authority to be outcomes-focused, effective and high performing, which have been identified based on evidence and benchmarking against comparable jurisdictions. Better practice will be supported by the Waste Authority and the Department of Water and Environmental Regulation through the development of better practice guidelines, measures and reporting frameworks, which will be 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.
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.
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 residents' 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.

Term	Definition
Major regional centre	Major regional centres: 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.
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 life cycle, on the environment and on public health and safety.
Putrescible waste	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 bio-degrade within the environment of a landfill.
Recovered Materials Framework	A proposed regulatory framework to facilitate materials derived from waste being used in various applications through the issuing of a recovered materials approval.
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 2019a).
Reprocessing	Using an item or material that might otherwise become waste during the manufacturing or remanufacturing process.
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 section 5 of the *Waste Avoidance and Resource Recovery Act 2007* (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.
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. Encompasses both reusing an item in its original form for its original purpose and reusing an item for a new purpose (also referred to as ‘repurposing’).
Waste avoidance	Refers to the prevention or reduction of waste generation, or the prevention or reduction of the environmental impacts (for example toxicity) of waste generation.

Term	Definition
Waste Avoidance and Resource Recovery (WARR) Account	In accordance with the *Waste Avoidance and Resource Recovery Act 2007*, 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 to waste collected in the metropolitan region and received at landfill premises outside the metropolitan region, administered under the *Waste Avoidance and Resource Recovery Levy Act 2007* and Waste Avoidance and Resource Recovery Levy Regulations 2008. The waste levy acts as an economic instrument to reduce waste to landfill by increasing the price of landfill disposal and generates funds for a range of waste and environmental purposes. In accordance with the *Waste Avoidance and Resource Recovery Act 2007*, each year the Minister for Environment must allocate not less than 25 per cent of the forecast waste levy amount to the WARR Account.
Waste-to-energy	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 normally referred to as 'waste to energy' (or energy from waste) and can include both thermal and non-thermal technologies.

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