



GOVERNMENT OF
WESTERN AUSTRALIA

 WASTE
AUTHORITY
WA...TOO GOOD TO WASTE



Annual
report
2020-21

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Hon Amber-Jade Sanderson, MLA, Minister for Environment

In accordance with section 23 of the *Waste Avoidance and Resource Recovery Act 2007*, I submit the Waste Authority annual report for the period 1 July 2020 to 30 June 2021, for presentation to Parliament.

A handwritten signature in black ink, appearing to read "Reg Howard-Smith".

Reg Howard-Smith

Chair, Waste Authority



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Chair's report



My fellow members and I have completed our second year of service at the Waste Authority. In a strong and collaborative partnership with the Department of Water and Environmental Regulation (the department) and the Minister for Environment, we have focused on actions to meet the waste-related challenges in implementing the *Waste avoidance and resource recovery strategy 2030* (the waste strategy).

The waste strategy's three objectives continue to guide our actions: waste avoidance; recovery of valuable resources; and the protection of human health and the environment from the harmful effects of waste. The five- and 10-year targets in the waste strategy are a key part of achieving waste change in Western Australia. It is inspiring to see so many stakeholders working together to make further progress towards these important goals.

COVID-19 continues to affect our lives. The pandemic is likely to influence the progress towards the waste strategy targets in some areas. For example, an increase in medical waste is likely, and the processing of recyclables may not proceed as planned if workforces are negatively affected and/or if international trade and shipping movements are further restricted. A reduction of commercial and industrial waste (C&I) is expected given some businesses have had to temporarily close or scale-down their operations. Meantime household municipal solid waste (MSW) may have increased due to a greater proportion of the population working from home. The impact of the pandemic will not be clear until the 2020–21 waste data is analysed.

We are looking at ways to respond to the fluctuating, and often shrinking Australian and international material markets and to improve recycling, reprocessing and manufacturing facilities in Western Australia to ensure a more sustainable future. Governments at federal, state and local levels must continue to work together to find solutions, particularly in these times of increased national protectionism. Industry has a key role in finding innovative supply and demand solutions to minimise waste generation, maximise resource recovery and protect the environment and human health from the harmful effects of disposed waste.

The economic stimulation measures in Australia, including government investment in infrastructure, provide important opportunities. In February 2021, the Australian and State Governments announced \$70 million in joint funding to drive \$174 million in recycling investments in Western Australia. As part of this, the National Recycling Modernisation Fund will provide \$20 million and the State Government \$15 million to leverage investments across eight new projects in the state. These will process about 140,000 tonnes of plastic and tyre waste every year.

The waste levy is an economic instrument that reduces waste to landfill and generates funds for a range of waste and environmental purposes. The levy in 2020–21 was \$70 per tonne. Under the *Waste Avoidance and Resource Recovery Act 2007*, a minimum of 25 per cent of total projected waste levy revenue is allocated to support the waste strategy and related action plan. In 2020–21, waste levy revenue of \$20.51 million was used to deliver important programs such as Better Bins, Household Hazardous Waste, Roads to Reuse, Charitable Recyclers Dumping Reduction, WasteSorted communications, Waste Wise Schools and grants for education and recycling infrastructure. Funding was also allocated for waste data collection systems, waste policy advice and reforms, compliance and enforcement, and initiatives such as the development of waste reforms, consultation on single-use plastics, the Keep Australia Beautiful Council and the Plastic Free Foundation.

In addition to these initiatives, the Waste Authority recognises the vital work of other government agencies in supporting the waste strategy, as described in the *Waste avoidance and resource recovery strategy action plan 2020–21* (the action plan). I thank everyone directly involved in meeting the action plan's commitments, and for their continued efforts going forward. An example is the excellent work in waste avoidance and recycling demonstrated by DevelopmentWA through projects such as the deconstruction of Subiaco Oval, the Hamilton Senior High School and the former Princess Margaret Hospital. These examples show that senior leadership commitment and early planning on waste issues can lead to minimal residual waste generation and very high material recovery rates.

A key target of the waste strategy is to achieve a 75 per cent recovery rate in reuse and recycling of materials. The latest figures (see [Waste and recycling in Western Australia 2019–20](#)) include a reported recovery rate of 58 per cent, with some likely under-reporting of stockpiled materials and unreported waste being sent to landfill. New reporting regulations and the

department's continued compliance and enforcement work will help improve data quality. To achieve the waste strategy targets, we continue to support the department as it introduces reforms such as the mandatory use of weighbridges at landfill sites. The Waste Authority is aware that reliance on market forces alone will not address the increasing and complex issues of waste generation, rates of recycling and material recovery, and disposal to landfill. We recognise that government must continue to play a role both as supporter and regulator of the waste industry.

During the year, the Waste Authority released an updated *Position statement on waste to energy*, reiterating our position that only residual waste should be used for energy recovery. We welcome the positive local developments in advanced waste systems, including initiatives such as the Kwinana and East Rockingham waste to energy projects, which will collectively use an estimated 700,000 tonnes of waste to produce 65 megawatts of electricity. We are committed to the waste hierarchy, which encourages better-practice waste management to maximise material recovery.

Together with the Minister for Environment and the department, this year we have focused on consistent statewide communications and behaviour change programs; the delivery of three-bin kerbside collection systems which include food organics and garden organics; and the provision of funding to promote the recovery of more value and resources from waste.

The increased use of recycled construction and demolition (C&D) waste is key to meeting the state's targets for material recovery and landfill diversion. C&D waste makes up around 47 per cent of Western Australia's waste stream and represents about 64 per cent of material recovered for recycling. The Waste Authority strongly encourages the inclusion of recycled products, including C&D, in infrastructure project contracts in the private, federal, state and local government sectors.

A Program Risk and Performance Committee (PRPC) supports the Waste Authority. The PRPC meets quarterly and provides oversight and guidance on risk management, program evaluation and financial reporting. It is important to evaluate programs to ensure they deliver value and improved outcomes.

This year the Household Hazardous Waste program was reviewed, and the department is now implementing its recommendations in partnership with the Western Australian Local Government Association.

I take this opportunity to thank the current and former Ministers for Environment and their staff and my fellow Authority members Lee Broomhall, Josh Byrne, Kelly Howlett and Tim Youé for their ongoing commitment to the waste strategy. I also thank the department's Director General Michelle Andrews and her predecessor Mike Rowe and their excellent teams for their support of the waste strategy and the Waste Authority. The challenges and opportunities ahead of us are significant and I am confident that collectively we are well-placed to move towards a more sustainable, low-waste future based on circular economy principles.

Reg Howard-Smith
Chair, Waste Authority



Performance overview

Waste and recycling data for the 2019–20 financial year showed that Western Australia generated 5.8 million tonnes of solid waste, of which 58 per cent, or 3.4 million tonnes, was recovered – up from 31 per cent in 2010–11.

The total quantity of waste generated in Western Australia declined by seven per cent between 2014–15 and 2019–20, with the disposal of C&D waste to landfill showing the biggest decline (a 10 per cent decrease). There was, however, an increase of 18 per cent in waste generation from 2018–19 because a more complete dataset was obtained through mandatory reporting requirements.

The material recovery rate for the C&D waste stream was 81 per cent in 2019–20, exceeding the 2020 waste strategy target of 75 per cent. However, the recovery rate is likely to be inflated due to the stockpiling of C&D waste.

Material recovery from the C&I waste stream decreased from 53 per cent in 2014–15 to 44 per cent in 2019–20, falling short of the 2020 waste strategy target of 70 per cent. While the C&I waste sector has responded to increases in the waste levy, this sector's material recovery performance is also closely tied to international market prices for waste products with permission for export.

The material recovery rate for the MSW stream generated in the Perth metropolitan region continues to underperform and was 31 per cent in 2019–20, less than half the 65 per cent target to be attained by 2030. A headline strategy of the waste strategy is the adoption of three-bin food organics and garden organics (FOGO) collection systems across the Perth and Peel regions. These systems have been shown to significantly improve MSW recovery rates both in Western Australia and other jurisdictions.

The waste strategy has a headline strategy to improve the quality and timeliness of waste data for assessing and reporting against its targets. Liable persons must now undertake waste data reporting under the revised Waste Avoidance and Resource Recovery Regulations 2008 (WARR Regulations). The 2019–20 data was the first collected under the revised WARR Regulations.



Table 1 – Landfill material recovery in Western Australia

| Year | Metro MSW | Major regional centres | C&I | C&D | Statewide recovery rate | Per capita generation (kg per person) |
|--------------------|-----------|------------------------|------------------|-----|-------------------------|---------------------------------------|
| 2010–11 | 39% | - | 28% | 31% | 31% | 2,764 |
| 2011–12 | 39% | - | 41% ² | 38% | 38% | 2,658 |
| 2012–13 | 45% | - | 45% | 39% | 40% | 2,486 |
| 2013–14 | 41% | - | 45% | 38% | 39% | 2,659 |
| 2014–15 | 39% | 30% ³ | 53% | 42% | 42% | 2,452 |
| 2015–16 | 36% | 31% | 48% | 64% | 49% | 2,029 |
| 2016–17 | 32% | 28% | 47% | 77% | 52% | 1,787 |
| 2017–18 | 37% | 28% | 47% | 75% | 51% | 1,769 |
| 2018–19 | 34% | 29% | 51% | 81% | 57% | 1,852 |
| 2019–20 | 31% | 28% | 44% | 81% | 58% | 2,168 |
| State targets 2020 | 65% | 50% | 70% | 75% | - | - |
| State targets 2025 | 67% | 55% | 75% | 77% | 70% | 2,207 |
| State targets 2030 | 70% | 60% | 80% | 80% | 75% | 1,962 |

Notes: Figures from 2019–20 are from data collected under regulation 18C of the WARR Regulations. Figures before 2019–20 are from the *Recycling activity in Western Australia* annual reports, except MSW performance (major regional centres) which is from the annual census of Western Australian local government waste and recycling services. Some historical data has been revised. The data presented here supersedes all previous versions. Excludes one major regional centre due to data verification issues.



Operational structure

Organisational structure

Sections 16(1) and 17(1) of the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) provide that the Minister for Environment will ensure the Waste Authority has the services and facilities reasonably necessary to enable it to perform its functions. Section 16(2) provides that the Minister may, by arrangement with the department, allow the Waste Authority to make use of the services of any officer in the department.

Services are provided by staff employed by the department under provisions of the *Public Sector Management Act 1994*, pursuant to section 16(1) of the WARR Act. Officers are subject to the department's human resources policy, information technology and administrative processes, and other policy matters regulated by the *Financial Management Act 2006* and Treasurer's instructions.

A service-level agreement for the provision of services and functions between the department and the Waste Authority is in place and reviewed annually. The agreement includes both section 16 services and section 80 functions that are approved by the Minister. The agreement sets out the parties' mutual understanding of their respective statutory and other legal functions and obligations through a statement of expectations and performance deliverables for the provision of services.



Membership

In July 2019, the Governor of Western Australia appointed the members of the Waste Authority for three-year terms.



Chair Reg Howard-Smith

Reg Howard-Smith is an industry advocate who has provided representation to the highest levels of government, the private sector and academia within Australia and internationally. He has considerable experience in shaping the strategic direction and policy of organisations, has been a member of numerous boards, and is known for his ability to evolve and cultivate strong relationships with leaders and stakeholders. Reg was also appointed Chair of the Building and Construction Training Board in March 2020.

Reg was the Chief Executive Officer (CEO) at the Chamber of Minerals and Energy for more than a decade, where he positioned and maintained the chamber as a leading resource sector organisation in Western Australia with a membership larger and more diverse than any other in the sector, Australia-wide.



Deputy Chair Lee Broomhall

Lee Broomhall is the CEO of Workpower and has held this role since 2012.

Workpower is a not-for-profit organisation that owns and operates several large-scale commercial businesses in Western Australia. Its enterprises exist to employ and support people with a disability.

With a 24-year tenure, Lee was previously the Deputy CEO and held executive roles such as the Executive Manager People, Performance and Strategy and Chief Operating Officer.

In 2010, Lee was the Western Australia winner of the Telstra Young Business Women's Awards. Lee holds qualifications in human services, business management and professional coaching. She is a Fellow of Leadership WA.



Member Dr Josh Byrne

Josh Byrne is an environmental scientist with a national profile as a consultant, researcher and communicator in urban sustainability. His approach is leadership through demonstration by engaging in projects that provide opportunities to test innovation, build capacity and share learnings with stakeholders and the broader community.

Josh's research interests span water sensitive design, high-performance housing and sustainable urban development. He holds a PhD and has authored over 30 academic publications in these fields, as well as industry guidelines and popular books. He is an Adjunct Professor with the Research Centre for Water, Energy and Waste at the Harry Butler Institute, Murdoch University, and a Senior Research Fellow at Curtin University's School of Design and the Built Environment.

Josh is a member of the WA State Design Review Panel and is on the Board of Greenlife Industry Australia, the national peak industry body for the producers and retailers of plants.



Member Kelly Howlett

Kelly Howlett is the CEO of Pilbara charity, Bloodwood Tree Association Inc. Bloodwood Tree is a wholly Aboriginal-controlled organisation that provides services to people experiencing disadvantage, unemployment or alcohol and other drug problems both in the Port/South Hedland and broader Pilbara areas.

Kelly has made her life and career in the Pilbara, and served as Mayor of the Town of Port Hedland for almost seven years until 2016.

An active and passionate environmental and sustainability practitioner, Kelly founded and remains the Chairperson of the local Care for Hedland Environmental Association.

Kelly was inducted into the Western Australian Women's Hall of Fame in March 2018 in recognition of her lengthy contribution to the Pilbara environment and community. She has extensive governance experience and a keen interest in social issues, the natural environment and sustainability. Kelly has a Bachelor of Science (Environment)/Bachelor Forest Science (Honours) and is a graduate of the Australian Institute of Company Directors' course.



Member Tim Youé

Tim Youé is the CEO of the Southern Metropolitan Regional Council (SMRC), a statutory local government authority delivering innovative and sustainable waste management solutions and climate change abatement measures on behalf of the communities of East Fremantle, Fremantle, Kwinana and Melville.

Tim is also the National Director of the Waste Management and Resource Recovery Association of Australia (WMRR).

He previously held senior management roles in the global logistics sector with a focus on business development, sales and marketing.

Tim is a graduate of the Australian Institute of Company Directors' course and holds Bachelor degrees in Sociology and Politics from Murdoch University and a Masters of Business Administration from Curtin Graduate School of Business.

Enabling legislation

The WARR Act establishes the Waste Authority. In the Act, sections 19 and 20 establish the Authority's general powers and functions, while schedule 2 sets out 17 functions in full. These enable us to:

- advise and make recommendations to the Minister for Environment on matters relating to the Act
- inquire into any matter relating to the Act and advise the Minister for Environment or CEO (of the department) when the Minister or CEO requests advice
- advise and make recommendations to the CEO on the regulation of waste services
- advise and make recommendations to the CEO with respect to subsidiary legislation under the Act
- seek the advice of other entities that we think fit for the purpose of advising the Minister for Environment in relation to the setting and variation of a levy
- act as an advocate for the objects of the Act
- develop, promote and review the waste strategy and coordinate its implementation
- monitor and assess the adequacy of, and report to the Minister for Environment on, the operation of the waste strategy, product stewardship plans and extended producer responsibility schemes
- promote community awareness and understanding of resource efficiency, waste avoidance and resource recovery.

The Authority monitors the implementation of programs in the annual business plan, which is approved by the Minister for Environment, and gives advice to the Minister as requested.

We seek to identify and promote the economic and environmental benefits from improved waste avoidance and resource recovery practices. We also work to ensure the community understands the benefits of resource recovery and avoiding waste generation.

The Waste Avoidance and Resource Recovery Account (WARR Account) is credited with at least 25 per cent of the forecast waste levy. During 2019–20, the department provided administrative support, functions and services, and managed programs funded from the WARR Account as articulated in the service-level agreement and the business plan.

Responsible Minister

The Waste Authority reports to the Minister for Environment, Hon Amber-Jade Sanderson MLA, as the Minister responsible for the WARR Act.



Performance management framework

Funding principles

The application of funds from the WARR Account, through the programs set out in the annual business plan, is a key mechanism for delivering the waste strategy. The Waste Authority has a set of funding principles to ensure the effective application of these funds.

Table 2: Funding principles

| Funding objectives | |
|---|--|
| <ul style="list-style-type: none"> Promote the most efficient use of resources and prioritise the avoidance of waste (by reusing, reprocessing, recycling and energy recovery) over disposal. Protect the environment by reducing environmental harm, including pollution through waste. Ensure consistency with the principles set out in section 4A of the <i>Environmental Protection Act 1986</i>. | |
| Outcome principles | |
| Shared responsibility and partnership | Funded activities should result in a reduction in the impact of waste generated and protection of the state's environmental resources. |
| Innovation and growth | Funded activities should consider innovation that enables and expands our waste management capacity and know-how. |
| Better practice | Funded activities should promote better-practice approaches in waste management, considering the full costs, benefits and impacts of waste management decisions. |
| Waste as a resource | Funded activities should consider the waste hierarchy, avoiding waste generation where possible, maximising waste recovery, and protecting the environment from the impacts of disposal. |
| Intergenerational equity | Funded activities should ensure the health, diversity and productivity of our environment is maintained or enhanced for the benefit of future generations. |

Table 2: Funding principles cont.

| Process principles | |
|------------------------------|--|
| Be efficient and effective | Funded activities should be cost-effective, efficient and deliver a net benefit to the state. |
| Integrity and accountability | Funded activities should be conducted in a manner that exhibits integrity and accountability and adheres to appropriate funding and governance processes. |
| Be collaborative | Funded activities should involve collaboration with relevant agencies and stakeholders where it is likely to lead to an outcome that involves greater benefits for the state and/or delivers outcomes more efficiently. |
| Be informed | Funded activities should be developed and evaluated using an evidence-based approach informed by the collection and reporting of relevant data and information. |
| Stakeholder engagement | Funded activities should be informed by stakeholder engagement and designed and implemented in a manner supported by relevant stakeholders. |
| Manage risk | Funded activities should be designed and implemented with appropriate identification, evaluation and risk management. |
| Be flexible and responsive | Funded activities should operate within the anticipated budget, although being flexible and responsive to changing circumstances is necessary. A 25% variation (up or down) in any given line item is permitted with the Chair's approval, on the basis that the overall expense limit for the year is not exceeded. If a variation of more than 25% is required, Ministerial approval will be sought. |

Waste levy collection

The waste levy is payable for all waste disposed of at category 63, 64 and 65 landfills within the metropolitan region and for metropolitan waste disposed of to landfills outside the metropolitan region. In 2020–21, \$79.43 million in waste levy was collected, a small increase on the \$78.39 million collected during the 2019–20 financial year. Thirty landfill premises were monitored in relation to the waste levy, most of which were in the Perth metropolitan area.



Waste Authority performance

The WARR Act sets out requirements for the Waste Authority to develop a waste strategy for Western Australia. The current waste strategy was released in February 2019. It sets targets for waste reduction, resource recovery and the diversion of waste from landfill and is supported by an action plan that we update annually.

The waste strategy aims for Western Australia to become a sustainable, low-waste circular economy in which human health and the environment are protected from the impacts of waste. The strategy has objectives to avoid waste, recover more value and resources from waste, and protect the environment and human health from the impacts of waste. The targets specified to achieve these objectives are ambitious and important to reach.

This section of the annual report sets out the Waste Authority's key achievements for 2020–21 against the waste strategy's headline strategies. It also refers to some of the action plan achievements of the department and other agencies.

The Waste Authority gratefully acknowledges the action plan commitments from, and waste-related work by, the departments of Biodiversity, Conservation and Attractions; Communities; Education; Finance; Health; Justice; Local Government, Sport and Cultural Industries; Planning, Lands and Heritage; and Transport, as well as DevelopmentWA, Main Roads WA and the Water Corporation. Examples of some of their contributions include:

- **DevelopmentWA:** Demonstration projects including the careful deconstruction and reuse of materials from Subiaco Oval and the former Princess Margaret Hospital, and the transformation of the former Hamilton Senior High School site into a thriving, sustainable residential community. Inclusion of a set of waste sustainability metrics in demolition tenders.
- **Department of Finance:** Completion of a revised better-practice social procurement framework, including sustainability and waste avoidance strategies and guidance material. Continued support for agencies in applying the sustainable procurement policy and disposal of goods policy released in 2020.
- **Main Roads WA:** Leadership in the Roads to Reuse (RtR) pilot program and use of thousands of tonnes of recycled C&D materials in various infrastructure projects. An ongoing commitment to increasing the use of recycled materials in future projects and strong leadership in the use of recycled materials for emulation by others in the construction and demolition sectors.

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Develop statewide communications to support consistent messaging on waste avoidance, resource recovery and appropriate waste disposal behaviours.

Behaviour change

Consistent communication across multiple channels is essential to ensure the community has a shared set of knowledge, skills and behaviours to avoid waste, recover resources and protect the environment from the impacts of waste.

Headline strategy 1 brings together a suite of programs including the WasteSorted toolkit, the 'Be a GREAT Sort' behaviour change campaign, Waste Wise Schools and other high-profile waste programs.

A review of WARR Account-funded programs has been undertaken to ensure all programs provide consistent messaging to the community and stakeholders. In 2020–21, the WasteSorted Awards (previously known as the Infinity Awards) and WasteSorted Grants (previously known as the Community and Industry Engagement Program) were aligned to the WasteSorted brand. In 2021–22, Waste Wise Schools will also transition to WasteSorted Schools.



'Be a GREAT Sort' behaviour change campaign

A major long-term behaviour change program, informed by research, was developed to support the waste strategy. The 'Be a GREAT Sort' campaign was launched in August 2020. The campaign targets five high-priority waste behaviours to encourage the community to take simple actions to make 'landfill the last resort'.

In 2020–21, 'Be a GREAT Sort' messages achieved a broad reach across many channels, including:

- 105,061 visits to the WasteSorted website
- 3,007,002 impressions on the WasteSorted YouTube channel
- 4,447,591 impressions on social media advertising
- 1,491,188 listeners on metropolitan radio
- 157,000 viewers on regional television.

In 2020–21, \$16,100 was invested in additional research to understand how the community disposes of batteries. New messages on batteries will become part of the WasteSorted campaign in 2021–22.

An initial evaluation of the 'Be a GREAT Sort' campaign was undertaken in June 2021. This used a survey of 1,000 households and media reach and bin tagging data to evaluate the effectiveness of key messages in changing behaviour. The results of the evaluation will be used to inform future messages.

WasteSorted toolkit

The WasteSorted toolkit provides a suite of free resources for local governments and regional councils to communicate with residents about sorting waste correctly to reduce contamination in kerbside bins and increase material recovery and recycling.

Stakeholders are regularly consulted about the ongoing development of the WasteSorted toolkit to ensure it meets their needs, including the Consistent Communications Collective of the Western Australian Local Government Association (WALGA).

In 2020–21, \$120,000 was invested in updating the WasteSorted materials. The WasteSorted toolkit now has additional FOGO materials, including:

- an animation to promote the use and benefits of FOGO
- a FOGO rollout guide for local governments
- an agreed list of items that can go in a FOGO bin.

Social media resources were also developed and shared with stakeholders for National Recycling Week in November 2020 and for International Compost Awareness Week in May 2021. Additional WasteSorted toolkit resources were also created in multiple languages to support culturally and linguistically diverse communities.

In 2020–21, a range of local governments and regional councils actively used the WasteSorted toolkit and ‘Be a GREAT Sort’ campaign materials, including the Eastern Metropolitan, Southern Metropolitan, Western Metropolitan and Bunbury-Harvey regional councils; the cities of Albany, Armadale, Bayswater, Busselton, Cockburn, Kalamunda, Swan and Wanneroo; the towns of Bassendean and Port Hedland and the shires of Augusta Margaret River, East Pilbara and Esperance. In State Government agencies, the WA Museum Boola Bardip installed internal and external WasteSorted bin signage and a billboard banner featuring the GREAT Sorts characters, and Kings Park and Botanic Garden continued to promote WasteSorted messaging through its public place recycling.

Both the behaviour change campaign and WasteSorted toolkit are supported by the new WasteSorted website www.wastesorted.wa.gov.au.



Bin tagging

Under a three-year service-provision agreement, WALGA received \$252,500 in 2020–21 to deliver a bin-tagging program to increase community awareness and reduce kerbside bin contamination rates. The program educates householders by providing direct feedback on kerbside bin contents, together with advice on what to exclude from particular bins to improve material recovery rates. The program will also gather data on the effectiveness of community education and behaviour change efforts. WALGA, working with local governments and regional councils, delivered the bin-tagging program to more than 10,000 households during the year.



WasteSorted Grants – recycling infrastructure and community education

The WasteSorted Grants program has two streams:

- stream 1 supports organisations to implement infrastructure projects that divert more waste from landfill and increase material recovery rates (action under headline strategy 8)
- stream 2 focuses on community education programs that align with the WasteSorted messaging.

In 2020–21, \$1,544,413 in funding was paid to 14 projects, including \$1,241,755 to six organisations undertaking recycling infrastructure projects across Western Australia (table 3) and \$302,638 to eight community education projects (table 4).

Table 3: WasteSorted Grants stream 1, recycling infrastructure

| Organisation | Project | Grant |
|--|--|--------------------|
| Adarsh Investments Pty Ltd | Wastepaper recycling and pulp product manufacturing | \$250,000 |
| City of Greater Geraldton | Meru waste disposal composting facility | \$176,000 |
| Eastern Metropolitan Regional Council | Tackling a troublesome two: provision of drop-off points for expanded polystyrene and aerosols in Perth's eastern region | \$65,775 |
| Fulton Hogan Industries Pty Ltd | Utilisation of recycled asphalt pavement, glass and plastics in asphalt manufacture | \$250,000 |
| Perth Bin Hire | Bottle to bottle recycling project | \$250,000 |
| Southern Metropolitan Regional Council | FOGO decontamination with slow speed shredder | \$250,000 |
| Total | | \$1,241,775 |

Table 4: WasteSorted Grants stream 2, community education

| Organisation | Project | Grant |
|---------------------------------------|---|-------------------|
| Bunbury Harvey Regional Council | Watch Your Waste and 'Be a GREAT Sort' education campaign using the WasteSorted toolkit | \$48,058 |
| City of Wanneroo | WasteSorted – talking my language! | \$41,547 |
| Curtin University | Development of recycled glass concrete specifically for Western Australian conditions | \$50,000 |
| Eastern Metropolitan Regional Council | Circular economy training and capacity building | \$50,000 |
| Level 5 Design Pty Ltd | Toolbox education sessions to improve the amount of C&D waste used in road projects in the South West | \$35,000 |
| Repair Café Fremantle | Repair Café Fremantle | \$5,192 |
| Shire of East Pilbara | Engaging Newman in waste management | \$23,085 |
| WALGA | Better practice resource recovery in multiple unit dwellings – guidelines and pilot project | \$49,756 |
| Total | | \$302, 638 |

Waste Wise (WasteSorted) Schools

The Waste Wise Schools program is being rebranded as WasteSorted Schools. It links to the Western Australian curriculum and supports schools with educational strategies, including hands-on learning experiences, to reduce waste to landfill and develop positive environmental values in students and the school community. During the year, WasteSorted Schools staff delivered professional learning workshops, visited schools and participated in project and partnership development across the Perth metropolitan and regional areas. The program budget in 2020–21 was \$450,000. Program highlights for the year were:

- accrediting a total of 281 schools
- grants totalling \$132,025 being distributed across 44 accredited schools for projects such as recycling systems, composting and worm farming, and reuse collection infrastructure
- delivering 19 professional development workshops and webinars for teachers from 186 schools, as well as 80 educational waste audits and 22 student activities for 82 schools
- developing an online professional learning module for teachers
- supporting waste management activities in schools through partnerships in the Kimberley and Kalgoorlie-Boulder regions and Perth's southern suburbs
- delivering waste education workshops to early years learning services
- developing waste management curriculum material for schools, to support teachers to deliver waste education to students
- 18 schools reaching 10 consecutive years of WasteSorted Schools accreditation.

The Western Australian litter strategy

The Keep Australia Beautiful Council WA (KABC) received funding of \$876,000 through the WARR Account to roll out its new five-year *Litter prevention strategy for Western Australia 2020–2025*. The strategy has four strategic objectives:

Objective 1 – Increase community understanding of the impacts of litter on the environment and support behaviour change.

Objective 2 – Contribute to the long-term prevention of litter and marine debris.

Objective 3 – Regulate and enforce the *Litter Act 1979*.

Objective 4 – Monitor the level of litter in Western Australia and its marine environment and evaluate the effectiveness of programs.

Key litter strategy achievements in 2020–21 included:

- A new litter audit methodology, the Australian Litter Measure (AusLM), designed in conjunction with all states and territories.
- Education and training events such as clean-ups and displays, the Clean Schools program and nine workshops in partnership with Waste Wise Schools.
- A total of 111 new registrations in the Clean Schools program, bringing participating schools to 680.
- The Adopt-a-Spot program, which had 1,670

registered groups, supported by more than 49,000 volunteers since the program began in 2009.

- The annual Tidy Towns Sustainable Communities Awards were initially launched in March 2020 in Kalgoorlie-Boulder with a clean-up attended by 100 volunteers, but the program was suspended due to COVID-19 restrictions. The Minister for Environment relaunched the program in June 2020 for the 2020–21 year. Forty-one communities registered in the awards, with Narrogin the 2020 state winner. More than 37,000 hours of volunteer participation was recorded in the submitted projects.
- The Litter Prevention and Waste Management Award, awarded to the Shire of Shark Bay for its new recycling centre. A special 'Community Action COVID-19' category was created to recognise regional projects that sought to maintain community connectedness during the pandemic. This was awarded to Corrigin for its 'Staying@Home: Community photography project'.
- An educational video, created to support the Community Litter Grants program and included the participation of the Minister for Environment.

For further details on KABC's work, see its 2020–21 annual report.

WasteSorted Awards



The WasteSorted Awards celebrate Western Australia's waste champions and recognise projects that avoid waste, recover value from waste streams and protect the environment.

A total of 79 nominations were received for the WasteSorted Awards and 40 finalists were announced on 6 April 2021. The Awards event was held on 5 May 2021 and attended by 178 people. The Waste Authority warmly congratulates the 2021 WasteSorted Awards winners:

- Community Waste Award – Downer
- Commercial and Industrial Waste Award – Instant Waste Management
- Waste Management Award – Downer
- WA Regional Waste Award – North West Recycling
- 2021 Waste Champion – Keith Rickman
- Waste Team of the Year – Sir Charles Gairdner Hospital, Green Team



- Waste Innovation of the Year – Town of Cambridge, Green Machines Lab, Poly Pipe Recycling and Aussie Pool Covers for the Pool Blanket Recycling Program
- WasteSorted School of the Year – Manea Senior College
- 2021 Young Waste Achiever – Youth Affairs Council, Youth Educating about Waste
- Media Award – Lucy Jarvis
- 2021 WA Waste Award – Southern Metropolitan Regional Council
- 2021 Waste Initiative of the Year (joint winners) – City of Bunbury for the Public FOGO Bins program and DevelopmentWA for the One One Five Hamilton Hill project.

An evaluation of the event showed that 92 per cent of respondents were satisfied or very satisfied with the event.

National Recycling Week

The Waste Authority invested \$19,990 in promoting National Recycling Week in November 2020. This went towards radio advertising, a supplement on recycling in The West Australian newspaper, content in the Ed! Liftout for students, online content and a competition to promote social media engagement.

The liftout included a message from the Minister for Environment and two feature articles: one on the increase in local governments rolling out three-bin kerbside collection systems including FOGO, and the other promoting the success of the RtR program.

Plastic Free July

The Plastic Free Foundation is a not-for-profit organisation which delivers the annual Plastic Free July challenge encouraging Western Australians to avoid single-use plastics for the month of July. In 2018–19, the foundation entered into a funding agreement with the State Government for \$326,625 to deliver the Plastic Free July campaign over three years from 2019 to 2021, including \$47,375 for 2020–21.

The Plastic Free Foundation ran its 10th Plastic Free July campaign in July 2020. An impact report estimated that 300,000 Western Australians, and a record 326 million people worldwide, participated in Plastic Free July in 2020.

Household Hazardous Waste program

The Household Hazardous Waste (HHW) program funds local governments and regional councils to collect, store, recover and dispose of flammable, toxic, explosive or corrosive hazardous waste generated by households. If not disposed of correctly, these products can pose a threat to public health or the environment.

The program is delivered under a multi-year funding agreement with WALGA. In 2020–21, \$1,802,450 was directed to WALGA for this important program, which included \$100,000 to construct two new permanent HHW collection sites: one in the City of Karratha and the other in the City of Bayswater.

Since 2011, 5,498 tonnes of materials have been collected from 15 permanent facilities (nine metropolitan, six non-metropolitan) and through temporary collection events. In 2020–21, 520 tonnes of materials including acids, batteries, flammable liquids, paint and cleaning products were collected for safe recovery or disposal.

An external financial audit of the program was completed in March 2021 with no adverse findings. The HHW program has also been evaluated independently and the recommendations will be adopted to improve the program in future years.

Better-practice local government waste services

The primary collection methods for MSW are kerbside, vergeside and drop-off services. Better-practice work began with the introduction of the original Better Bins program, which funded local governments to provide better-practice kerbside collection services, focusing on a three-bin system to encourage greater source separation and higher resource recovery. Better Bins encourages services consistent with the Waste Authority's *Better Bins kerbside collection guidelines* (2014) and the *Better practice FOGO kerbside collection guidelines* (2020). These guidelines support the waste strategy target to increase the recovery of organic materials through three-bin systems that include a separate FOGO bin.

Guidance on vergeside and drop-off services is being developed, in consultation with WALGA and other key stakeholders, and will be released in 2021–22.



02

A consistent three-bin kerbside collection system, which includes separation of food organics and garden organics from other waste categories, to be provided by all local governments in the Perth and Peel regions by 2025 and supported by State Government through the application of financial mechanisms.

Waste Authority performance

FOGO position statement

The Waste Authority FOGO position statement was updated in August 2020. It confirms our support for FOGO collection systems which local governments provide to households and gives details about FOGO services and benefits.

Better Bins and Better Bins Plus: Go FOGO

The State Government has allocated \$20 million over six years for three-bin FOGO kerbside collections to be provided to households.

The Better Bins program began in 2014 as a pilot and then ran from 2016 to 2019, with several multi-year funding agreements in place with various local governments. During 2020–21, the Waste Authority continued to manage Better Bins agreements with 17 local governments, at different stages of implementation. The program provides an incentive for local governments to introduce a three-bin system to encourage greater source separation and higher resource recovery rates. Since the launch of the program, \$16.8 million has been committed to 29 local governments.



On 5 May 2020 the Minister for Environment announced the Better Bins Plus: Go FOGO program, building on the original Better Bins program by encouraging the transition to a three-bin FOGO system as the next step towards better-practice kerbside collection systems. Better Bins Plus: Go FOGO offers local governments up to \$25 for each household that receives a better-practice three-bin FOGO collection service, consistent with the *Better practice FOGO kerbside collection guidelines (2020)*.

In 2020–21, 16 local governments entered funding agreements for the Better Bins Plus: Go FOGO program. A total of \$1.475 million was committed to eight local governments to optimise existing FOGO services through complementary measures. Three local governments who were not involved in the original Better Bins program entered into funding agreements for the revised Better Bins Plus: Go FOGO program, which will provide funding of more than \$800,000 to reach an additional 35,000 households. Overall, the 2020–21 investment in supporting local governments to implement FOGO services impacted more than 168,000 households.



Plan for a three-bin FOGO system rollout

The FOGO Reference Group, comprising representatives from state and local government and the waste and organics industry, supports the Waste Authority by advising on the rollout of FOGO services.

The reference group helped develop the *2020–21 FOGO rollout plan* which focuses on facilitating markets for FOGO-derived products and matching processing capacity with expected generation rates. The FOGO rollout plan has actions relating to five themes:

1. markets
2. engagement and education
3. local government services
4. processing
5. foundation actions (such as data projections and support services for the sector).

Highlights include the preparation of a draft market development strategy for FOGO-derived products, a step-by-step guide for planning, implementing and monitoring better-practice FOGO services, and a list of materials that can be placed in the FOGO bin to support consistent communications. These projects complement the Better Bins Plus: Go FOGO program.

An online forum was delivered in September 2020 focusing on FOGO services to multi-unit dwellings, attracting more than 200 participants. The forum followed the success of previous online sessions.

03

Implement sustainable government procurement practices that encourage greater use of recycled products and support local market development.

Reducing waste through procurement

On behalf of the Waste Authority, the department contributed to the Department of Finance (DoF) better-practice procurement framework. This includes guidelines on sustainable procurement practices and the disposal of goods purchased by public authorities, as well as input on common use agreements to reduce waste and support agencies to reduce their purchasing of single-use plastics.

The department also worked with DoF to identify how the State Government could lead by example and use its purchasing power to encourage suppliers to adopt more sustainable practices and develop markets for sustainable products and services.

Transport infrastructure projects provide opportunities to procure and use significant volumes of recycled products, such as C&D products (including road base), organics, rubber, glass and plastics. The Waste Authority and the department worked closely with the transport portfolio to identify opportunities to use recycled products in major transport infrastructure projects, including those fast-tracked as part of the COVID-19 economic recovery package.



Roads to Reuse program

C&D waste not only makes up about half the state's waste stream, but also about half of the material recovered from recycling. Increasing the recovery of C&D will help achieve the waste strategy's 2030 target to recover 75 per cent of materials.

The Waste Authority and the department continued to deliver the RtR program, in partnership with Main Roads WA, the Department of Health and the Waste and Recycling Industry Association of Western Australia (WRIWA). The RtR program encourages the use of recycled C&D products in civil applications, such as road construction. This is achieved by supporting the supply to market of recycled C&D products which meet a product specification to protect public health and the environment.

After the success of the RtR pilot project with Main Roads WA, which used more than 30,000 tonnes of recycled C&D products in the Kwinana Freeway Widening and Murdoch Drive Connection project, the partnership has continued. In 2020–21, Main Roads used close to 30,000 tonnes more recycled C&D products in the state's roads. Since 2019, it has used more than 62,000 tonnes of RtR material in total and has committed to increase this in future years. The *Roads to Reuse pilot report* was published in June 2021.

Four RtR recyclers have been accredited in Western Australia as of June 2021, with five sites producing RtR material. As the network of accredited locations increases, construction sites will be able to access recycled materials from more sources while reducing

transport impacts and costs.

RtR has also provided other government agencies with opportunities to collaborate and use recycled material. Sustainability was at the forefront of the DevelopmentWA Subiaco Oval demolition, where materials were broken into large segments and transported to recycling facilities. This ensured maximum recycling opportunities and minimum impact on the environment and community. Most of the material was recycled and used by Main Roads WA.

The same methods are being applied to the demolition of Princess Margaret Hospital in 2021. The project has a recycled material target of up to 96 per cent. Recovered concrete from the site will be processed into RtR material for use in road construction.

A C&D industry roundtable was held in 2021 which was attended by state and local government, industry representative bodies, recyclers and other stakeholders. The roundtable explored opportunities to expand the use of recycled C&D products in Western Australia. It also discussed barriers to material use for local government and private industry, and how to overcome them. The roundtable confirmed the State Government's commitment to working with recycled C&D materials and expanding use beyond recycled concrete.

RtR program funding for C&D recyclers and for the independent auditing of processes, systems and materials will continue into 2021–22.

04

Implement local government waste plans, which align local government waste planning processes with the *Waste avoidance and resource recovery strategy 2030*.

Support and guidance for local government waste plans

The Waste Authority has recognised that local governments are vital to achieving waste strategy targets by making the creation of local government waste plans a headline strategy. Waste plans are intended to:

- align local government waste management activities with the waste strategy's objectives and targets
- increase consistency in waste planning across local government
- positively impact MSW recovery rates
- encourage local governments to adopt better practice and preferred approaches to waste management.

To begin implementation of this headline strategy, in November 2019 we asked local governments and regional councils in the Perth and Peel regions and major regional centres to develop waste plans.

To help these local governments create their waste plans, we:

- developed a waste plan resource kit
- conducted two training workshops and a webinar
- gave feedback on draft waste plans before they were finalised and adopted by councils.

Given the COVID-19 pandemic and its impacts on local government operations, the original waste plan submission deadlines were extended by six months to 31 March 2021. At 30 June 2021, 42 of 43 council-approved waste plans had been submitted to the department for assessment, with 29 plans endorsed by the CEO, one not endorsed, and the remaining plans under review.

Work is underway to develop the online annual reporting mechanism that local governments will use to submit annual reports on waste plan implementation, as part of Waste Data Online annual reporting. This will include training and support for local governments. The first annual report on the implementation of waste plans is due on 1 October 2022.



05

Review the scope and application of the waste levy to ensure it meets the objectives of the *Waste avoidance and resource recovery strategy 2030* and establish a schedule of future waste levy rates with the initial schedule providing a minimum five-year horizon.

Improved regulatory framework for waste

The Waste Authority acknowledges the department's important work on legislative reforms to support the waste strategy's implementation. Many of the initiatives and programs delivered through the Waste Authority depend on improvements to the waste regulatory framework.

The department conducted four major public consultation processes for waste reform projects during 2020. On 20 February 2020, it released two waste reform consultation papers: *Closing the loop: waste reforms for a circular economy* and the *Review of the waste levy* for an extended five-month timeframe due to COVID-19.

Closing the loop outlined legislative proposals to improve waste management and the effectiveness of the waste levy in Western Australia. Proposed changes would modernise the licensing of waste facilities and reform how the waste levy is applied at landfills. New measures are also proposed to address long-term waste stockpiling. The department has reviewed the consultation submissions and is preparing advice for the State Government on the final approaches for waste reform.

The *Review of the waste levy* canvassed broader strategic issues related to the waste levy's design, including its geographical boundaries and a schedule of future levy rates.

The waste levy aims to influence waste management practices, including reducing waste to landfill, by increasing the price of landfill disposal. It also raises funds to support waste-related programs that reduce waste to landfill. A five-year schedule of rate increases set out in the Waste Avoidance and Resource Recovery Levy Regulations 2008 (WARR Levy Regulations) was completed on 1 July 2018 when the levy reached \$70 per tonne at putrescible landfills and \$105 per cubic metre at inert landfills. With the review of the waste levy underway, the Minister for Environment determined that the waste levy would not increase for 2020–21.

We anticipate the *Review of the waste levy* will be released in 2021–22, in which further direction on the future scope of the waste levy and waste levy rates will be provided.

Between September and December 2020, the department undertook 12 weeks of public consultation on the proposed legislative framework for waste-derived materials in Western Australia. It then published the discussion paper *Waste not, want not: valuing waste as a resource* and held six information sessions.

The proposed legislative amendments will provide certainty about when materials derived from waste are no longer considered waste, meaning that licensing under the *Environmental Protection Act 1986* would not be required and, where relevant, waste levy requirements would not be triggered.

The proposed legislative framework will contribute to objectives in the waste strategy to encourage the use of waste-derived materials, increase demand for recycled products and develop relevant markets, while protecting the environment. The [consultation summary](#) has been released.

In September 2020, the department published a discussion paper *Review of the Waste Avoidance and Resource Recovery Act 2007*, seeking feedback to inform the statutory five-yearly review.

The review considers the effectiveness of the legislation in meeting its objectives for reducing waste and encouraging resource recovery and its alignment to the waste strategy. It also considers recommendations from the 2016 Auditor General and 2018 Public Accounts Committee reports, which outlined areas where waste management could be improved through potential legislative changes.

The department is working to provide a final report on the review for tabling in Parliament during 2021–22.

06

Undertake a strategic review of Western Australia's waste infrastructure (including landfills) by 2020 to guide future infrastructure development.

Illegal dumping

The WARR Account funds the department's waste operations branch to deliver a compliance and enforcement program to reduce the harmful impacts of waste on the environment. The program is designed to ensure compliance with the waste-related provisions of the *Environmental Protection Act 1986* and the WARR Levy Regulations. This is achieved through targeted inspections of landfill premises and illegal waste dump sites and appropriate enforcement action. The branch works in partnership with land managers to reduce the incidence of illegal dumping and littering. Where the program results in offenders being convicted before the courts, joint media releases are prepared. See a summary of the department's prosecutions at www.der.wa.gov.au/our-work/enforcement/summary-of-prosecutions.

Throughout 2020–21, the waste operations branch continued to focus on waste levy compliance at licensed landfills and the transport of waste to and from associated industries.

Waste infrastructure planning

Understanding current and future infrastructure needs is critical for long-term strategic planning and ensuring sufficient waste management infrastructure is available to meet the waste strategy targets.

The department engaged consultants to undertake a waste infrastructure audit and needs analysis to:

- determine the waste management infrastructure required to meet the waste strategy targets and the state's needs to 2050
- examine the extent to which these requirements may be met by current infrastructure, and where gaps may occur
- explore a range of scenarios for meeting future waste infrastructure requirements.

The waste infrastructure audit and needs analysis will inform the development of a state waste infrastructure plan in 2021–22. The plan will provide a long-term framework to guide decision-making for the planning and development of waste infrastructure in Western Australia.



07

Review and update data collection and reporting systems to allow waste generation, recovery and disposal performance to be assessed in a timely manner.

Waste data strategy

The *Waste data strategy* is a key supporting document of the waste strategy. It guides the actions of the Waste Authority and the department to improve waste data management and meet the waste data needs of stakeholders.

Actions progressed in 2020–21 included the collection and validation of data collected under the WARR Regulations and measurement and reporting against waste strategy targets. To improved data confidence, a compliance program for data reported under regulation 18C of the WARR Regulations was developed and implemented. Twelve returns were audited for accuracy and compliance with the regulations.

Mandatory reporting of waste and recycling data

Regulation 18C of the WARR Regulations requires liable persons to report waste and recycling data to the CEO of the department each year in line with approved procedures. The first mandatory reporting period began on 1 July 2019 and ended on 30 June 2020, with 268 annual returns for 2019–20 submitted by liable persons in October 2020.

Annual returns under regulation 18C of the WARR Regulations replace the voluntary surveys of recycling activity and local government waste and recycling services that the department previously conducted on behalf of the Waste Authority.

The *Waste and recycling in Western Australia 2019–20* report will be published on the department's website in 2021–22. This new report will replace the previous series of reports, *Recycling activity in Western Australia* and *Census of local government waste and recycling services*.

Online system for waste reporting

The Waste Data Online system was launched on 1 July 2021 for liable entities to lodge their 2019–20 annual returns as required under regulation 18C of the WARR Regulations. The system was enhanced in 2020–21 to improve user experience.

MyCouncil reporting waste data

The department, on behalf of the Waste Authority, provided local government waste and recycling data for 2019–20 to the Department of Local Government, Sport and Cultural Industries for publication on its MyCouncil website.

08

Provide funding to promote the recovery of more value and resources from waste with an emphasis on focus materials.

Container deposit scheme

The Western Australian container deposit scheme, Containers for Change, began on 1 October 2020. The scheme is expected to recycle 6.6 billion containers over 20 years and pave the way for reduced litter and new business opportunities across the state.

As of 30 June 2021, more than 535 million containers had been returned through Containers for Change, with over \$1.9 million donated to charities and community groups.

About 730 jobs have been created by Containers for Change, with about 40 per cent of these going to people living with disabilities, the long-term unemployed or Indigenous Australians.

The container deposit scheme is a successful example of a state-based product stewardship approach.

Action on single-use plastics

The State Government released Western Australia's Plan for Plastics on 8 November 2020. The plan encourages avoidance of single-use plastics as the preferred action to mitigate their known impacts on the environment and waste streams.

On 13 June 2021 the Premier announced the government would fast-track its Plan for Plastics by four years. The new timeframe will see the Plan for Plastics regulatory actions implemented by the end of 2022, moving Western Australia ahead of other jurisdictions.

Bans on specified single-use plastic items will be delivered over the short- and medium-term and complemented by voluntary approaches. Retailers, hospitality businesses and community groups will be supported in this transition by education and behaviour change programs, as well as through the Plastic Free Places program.

The Plastic Straws Working Group was established in February 2021 to consult with the disability, health and aged-care sectors to ensure that people who need single-use plastic items to maintain their quality of life have continued access to straws. Membership of this group was broadened in July 2021 and re-named the Single-Use Plastics Working Group. The group will provide input into the rollout of the fast-tracked Plan for Plastics.

The department is undertaking a study in collaboration with the Department of Biodiversity, Conservation and Attractions to research the levels and impacts of plastics and microplastic pollution in the Swan-Canning estuary. The plastic sampling data will be gathered over 18 months to obtain information about plastic pollution across multiple estuary locations and at different times of the year. Three rounds of sampling were completed in 2020–21.

Premier's Circular 2018/03 – Reducing the use of disposable plastic was issued on 12 November 2018. This policy seeks to significantly reduce the amount of single-use plastic items procured by State Government agencies. In 2020, the department circulated a survey to all agencies and entities subject to the Premier's Circular to understand current plastic procurement practices and barriers to reducing their use. More than

1,300 responses were received from 46 agencies. A report has been prepared and agency feedback was clear: significant support is required to reduce plastic procurement. The department has begun work on developing tools for State Government agencies to reduce their use of disposable and single-use plastics.

Electronic waste (e-waste)

The WasteSorted e-waste grants 2020–21 were launched in October 2020. In January 2021, the government announced funding of nine e-waste projects totalling \$1 million through the Department of Jobs, Tourism, Science and Innovation's New Industries Fund: WasteSorted e-waste grants. Funding was allocated through two streams: 'innovation processes' and 'collection'. Grant recipients included CSIRO, to develop metal recovery from e-waste through innovative biotechnology, and Total Green Recycling, to develop a mobile reuse and data destruction centre.

In 2021, the State Government announced it would ban the disposal of e-waste to landfill by 2024. To inform the future work, a material flow analysis was undertaken to determine the volume, type and location of e-waste generation and projected trends. Significant work is required over the next three years, in consultation with the community, to develop policy and regulation (including licensing and compliance) and ensure suitable recycling infrastructure. Further work will be required to engage and inform the community in the lead-up to the ban. The Waste Authority will support the department to prepare for the ban; for example, by administering funding to develop e-waste recycling infrastructure.

Food waste

In May 2019, the Minister for Environment approved Western Australia's participation in the Fight Food Waste Cooperative Research Centre (CRC). A report on household food waste behaviours in Western Australia was published in 2020. Household bin audits have also been undertaken and key messages identified.

OzHarvest was awarded \$50,000 in February 2021 to trial interventions to reduce household food waste.

Food waste messages, informed by the Fight Food Waste CRC and OzHarvest research, will be included in the WasteSorted 'Be a GREAT Sort' behaviour change campaign in 2021–22.



Charitable recycling organisations

Western Australian charitable recycling organisations continued to access WARR Account funding through the Charitable Recyclers Rebate (CRR) program and the Charitable Recyclers Dumping Reduction (CRDR) program.

Charitable recycling organisations routinely dispose of materials that have been illegally dumped or cannot be recycled or reused, incurring costs that are challenging to manage. To provide practical assistance to these charities, the Waste Authority offers the CRR program, which provides a rebate for the cost of the waste levy incurred by these organisations when they dispose of unusable material in the metropolitan area. The program supports the continued efforts of charitable recycling organisations to divert waste from landfill and recognises that disposal may be the only option for some items. Charities can claim the rebate at the end of each quarter. Six charities participated in the program in 2020–21 and were supported by a total of \$288,391.60.

Reducing littering and illegal dumping at donation sites is a key priority and the Waste Authority supports charitable recycling organisations in their efforts to reduce donations of unusable goods, which in turn reduces littering, illegal dumping and the amount of material needing to be disposed of to landfill.

In 2020–21, \$29,981 was invested in developing a suite of behaviour change materials to reduce illegal dumping at charity bins and stores. The resources, developed in consultation with Western Australian Charitable Recyclers, promote 'Gifting only the good stuff' to charity, such as textiles, toys and furniture. A promotional video was produced along with posters, bin stickers and social media materials. An additional \$12,450 was invested in promoting the campaign on Google and Facebook: the advertisements were seen 14 million times and generated more than 7,000 visits to the WasteSorted website.

Support for material recovery facilities

In response to the fire that destroyed the Cleanaway material recovery facility in South Guildford in November 2019, which had been processing about one third of the recyclables from the metropolitan area, the Minister for Environment committed to support the remaining major material recovery facilities with funding throughout 2019–20 and 2020–21. A total of \$2.1 million in WARR Account funding was provided through funding agreements between the Waste Authority and SMRC and SUEZ to support their capacity to process as much of the diverted material as possible. Funds of \$362,000 were paid in 2020–21.



Summary of expenditure

The *Business plan 2020–21* focused on the actions and activities under each of the eight headline strategies that are funded through the WARR Account. See Table 5 for a summary of project budgets and actual expenditure. Some variation between the planned budget and the final expenditure is inevitable given various factors throughout the year, including the cost of services, the impacts of COVID-19 and changing State Government priorities. Where variations occurred, they were approved by either the Chair of the Waste Authority or the Minister for Environment as required under the *Business plan 2020–21*. By the 30 June 2021, 98 per cent of the projected 2020–21 budget was expended.

Note 1: Table 5 provides project expenditure extracted from the department's financial management system. Its annual report provides an audited financial statement that includes expenditure from the WARR account.

Note 2: Variations between the original planned budget and the final expenditure were approved in advance by the Chair of the Waste Authority if 25 per cent higher or lower than originally anticipated, or by the Minister for Environment.

Note 3: Expenditure limit increase was a result of program grant refunds from previous financial years received in 2020–21 and additional funding approved by the Minister for Environment.





Table 5 – Project budgets and actual expenditure

| Project | Original 2020–21 budget | Final 2020–21 expenditure |
|---|-------------------------|---------------------------|
| Headline strategy 1 | | |
| Action 1.1.1 – WasteSorted toolkit | 100,000 | 120,000 |
| Action 1.1.3 – WasteSorted behaviour change | 340,000 | 367,147 |
| Action 1.1.4 – WasteSorted bin tagging | 110,000 | 252,500 |
| Action 1.1.5 – WasteSorted Grants for community education | 100,000 | 299,363 |
| Action 1.1.6 – WasteSorted Schools | 450,000 | 441,436 |
| Action 1.1.7 – Litter strategy (KABC) | 876,000 | 876,000 |
| Action 1.1.8 – WasteSorted Awards | 190,000 | 193,692 |
| Action 1.1.9 – National Recycling Week | 20,000 | 19,990 |
| Action 1.1.10 – Sponsorship (Waste & Recycle Conference) | 35,000 | 28,000 |
| Action 1.1.11 – Plastic Free Foundation | 47,375 | 47,375 |
| Action 1.2 – Household Hazardous Waste | 1,770,450 | 1,823,095 |
| Headline strategy 2 | | |
| Action 2.1.1 – Original Better Bins funding | 3,608,000 | 3,416,746 |
| Action 2.1.2 – Better Bins Plus: GO FOGO | 1,000,000 | 1,763,205 |
| Action 2.1.3 – FOGO market research | 100,000 | 108,782 |
| Headline strategy 3 | | |
| Action 3.3 – Roads to Reuse program | 150,000 | 81,372 |
| Headline strategy 6 | | |
| Action 6.1 – State waste infrastructure audit | 250,000 | 171,289 |
| Action 6.2 – Reprocessing feasibility research | 150,000 | 0 |
| Action 6.3 – State waste infrastructure plan | 50,000 | 0 |

| Project | Original 2020–21 budget | Final 2020–21 expenditure |
|--|-------------------------|---------------------------|
| Headline strategy 7 | | |
| Action 7.2.2 – Online reporting system | 100,000 | 120,750 |
| Action 7.3 – Improved waste data | 75,000 | 53,983 |
| Headline strategy 8 | | |
| Action 8.3 – Product stewardship | 40,000 | 0 |
| Action 8.4.1 – Single-use plastics | 475,000 | 378,048 |
| Action 8.4.2 – Food waste | 50,000 | 50,000 |
| Action 8.4.3 – E-waste research work | 150,000 | 45,288 |
| Action 8.4.4 – CRR and CRDP | 375,000 | 330,823 |
| Action 8.5 – WasteSorted grants for infrastructure | 1,340,000 | 1,076,258 |
| Other expenses | | |
| WARR and Waste Authority costs | 46,175 | 87,000 |
| Investment in infrastructure for material recovery facilities | 362,000 | 362,000 |
| Subtotal | 12,360,000 | |
| Services and functions funded under section 16 and section 80 of the WARR Act and covered in the service-level agreement | 8,390,000 | 7,995,320 |
| Total operational budget 2020–21 | 20,750,000 | |
| Expenditure limit increase | 174,000 | |
| Total operational budget versus total expenditure | 20,924,000 | 20,509,460 |



Program evaluations

The Waste Authority’s evaluation framework provides a methodology to assess the effectiveness and efficiency of various waste programs. All programs are regularly monitored. An independent evaluation of at least one funded program per year is undertaken to understand the extent to which it supports progress towards the waste strategy targets and to inform planning of future actions.

Programs scheduled for formal evaluation are broadly determined by the number of years the program has run and the cumulative budget which has been allocated. An allocation for these evaluations is put in each budget. The Waste Wise Schools program was evaluated in 2019–20 and the recommendations are now being implemented. The HHW program was evaluated in 2020–21 and the recommendations will be implemented in 2021–22. The anticipated schedule for future evaluations is:





Significant issues impacting the Waste Authority

Current and emerging issues and trends

Western Australia's key challenge in managing waste is to minimise the amount of waste generated and disposed of to landfill, and to maximise the benefits and economic opportunities from the recovery of materials and their circulation through the economy.

The circular economy is used as a guiding concept in the waste strategy and prioritises a shift from the linear model of 'take, make, use and dispose' to one in which materials and energy are recovered and reused, circulating in the economy for as long as possible. This type of approach supports sustainability by relying less on the use of virgin raw materials and encouraging improved planning of product lifecycles from the initial design stage through to production, distribution, consumption, use, reuse and repair, collection and recycling. This approach to waste management helps protect the environment and human health and provides opportunities for increased local recycling, which in turn helps stimulate new jobs and decrease the negative impacts associated with the transport of waste.

There are heightened levels of community and government awareness of waste issues globally, nationally and locally. Communities are increasingly looking to governments to take an active role to ensure better outcomes in waste management and find solutions domestically where possible. Local governments and their communities are gradually recognising the benefits of moving to a FOGO collection system. An important step in tackling this waste stream will be the development of appropriate processing infrastructure capacity and the securing of markets to use the compost and organic by-products produced. This will be a focus in 2021–22 and beyond.

Community interest in waste issues was also highlighted by the Premier's 13 June 2021 announcement that the implementation of the Western Australian Plan for Plastics would be accelerated.

The *Recycling and Waste Reduction Act 2020* banned the export of waste plastic, tyres, glass and paper and cardboard from 1 January 2021, presenting a range of opportunities along with challenges for Western Australia in the coming years. To become more resilient to fluctuating international markets and trends, the state must address the quality of materials exported for offshore processing and create appropriate local infrastructure and markets for recycled resources.

Two major programs are underway to develop recycling infrastructure in Western Australia. The Australian Government has agreed to match the state's contributions through its Recycling Modernisation Fund. The State Government has committed \$15 million in funding to support the development of local paper and cardboard recycling infrastructure. This will help manage the state's estimated 80,000 tonnes of mixed and unsorted paper and cardboard which will need to be processed locally given the waste export bans. The State Government also committed \$20 million in funding and land to develop processing infrastructure for local plastics and tyres. The department is administering these two major infrastructure investment programs.

Combined with industry investment, it is expected that Western Australia will receive a \$174 million investment boost to recycling infrastructure in the next five years. Pending final funding agreements, the following nine projects will begin in 2021–22:

| Company | Project type | Total grant funding |
|--|---------------------|---------------------|
| PACT/Cleanaway | Plastics | \$9,590,400 |
| Chairay | Plastics | \$5,640,400 |
| TC Waste/D&M Waste Management | Plastics | \$832,000 |
| Kariyarra–Tyrecycle (regional project to be based in Port Hedland) | Tyres | \$6,921,845 |
| Tyrecycle | Tyres | \$5,191,383 |
| Complete Tyre Solutions | Tyres | \$3,500,000 |
| 4M Waste | Tyres | \$2,966,505 |
| Elan Energy Matrix | Tyres | \$357,867 |
| SUEZ/AusWaste | Paper and cardboard | \$30,000,000 |

An increase in national product stewardship and producer-responsibility schemes for everyday products, and the emergence of waste streams such as photovoltaic systems, will likely reduce the reliance on state-based collection and recycling approaches. These initiatives result in price signals that include the costs of recovering problematic and priority products and can influence consumer decisions about product construction and design.

In line with its 2021 election commitment, the State Government is delivering a statewide ban on e-waste being disposed to landfill by 2024. Funding of \$14 million has been announced to implement the e-waste landfill ban, supporting relevant policy and regulatory changes and grants for new e-waste collection and recycling infrastructure to provide an alternative to landfill. The ban on e-waste to landfill and the associated investment in processing infrastructure supports the waste hierarchy and the principles of waste minimisation as set out in the objectives of the waste strategy.

A key issue which emerged in 2020 that will likely affect waste generation and disposal and material recovery is COVID-19. The full reach of the pandemic and its local impacts in the short, medium and long term are still unknown, although an increase in the generation of waste materials such as medical waste and single-use products is likely.

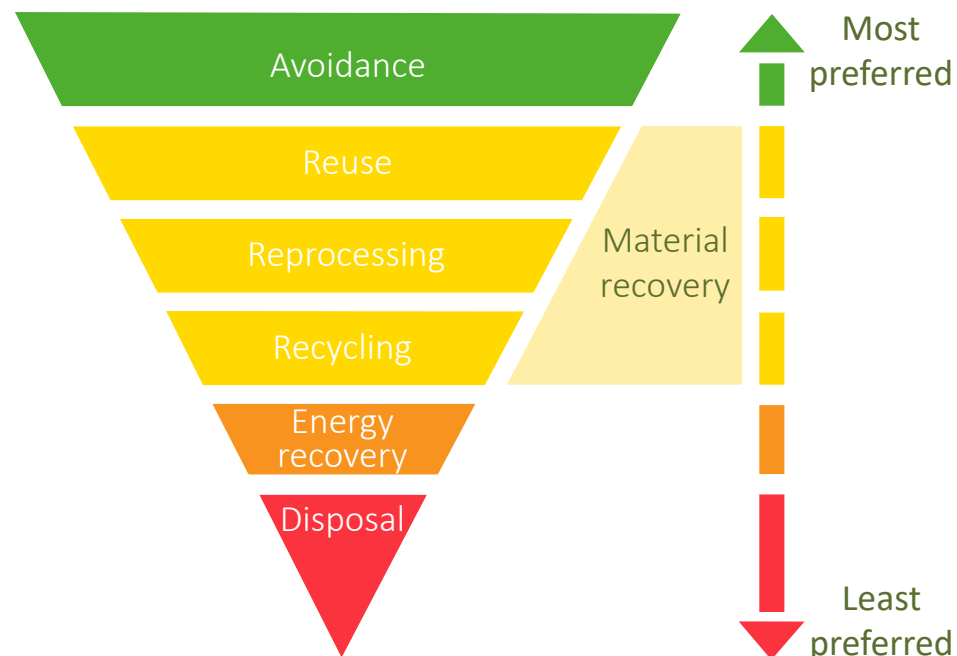
In 2013, the Environmental Protection Authority and Waste Authority released joint advice on the environmental and health performance of waste to energy technologies using thermal treatment. As part of that joint advice, the two authorities described best-practice approaches for potential waste to energy operations in Western Australia, including a range of recommendations for the circumstances in which waste to energy would be acceptable. One important finding was that only residual waste was a suitable feedstock for waste to energy facilities. Residual waste is that which remains after application of a better-practice source separation process and recycling system.

Waste to energy should therefore only target the waste that remains once source separation and recovery processes have been applied. This approach is consistent with the waste hierarchy, an internationally recognised system for ranking waste management options, from the lowest impact (waste avoidance) to the highest impact (waste disposal). Under the waste hierarchy, waste to energy is preferred to landfill, and waste avoidance and material recovery through recycling are preferred to waste to energy. Two new waste to energy facilities are under development and will begin operations in Western Australia in the next few years.

Changes in written law

There were no changes in any written law that affected the operations of the Waste Authority during the reporting period.

The waste hierarchy, from the *Position statement on waste to energy*.





Disclosures and legal compliance

Processes are in place within the department to monitor and audit the financial performance of the WARR Account, as required by section 81 of the WARR Act and in accordance with the *Financial Management Act 2006*.

The management of the WARR Account is regarded as a department service for the purposes of sections 52 and 53 of the *Financial Management Act 2006*. Accordingly, the relevant financial information is contained within the department's annual report.

Ministerial directives

Under the WARR Act, the Minister for Environment may give written directions to the Waste Authority, either generally or in relation to particular matters. The Waste Authority did not receive any ministerial directions during 2020–21.

Pricing policies of services provided

Not applicable. The Waste Authority does not apply fees or charges for goods or services.

Employment and industrial relations

Not applicable. The Waste Authority is not an employing authority and does not employ staff.

Sitting fees

Remuneration of the Waste Authority members is determined by the Governor of Western Australia, on recommendation of the Public Sector Commissioner, in accordance with the *Public Sector Management Act 1994*. Annual remuneration for 2020–21 is outlined in Table 6.

Table 6: Remuneration

| Position | Name | Type of remuneration | Period of membership | Gross/actual remuneration 2019–20* |
|--------------|------------------|----------------------|----------------------------|--|
| Chair | Reg Howard-Smith | Sitting fees | 1 July 2020 – 30 June 2021 | \$44,812 |
| Deputy Chair | Lee Broomhall | Sitting fees | 1 July 2020 – 30 June 2021 | \$27,849 |
| Member | Kelly Howlett | Sitting fees | 1 July 2020 – 30 June 2021 | \$22,294 |
| Member | Josh Byrne | Sitting fees | 1 July 2020 – 30 June 2021 | \$22,294 |
| Member | Tim Youé | Sitting fees | 1 July 2020 – 30 June 2021 | Does not receive sitting fees (ineligible) |

* Includes superannuation

Director and officer liability insurance

Waste Authority members are covered under the department's RiskCover insurance arrangements.

Other legal requirements

Expenditure on advertising, market research, polling and direct mail

Table 7: Expenditure

| Expenditure | Program | Organisation | Amount (\$) | Total (\$) |
|-------------------------|------------------------------|--|-------------|------------------|
| Advertising | WasteSorted behaviour change | Carat Australia | 172,464 | 209,210 |
| | | Tribe | 2,528 | |
| | | Facebook | 413 | |
| | | Google | 1,365 | |
| | CRR and CRDP | Facebook | 5,177 | |
| | | Google | 7,273 | |
| National Recycling Week | Carat Australia | 19,990 | | |
| Market research | FOGO market research | GHD | 42,600 | 233,582 |
| | | Mike Ritchie & Associates | 29,775 | |
| | Single-use plastics | Colin Ashton-Graham | 42,600 | |
| | | Development Disability WA | 12,500 | |
| | | Envisage Works | 19,700 | |
| | Food Waste | OzHarvest Limited | 50,000 | |
| Direct mail | Waste Wise Schools | T & C Couriers | 101 | 101 |
| Media advertising | WasteSorted behaviour change | Carat Australia – Regional Submarket WA GWN | 9,371 | 78,821 |
| | | Carat Australia – National AMNET | 22,817 | |
| | | Carat Australia – National Adserving | 4,727 | |
| | | Carat Australia – Metropolitan WA Radio, 96 FM, Mix 94.5FM, 929 GWN, 7Two WA | 41,906 | |
| Total | | | | \$521,714 |

Disability access and inclusion plan

The Waste Authority is covered by the department's five-year disability access and inclusion plan.

Compliance with public sector standards and ethical codes

The Waste Authority's code of conduct (2019) aligns with the Western Australian Public Sector Commission's code of ethics and has been developed in accordance with the Public Sector Commission's *Conduct guide for public sector boards and committees and the Board essentials*.

Waste Authority members signed their code of conduct in August 2019 for their three-year term of membership, and in doing so, committed to act with honesty and integrity at all times. Members are aware of their legal and ethical responsibilities in carrying out official duties and understand the values, principles and standards of behaviour expected.

Recordkeeping plan

The Waste Authority complied with the *State Records Act 2000* through adherence to the department's recordkeeping plan.

In accordance with our code of conduct, the Waste Authority ensured that official information remained confidential, and records of decisions and all other documentation were securely retained. Minutes of Waste Authority meetings were circulated to members with meeting agenda papers.

Government policy requirements

Occupational safety, health and injury management

Waste Authority staff comply with the department's three-tier occupational safety and health (OSH) system. Details on the department's OSH regulations are available in its 2020–21 annual report.



Governance disclosures

The Waste Authority's corporate governance arrangements ensure transparency in decision-making and operation, as well as accountability to stakeholders. The following disclosures of potential conflicts of interest were made by members of the Waste Authority during 2020–21:

Table 8: Governance disclosures

| Meeting date | Member | Disclosures of potential conflicts of interest |
|--------------|---------------|--|
| 14/10/2020 | Josh Byrne | Declared a potential perceived conflict of interest because an associate of his company, Josh Byrne & Associates (JBA), applied for WasteSorted grant funding. The work was in accordance with Dr Byrne's previous declaration of interest regarding projects coordinated by JBA. |
| 14/10/2020 | Tim Youé | Declared a potential conflict of interest regarding a Waste Authority submission to the WARR Act 2007 review. Mr Youé considered being part of a group represented by WALGA and the Municipal Waste Advisory Council (MWAC) that was also providing a submission. Mr Youé subsequently advised on 29/10/2020 that he had formally withdrawn from the WALGA/MWAC and SMRC process as a member of the Waste Authority. All parties were informed in writing of the decision. |
| 30/10/2020 | Josh Byrne | In relation to a JBA submission to a WasteSorted grant round, Dr Byrne informed members that he had withdrawn that submission due to a perceived conflict of interest with his role as member of the Waste Authority. |
| 09/12/2020 | Lee Broomhall | As CEO of Workpower, Ms Broomhall declared a potential conflict of interest, due to Workpower's involvement in a proposal seeking WasteSorted e-waste grant funding. Members noted that WALGA was the project lead submitting the application. Workpower and Total Green Recycling are key partners in delivering the project if successful. |
| 29/01/2021 | Josh Byrne | Informed members that he is a shareholder and director of a newly formed company, Renovate or Rebuild Pty Ltd. The company has been set up to oversee the delivery of a new lifestyle television series called 'Renovate or Rebuild', which began production and aired nationally on Channel 9Life during the first half of 2021. Major partners included the NSW Department of Planning, Industry and Environment; Sustainability Victoria; and corporate sponsorship. |
| 29/01/2021 | Josh Byrne | Informed members that he was appointed to the role of Adjunct Professor – Water, Energy and Waste Research Centre, Harry Butler Institute – Murdoch University from 1 February 2021. Activities include lecturing, PhD supervision and collaborating with industry on demand-led research related to sustainable urban development. Dr Bryne will be involved in waste avoidance and resource recovery related research. |
| 03/03/2021 | Tim Youé | Informed members that the SMRC was a finalist in the upcoming WasteSorted Awards. Due to leave commitments of senior SMRC staff, Mr Youé, on behalf of the SMRC, made a presentation to Mills Wilson in support of the submission. Members noted judging was independent from the Waste Authority. |
| 07/04/2021 | Tim Youé | In relation to a site visit of Avertas Energy on 07/04/2021, Mr Youé informed members that the SMRC had executed contract documents with Avertas Energy for the supply of residual waste. |

Ethics and integrity

The Waste Authority has an agreed governance charter. The code of conduct and conflict of interest policy was reviewed in 2019, with new versions of both documents signed for the current three-year term of memberships.

Waste Authority members participated in a survey on processes and improvements including self-assessments of skills and development opportunities.

Procurement practices followed the Government of Western Australia's guidelines and procurement policies.

Unauthorised use of credit cards

Not applicable. Members of the Waste Authority do not hold corporate credit cards.

Meetings

The Waste Authority held four meetings during 2020–21.

Table 9: Members' meeting attendance

| Member | Meetings attended |
|------------------|--------------------------|
| Reg Howard-Smith | 4 |
| Lee Broomhall | 4 |
| Kelly Howlett | 4 |
| Josh Byrne | 4 |
| Tim Youé | 4 |

During the year the Waste Authority also held special meetings outside of its ordinary meeting schedule. These included a joint planning session with the Program Risk and Performance Committee and a workshop to review the WARR Act.

Waste Authority publications

During 2020–21, the Waste Authority published:

- *The 2018–19 census of Western Australian local government waste and recycling services*
- *Recycling activity in Western Australia 2018–19*
- *Waste and recycling snapshot 2018–19*
- *Waste Authority annual report 2019–20*
- *Waste Authority business plan 2020–21*
- *Position statement on FOGO collection systems*
- *FOGO rollout plan 2020–21*
- *Better practice FOGO kerbside collection guidelines (version 2)*
- *Better Bins Plus: Go FOGO – funding guidelines (version 2)*
- *Household hazardous waste annual report 2019–20*
- *Waste Wise Schools 10 steps to getting our WasteSorted online module*
- *Green canteen factsheet*
- *Specialised school recycling list*
- *Sample resources: Karrinyup Primary School sustainability roster and Mary's Mount Primary School sustainable event guide*
- *Position statement on waste to energy*
- *WasteSorted grants infrastructure and community education 2020–21 guidelines*

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