
GREEN INDUSTRIES SA

Business Plan 2021-22 and future directions

April 2022



**Government
of South Australia**

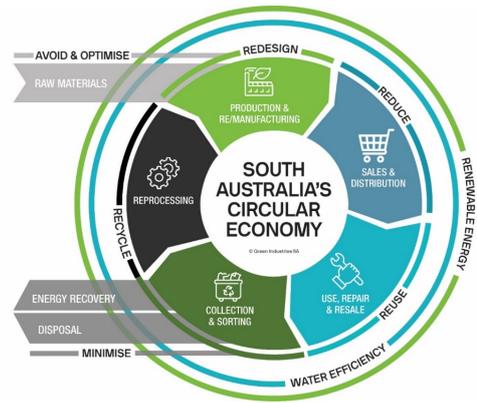
Green Industries SA

ABOUT GREEN INDUSTRIES SA

The primary objectives of Green Industries SA as set out in the *Green Industries SA Act 2004* are:

- To promote waste management practices that, as far as possible, eliminate waste or its consignment to landfill.
- To promote innovation and business activity in the waste management, resource recovery and green industry sectors, recognising that these areas present a valuable opportunity to contribute to the State's economic growth.

The circular economy is a prominent focus for Green Industries SA. The *Green Industries SA Act 2004* incorporates the concept of 'circular economy' as a guiding principle.



Acknowledgement of country

We acknowledge and respect the Traditional Custodians whose ancestral lands we live and work upon and we pay our respects to their Elders past and present.

We acknowledge and respect their deep spiritual connection and the relationship that Aboriginal and Torres Strait Islanders have to Country.

We also pay our respects to the cultural authority of Aboriginal and Torres Strait Islander people and their nations in South Australia, as well as those across Australia.

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MESSAGE FROM THE PRESIDING MEMBER

As the circular economy is gaining traction globally, 2021-22 will be a watershed year for Green Industries SA as it accelerates South Australia's transition to a circular economy.

There is an urgency in Green Industries SA's work as we strive to achieve positive environmental outcomes through circular economy actions which support the state government's economic development goals.

These include 'Growth State', 'Magnet State' and 'Green Economy' initiatives.

Leading this work is Green Industries SA's new Chief Executive Dr Ian Overton and a dynamic and skilled agency team passionate about advocating for the benefits of the circular economy.

This is a new era for the agency, as we recognise retiring Chief Executive Vaughan Levitzke's nation-leading strategies to reduce waste to landfill.

In the past year we have seen an enormous shift with mainstreaming of circular thinking in public policy and media commentary.

The circular economy has a crucial role to play in the state's post-COVID 19 economic recovery with its link to well-being and resilience.

A key priority in 2021-22 will be to release a comprehensive roadmap for South Australia's circular economy.

This work will complement our whole-of government engagement through Growth State, the state government's plan for economic growth, and the targets for the Green Economy which complement South Australia's *Waste Strategy 2020-25* and the State's Climate Action Plan.

A highlight will be the launch of the Centre of Excellence in Circular Economy which will develop pilot projects and engage with funding partners on circular solutions. Together with our objective to bring to life the benefits of the circular economy to the community we will launch a Circular Economy Hub in partnership with the City of Adelaide.

We will continue to provide support for local government and business to divert more materials for resource recovery. This includes \$36.289 million in State and Australian government funding through the Recycling Modernisation Grants Program. We will also continue to work on actions to deliver on targets in the National Waste Policy Action Plan 2019, *South Australia's Waste Strategy 2020-25* and the state's first food waste strategy, *Valuing our Food Waste*.

Through better collection systems, infrastructure and education, by 2030 we want to see zero avoidable waste to landfill and a zero food waste SA. Our key areas of focus also include building the resilience, capabilities and competitiveness of the state's green sector, extending bans on single-use plastics, advocacy for product stewardship schemes and regulatory reform, and driving behaviour change through evidence-based education and awareness programs.

Kevin McGuiness

Presiding Member, Board of Green Industries SA

STRATEGIC PRIORITIES

Vision: Creating a sustainable future through a green economy by focusing on the value of materials in a circular economy

Key Drivers for Change

Leadership and advocacy	Policy and regulation	Incentives and support	Innovation and technology	Education, behaviour change, capacity building
Leading through reputation, expertise, action and advocacy for a circular economy	Introducing policy and regulations to implement the circular economy	Financial incentives to grow the circular economy in South Australia and support businesses to contribute to economic development	Innovating and investing in technology to underpin the growth in high performing products and practices	Impactful education to encourage behaviour change and capacity building for government, business, industry and the community

Strategic Priorities and Business Programs

1. Circular Products and Services	Circular Economy Market Development Grants Program (includes circular procurement)	Single-use plastic products and plastic-free precincts Business Sustainability Program
2. Circular Consumption	Household Education Program Makerspaces and community-based initiatives	Council Modernisation Grants Program Charitable Recyclers Subsidy Program
3. Circular Resource Recovery	Recycling Infrastructure Grants Program Commonwealth/State Government Recycling Modernisation Fund Waste strategy and policy (including better practice guide for government)	Household hazardous waste BackLight Disaster waste management
4. Circular Sectors	South Australia's Food Waste Strategy Local Government Program (Food Waste)	Regional South Australia pilot project Other sectors – Growth State, built environment, textiles
5. Circular Capacity	Roadmap for South Australia Education in schools and tertiary institutions Measurement Centre of Excellence and Global Leadership Program Women's Leadership Award Circular Economy Hub	Commercialisation of Innovation Program Knowledge management <ul style="list-style-type: none"> • Waste audits and Recycling Activity Survey • Zero Waste Environment User System Partnerships: Local Government Association of South Australia; Waste Management Association of Australia ; KESAB <i>environmental solutions</i>

FUTURE DIRECTIONS

Transformation through circular thinking and solutions will gather apace as optimising systems through digital technologies will be at the forefront of innovating the design of products, services and systems.

Using advanced science, chemistry and engineering capabilities we will lower the time, cost and difficulty required to extract the maximum value of resources

New materials, while an opportunity for some sectors, will present challenges for the waste and recycling sector.

Innovation

- Breakthrough technology to commercialise innovations used at scale to address global climate change risk and impacts and environmental degradation.
- Solutions for the recovery of resources from emerging and problematic waste items such as electrical, electronic and renewable technology products.

Built environment

- An increased emphasis on well-being and resilience and adopting strategies to make construction part of a materials bank.
- Planning for circularity, prefabrication, modularity, deconstruction and reuse.

Investment

- Enabling investments in emerging technologies that provide for resource efficiencies and greenhouse gas savings.

Container collection depots

- Major investment in advanced automation

technology as part of a modernisation strategy.

Extended Producer Responsibility

- National EPR schemes for new and emerging wastes especially resulting from renewable energy and climate change technological development.

Products

- Greater product transparency through improved labelling, increased use of recycled content and improved corporate social responsibility with supply chain auditing and environmental declarations.
- Transition from problematic and unnecessary single-use plastics products to more sustainable alternatives.

Food waste

- Metropolitan food waste collection systems will be universal for both households and commercial premises.
- Multi-unit dwellings and public places will use the latest international evidence-based practices to divert food waste from landfill and decrease contamination using hi-tech collection technologies.

STRATEGIC PRIORITY 1: CIRCULAR PRODUCTS AND SERVICES

Designing out waste and keeping products and materials circulating in the economy by designing for durability, reuse, remanufacturing, and recycling – and stimulating economic growth through business efficiencies, innovation and market development.

Market Development Grants Program

This program aims to increase the quality and market demand for recyclable materials and recycled content products, and encourage the transition and adoption of circular business models and systems.

Building stronger domestic markets for recycled materials and recycled content products and adopting circular business models and systems in response to fluctuating international market conditions will increase the resilience of South Australia's local industry and reduce reliance on selling into overseas commodity markets.

Industry collaboration and purchasing by South Australian governments, business, and individuals of recycled materials and recycled-content products will increase demand and market opportunities for new, sustainable products made from recycled materials, stimulating economic development and creating local jobs.

Grants awarded under this program have included:

- **Local Government Association Circular Procurement Pilot Project** supporting participating councils putting in place circular procurement systems and practices prioritising recycled-content through procurement process, setting out buy-back targets for purchasing recycled-content, and tracking and reporting on the amount of recycled content

products/materials purchased. Following the trial, the LGA now has endorsed the rollout of circular procurement targets across South Australia's local government sector.

- **Feasibility study on capitalising the emerging lithium-ion waste challenge** and developing South Australia as a national and regional leader in lithium-ion battery reuse, repurposing and recycling. Lithium-ion batteries are a high-value, emerging waste stream.
- **Lifecycle analysis of an Environmental Product Declaration for an asphalt product** with a high percentage of recycled content materials such as soft plastics, glass, toner and reclaimed road base. The project included a trial on the state government's Regency Road to Pym Street road upgrade.

Business Sustainability Program

This program supports South Australia's businesses and industry to accelerate sustainable change and transition to a more circular economy.

By identifying and prioritising materials and resource efficiency, better practice waste management, lean production, and sustainable procurement, participants are equipped with knowledge and plans for improving profitability and environmental performance.

Implementing improvements may give businesses a competitive advantage and savings to reinvest for continuous improvement and business growth.

Experienced and knowledgeable agency staff provide expertise, guidance, tools and business-to-business connections, and in-kind support to other government, helping to drive a more circular economy across business and government.

Grant funding is available to businesses, not-for-profits and companies seeking to identify, prioritise and implement business sustainability improvements.

Funded projects provide accountability and transparency for business reporting, and influence decision-making.

Grant funds are also available to industry associations and business groups to drive sector-wide change for better environmental and economic outcomes.

Showcasing environmental achievements and circular economy practices through case studies and award sponsorships, acknowledging industry leaders and exemplar performance is also offered through the program.

Phasing out single-use plastic products

Green Industries SA will continue to promote the circular economy by shifting away from a single-use, throwaway mindset and phasing-out single-use plastic products through legislation, business support and education.

The state government's national leadership to phase out single-use plastic products received overwhelming community support in response to the *Turning the tide on single-use plastic products Discussion Paper* released in 2019.

Responding to the community's call for urgent action, the South Australian Parliament passed the *Single-use and Other Plastic Products (Waste*

Avoidance) Act on 19 September 2020.

Single-use plastic straws (with exemptions for people with health or medical needs), cutlery and beverage stirrers were banned on March 1 2021. Polystyrene food service items and oxo-degradable products will be banned from March 1 2022 and other products will also be considered.

Key activities during 2021-22 include:

- Expanding the plastic free precinct project delivered in partnership with Boomerang Alliance. These precincts include hospitality, café and food retail outlets, sporting clubs and major sport and entertainment venues.
- Delivering an updated *Replace the Waste* education campaign for the second tranche of products being banned from March 1 2022.
- Operating the 1800 business helpline in partnership with the National Retail Association.
- Investigating further opportunities to reduce, minimise or eliminate single-use plastic products, including consultation with the Single-use Plastics Taskforce consisting of representatives from peak business, industry and environmental organisations.
- Support the Australian Government targets:
 - 100% Australian packaging to be recyclable, compostable or reusable by 2025, to be delivered by the Australian Packaging Covenant Organisation
 - the *National Waste Policy Action Plan* commitment to phasing out problematic and unnecessary plastics by 2025: lightweight plastic bags; degradable plastics; plastic straws, plastic utensils and stirrers; EPS consumer food containers (e.g. cups and clamshells); EPS consumer goods

packaging (loose fill and molded);
microbeads in personal health care
products.

under the Australian Government's *Recycling
and Waste Reduction Act 2020*.

- Investigate producer responsibility schemes

STRATEGIC PRIORITY 2: CIRCULAR CONSUMPTION

Reducing wasteful consumption by sustaining products through repair and reuse, avoiding and reducing waste, and recycling effectively

Household Recycling Education Program

A state-wide campaign is educating householders on correct recycling practices to reduce contamination in kerbside-collected bins and improve the quality of recyclable materials collected for recycling.

This will assist facilities to sort and process recyclable materials into cleaner commodity streams that can be sold into domestic or overseas markets, subject to meeting export rules.

The *Which Bin* campaign uses a range of media channels to target different age groups such as TV commercials and digital and social media.

In 2021-22 this campaign will continue to be expanded with traditional media advertising on free-to-air TV, radio, print and outdoor, as well as social media campaign, supported by partnerships with local government for direct delivery to householders.

Ongoing investment in the *Which Bin* search engine and the *Which Bin* phone hotline (provided by KESAB *Environmental Solutions*) will ensure recycling pathways for different materials are accurate.

Engaging with local government waste educators and communicators will continue as the *Which Bin* campaign is further developed, investing in consistently branded and easy to understand household resources to support awareness and behaviour change.

Independent market research undertaken by the Ehrenberg-Bass Institute of Marketing Science will continue to be incorporated into the campaign strategy and tactics.

This will ensure that *Which Bin* continues to influence knowledge and improve householder behaviour, taking into account memory structures fade over time and messages need to be continually reinforced and refreshed.

Makerspaces and community-based initiatives

Makerspaces contribute to a circular economy by reducing resource consumption through shared access to equipment, salvage and reuse of materials, along with expanding this more widely into the community through tool libraries, as well as opportunities for reusing and repairing things through initiatives such as repair cafes.

Circular design approaches and digital fabrication techniques used in these spaces support waste avoidance by enabling more precision in the use of materials.

The agency's long-standing support for Makerspace Adelaide recognises its alignment with the agency's strategic priorities for transitioning South Australia to a circular economy.

Through a Service Level Agreement, Makerspace Adelaide will deliver a unique school-based program of 50 workshops. The content is linked to STEM, business, economics, sustainability and humanities subjects.

- The *Circular by Design* workshop introduces creative design thinking and the need to move to local and on demand manufacturing, including uses of tools such as 3D printers.
- The *Science of Reclaiming Waste* workshop introduces material science and the materials and processes that go into recovering resources, targeting students, families and educators to develop learnings related to multiple curriculum areas.

Council Modernisation Grants Program

Modernisation and innovation in the local government sector through technology upgrades can improve household bin services which increase landfill diversion, decrease contamination levels, improve data collection, and improve householder engagement and satisfaction.

The Council Modernisation Program provides grants to stimulate modernising local government's waste management and resource recovery operations and encourage investment in technology and innovation.

Grants are provided to support councils' investment in initiatives such as technology, market testing, research and pilots for all aspects of waste

management and resource recovery service delivery.

Regional Transport Subsidies

High transport costs for recycling in regional areas has long been recognised as a barrier and has been exacerbated by former overseas markets such as China no longer accepting some recyclables and low international market prices for high quality recyclable materials.

Transport subsidies to regional councils addresses this barrier and supports their continued recycling efforts by offsetting some of the extra costs associated with processing and transporting collected recyclables. Regional councils also benefit from a reduced waste levy.

Charitable Recyclers Subsidy Program

Green Industries SA has developed the Charitable Recyclers Subsidy Program in consultation with the Environment Protection Authority and Charitable Recycling Australia (CRA), to provide charitable recycling organisations with partial relief from the costs of the solid waste levy. It will enable the agency to collect data to expand our knowledge of waste material profiles and for reuse, repurposing and recycling.

STRATEGIC PRIORITY 3: CIRCULAR RESOURCE RECOVERY

Investing in state-of-the-art infrastructure to unlock the value of materials that would otherwise be sent to landfill or used to create energy. Keeping resources circulating through the economy to increase our resilience to supply chain disruptions, create local jobs and benefit our environment

Waste strategy and policy

South Australia's Waste Strategy 2020-2025 provides a framework to assist South Australia meet its objectives for economic prosperity and community well-being. A transition to the circular economy is a priority for the Waste Strategy through:

- a clearly articulated policy and legislative framework that gives a solid platform for investment decisions and a stable and efficient market
- supporting innovation and commercialisation
- education, advocacy and awareness to support behaviour change in the way waste and resources are managed
- applying the waste management hierarchy consistently with the principles of ecologically sustainable development.

Green Industries SA will continue to advocate for better and new product stewardship approaches for waste products and materials that will in turn provide market opportunities for South Australian businesses.

It will also support measures for materials banned from landfill under the *Environment Protection (Waste to Resources) Policy 2010* and measures for

materials such as glass, tyres, paper and cardboard and plastics banned from overseas export following a decision of the former Coalition of Australian Governments in March 2020.

An implementation plan for the National Waste Policy agreed by state, territory and federal environment ministers will also be progressed.

Policy work continues with the agency advocating that business, industry and the community move towards a more circular economy and to target waste avoidance.

Projects include supporting new circular and 'purpose economies' which includes objectives such as moving away from consumption.

Waste and Recycling in Public Sector Offices - Better Practice Guide

Green Industries SA will implement a strategy developed in 2020-21 which aims to guide high-impact and specific action in the South Australian Government's main office buildings.

The strategy focusses on four initiatives:

- reviewing and improving waste and recycling systems and services
- Installing minimum standard and better-practice systems and infrastructure
- developing and delivering waste education
- procuring reusable and recycled content items.

The aim is to improve from our current estimated base of minimum service levels in place for responsible waste management and improve these to better-practice.

By taking this action, we can:

- reduce environmental impacts from government through better waste and resource use
- build on our capabilities and capacity to increase the diversion of materials to better purposes
- reduce government operating costs
- boost education and awareness of resource recovery, and our culture, commitment and leadership
- Increase demand for services local resource recovery industry.

Recycling Infrastructure Grants Program - Industry and Local Government

Council and industry operated resource recovery and processing infrastructure benefit from grant funding to enable investment in recycling and re-manufacturing to modernise infrastructure. Improved sorting and processing enhances the quality of recovered materials.

This funding assists with improved competitiveness through improved technology and innovation and creates employment opportunities, and reduces waste to landfill.

South Australia's Waste and Resource Recovery Infrastructure Plan and *South Australia's Waste Strategy 2020-25* have strategic objectives to increase and maintain the capacity of South Australia's recycling systems and reprocessing infrastructure.

Continuing and significant investment is needed to enable South Australia to responsibly deal with its

waste. The impacts arising from foreign policy decisions to no longer accept poor quality recyclable materials combined with fluctuating and often low international commodity prices alongside a demand for better quality recycled materials continue unabated.

With the Australian Government's export bans and export destinations requiring much lower contamination levels in post-consumer commodities there is even greater emphasis on the need for recycling facilities to improve processes to reduce contamination, and build in resilience and redundancy to ensure high quality material can reach viable end markets.

Australian Government Recycling Modernisation Fund

The Australian and South Australian governments have entered into a National Partnership Agreement on Recycling Infrastructure to improve recycling through the Recycling Modernisation Fund, targeting plastic, paper, glass and tyres.

The Australian and state government are each providing \$18.96 million from 2020-21 to 2023-34. The Australian Government's contribution is included in the Expenditure table at page 23 of this business plan.

Household hazardous waste and farm chemical collection program

South Australians are provided with a responsible safe collection and disposal service for unwanted chemicals through four new permanent facilities commissioned in 2019-20 and located in metropolitan Adelaide.

The new facilities include: Adelaide Waste and Recycling Centre, North Plympton; Northern

Adelaide Waste Management Authority, Edinburgh North; Campbelltown City Council works depot, Campbelltown; Adelaide Hills Region Waste Management Authority Resource Recovery Centre, Heathfield.

The service includes Paintback which provides households and commercial painters with an easy option for disposing of unwanted architectural paint and packaging correctly.

The community continues to be educated about correct disposal practices for household chemicals and paint, and encourage the recovery and treatment of oils, solvents and other valuable materials for reuse.

BackLight Program

Green Industries SA operates the *Backlight* program with Mitre10, Banner and True Value hardware stores to enable South Australians to recycle all domestic light globes at no cost.

The globes are recycled by Chemsal Resource Recovery.

Glass, metal, plastic, phosphor and mercury extracted from the light globes are all recycled in end markets.

The aluminium and mercury is used to make new light globes, the phosphor powder is used in fertilizer, and the glass is re-used for a variety of other glass products.

Disaster Waste Management

As the state's Functional Lead for disaster waste management Green Industries SA is responsible for overseeing implementation of the *South Australian Government Disaster Waste Management Capability Plan*.

The agency's extensive and proactive work to integrate disaster management waste planning into broader state emergency management arrangements recognises that this contributes to stronger community resilience, particularly in disaster recovery.

Green Industries SA's *South Australian Government Disaster Waste Management Capability Plan* and Guidelines sit under the authority of the *State Emergency Management Plan*.

The Plan specifies the guiding principles and objective for disaster waste management and establishes a governance framework throughout the preparedness, response and recovery phases of a disaster

It includes data collection, assessment and reporting and addresses all essential requirements for managing disaster waste throughout each of an emergency's phase.

The Guidelines provides guidance on key decision-making process, including identifying the level of state government support provided to disaster waste management stakeholders and comprehensive operational guidance for management of 19 waste streams.

The *South Australian Government Disaster Waste Management Capability Plan* will be reviewed in 2021-22 to reflect lessons learned from the agency's well regarded 2019 bushfire clean-up activities.

It continues to support the state's preparedness and resilience to future disasters.

STRATEGIC PRIORITY 4: CIRCULAR SECTORS

Contributing to South Australia's economic growth and job opportunities by making targeted industry sectors resource efficient and carbon-neutral

During 2021-22 prioritised industry sectors will be analysed to build knowledge about the circularity in terms of the flow of resources.

In response to these analyses, strategies, action plans and/or financial incentives program will be developed.

FOOD AND ORGANICS SECTOR

Food and organics sector analysis

Addressing food waste and supporting continual growth of markets for the recycled organics sector are key features in *South Australia's Waste Strategy 2020-2025*, South Australia's food waste strategy – *Valuing our Food Waste* and Green Industries SA's Strategic Plan.

There are significant economic benefits to be gained from food waste avoidance and job creation opportunities associated with capturing and diverting unavoidable food waste away from landfill to processes such as composting.

This supports South Australia's resource recovery efforts and returns valuable nutrients back into horticulture, viticulture and increasingly broad acre farmland.

The agency's major analysis of the organics sector completed in 2020-21 found there is the potential to increase the circularity of the organics recovery and processing sector to 92%

This will maintain South Australia's lead in the management and processing of organics material to realise further economic and environmental

benefits to the State.

South Australia's food waste strategy

South Australia's food waste strategy – *Valuing our food waste* - has been released in response to global, national and state-wide policy imperatives to reduce waste, reduce greenhouse gas emissions and drive change at the industry, local government and community levels.

The strategy includes actions to address consumer food waste sent to landfill through policy and legislation, systems and infrastructure and community education.

It reflects international and national approaches and practices and the considerable work that has been undertaken in South Australia to date at the commercial and householder levels.

Fight Food Waste Collaborative Research Centre

Green Industries SA will continue to support the Fight Food Waste Collaborative Research Centre projects.

It aims to reduce food waste throughout the supply chain, transform unavoidable waste into innovative high-value co-products and engage with industry and consumers to deliver behavioural change.

Local Government Program (food waste)

The single, largest remaining area for improvement in council kerbside systems is food waste, as it comprises over 40% of the weight of household residual waste bins sent to landfill.

The program encourages councils to provide high-performing systems which assist with the diversion of food waste from landfill, which will significantly reduce council landfill costs and greenhouse gas emissions.

Councils receive a subsidy for the cost of bench-top containers, compostable bags and production of householder education material.

The *Which Bin* campaign provides state-wide consistent messaging to support improved knowledge and bin behaviour, particularly in relation to ensuring that only certified compostable bags are used and contamination of bins is minimised.

Funding is provided to pilot and evaluate organic waste collection models for high density residential dwellings and food processing and restaurant precincts.

OTHER SECTORS

Regional South Australia pilot project

The pilot project *Benefits of a Circular Economy to Regional SA* is a collaborative Green Industries SA and Regional Development Australia.

It involves identifying and analysing the needs, opportunities and pathways to a more circular economy in the Limestone Coast and the Murraylands and Riverland regions.

The pilot project will cover the bulk of the Eastern region of SA and is jointly funded and managed by Green Industries SA and both Regional Development Australia Boards.

It will provide recommendations on pathways to achieve a circular economy, delineating an approach that could be used by other Australian regional areas at similar scale.

Growth State

Green Industries SA will examine opportunities for circular economy investment in the South Australian Government's *Growth State* economic development initiative which include nine industry sectors:

- Food, Wine and Agribusiness
- International Education
- Tourism
- Energy and Mining
- Defence
- Space Industries
- High-Tech
- Health and Medical Industries
- Creative Industries

This work will also contribute to the South Australian Government Magnet State strategy (in development) which seeks to attract young, skilled workers to the state.

Built environment

The built environment consumes almost half of the world's resources extracted every year and responsible for a massive environmental footprint.

An analysis will be undertaken to develop a circular economy roadmap for the sector taking into account South Australia's performs well in the diversion of construction and demolition from landfill and circular solutions are critical to achieving South Australia's diversion target of 95% by 2025

The analysis will examine opportunities for applying circular thinking and solutions to each activity/phase involved in the built environment lifecycle, including design, procurement, construction, demolition and resource recovery.

This analysis will include: materials, prefabrication and modular construction, online circular buy/sell/share platforms, disassembly and

deconstruction, optimising use of existing stock, retrofitting for energy efficiency, and product stewardship schemes and government policies.

Textiles

Textile waste is identified as a problematic waste in *South Australia's Waste Strategy 2020-25*.

As global consumption and waste associated with textiles continues unabated there are opportunities to ensure that clothing, textiles and fibres remain circulating in the economy at their highest value and utility.

Green Industries SA will investigate options for developing a circular textile action plan for South Australia collaborating with industry stakeholders.

Note: circular sector analyses and strategies are included in the budget for the Circular Economy Policy and Implementation Program.

STRATEGIC PRIORITY 5: CIRCULAR CAPACITY

Capacity building through investment in training, education, innovation and research and development and partnerships

Creating a generation of inspired and skilled practitioners to drive change and accelerate the transition to a circular economy

Roadmap for South Australia

Green Industries SA will release a *Circular Economy Roadmap for South Australia* in the second half of 2021.

The roadmap will outline what a circular economy means for South Australia and the state's current circularity status.

It will detail opportunities to support the South Australian Government's Growth State objectives and actions relating to circular approaches for products and services, waste and resource recovery and innovation.

It will address building capacity to support the transition to a circular economy through business investment, research and development, education and technology.

Measuring the circular economy

Developing robust methods to measure the circular economy and identify areas for increased investment is critical to advancing the circular economy.

With a sound methodology in place Green Industries SA will benchmark and track the state's performance in transitioning to a circular economy.

Circular Economy Global Centre of Excellence

Building on the achievements of the *Global Leadership Program on the Circular Economy* a new

not-for-profit entity will expand the program's impact.

This initiative recognises the interest from international organisations in partnering with Green Industries SA to advance practical policy responses to the opportunities inherent in the circular economy.

The centre will aim to accelerate adoption of the circular economy by: advancing circular economy theory and science; linking stakeholders worldwide; providing thought leadership and educational resources to build capacity; supporting innovation through research, development and commercialisation; and supporting high impact circular economy projects, through advocacy and funding to demonstrate whole of supply chain outcomes that are truly circular.

Through the agency's stewardship it will leverage funding from the public and private sector to establish the desired global and local partnerships for the benefit of the state government's economic development goals.

This will allow investments and partnerships from local, national and international partners.

This centre will reinforce and build upon South Australia's leadership in the development of the circular economy.

Global Leadership Program

The program, piloted in 2018 and held in 2019 and early 2020, targets influential decision makers from the Asia-Pacific region.

It capitalises on South Australia's global reputation for leadership in water, waste and energy and facilitates business-to-business introductions with representatives and experts from leading companies and organisations to stimulate the export of the state's leading-edge 'know how' and technologies.

The content of the program will be migrated to online modules to allow greater flexibility in the delivery of the program and include other forms of education from the proposed Circular Economy Global Centre of Excellence.

Circular Economy Hub

In partnership with the City of Adelaide, vacant space at 25 Pirie Street will be developed as a hub for activating a range of circular economy activities. Residents, city workers and visitors to the city will have opportunities to understand the practical benefits of the circular economy and engage in a program of different activities.

These activities could include collection of food waste collection caddies for household recycling, pop-up events hosted by Makerspaces and related organisations to promote repair and reuse and circular design thinking and solutions.

Women in Circular Economy Leadership Award

The Women in Circular Economy Leadership Award provides an opportunity and co-funding for a South Australian woman who is an emerging or established leader working in the area of the circular economy to pursue an investigative project of a kind that is not readily available in South

Australia.

The Award has evolved from a scholarship established in 2010 in memory of Pam Keating.

She was a member of the Board of Zero Waste SA when she died in a car accident in Victoria 2009.

Previous award winners have undertaken projects in the areas of: reforming household kerbside collections; international and national developments in food waste recycling; textile waste in a circular economy; and school and community-based education.

Education review and Professional Certificate in Circular Economy

A review will be undertaken of school, TAFE and tertiary programs to expand our approach towards teaching and learning. An Adelaide-based partner(s) will be sought to deliver a new, accredited Professional Certificate in Circular Economy.

Commercialisation of Innovation Program

Green Industries SA's first agreement with Innovyz for the Waste and Recycling Technologies Commercialisation of Innovation was funded by a loan of \$750,000 (with matched funding) which is due for repayment in September 2021. Six entities have been established all of which are building successful markets, locally and in some instances internationally, for innovative products and services: Athena Irrigation; Bygen; Clarity Aquatic; Smart Sinks; PREP; and PVC Separation.

Innovyz was awarded repayable funding of \$750,000 (matched) to deliver a second program following a nationally advertised Request for Proposals.

This program emphasises innovative circular economy approaches to address pressing environmental issues.

Researchers participating in the program have undertaken training to commercialise innovations with X-Frame, a zero waste modular plywood building system being piloted in South Australia applying circular design thinking to the built environment and reducing the amount of building and construction waste sent to landfill.

Waste audits and recycling activity studies

Green Industries SA is the custodian of data which measures the state's progress against indicators in South Australia's Waste Strategy and relative to other jurisdictions.

Data is also used to guide investment opportunities and evaluate programs and market interventions.

Since 2003-04, the agency has reviewed recycling activity in South Australia to guide its activities and to monitor progress against targets in South Australia's Waste Strategy.

Data capture on re-use has commenced and will be expanded to include areas of the circular economy such as the charitable sector for data on collection and reuse.

Data is collected from recyclers and re-processors to provide stream-by-stream and waste type recycling tonnages. Previous surveys have shown a steady increase in recycling.

Kerbside bins waste data is also collected and summaries are used to produce a kerbside recycling report. This provides useful information on strategies to reduce waste at the household level.

Zero Waste Environment User System (ZEUS)

ZEUS is a web-based system used to monitor, analyse and report on waste reduction targets in South Australia's Waste Strategy.

ZEUS collects information on: recycling activity; waste (tonnes) to landfill by waste stream (municipal solid waste, commercial and industrial waste, and construction and demolition waste); litter; economic and environmental costs and benefit; infrastructure needs; and areas needing regulatory underpinning.

ZEUS also captures corporate data including contract information, agency publications and industry and stakeholder contacts.

After more than 10 years of use, a review in 2019-20 examined the suitability of ZEUS to meet changed business needs and procedures.

As a result, work will continue to develop a new system with improved adaptability for updated existing and new data capture requirements.

PARTNERSHIPS

Local Government Association of South Australia

Green Industries SA collaborates with the Local Government Association of South Australia to develop a strategic and co-ordinated approach towards waste management and resource recovery in regional and metropolitan planning and investment decisions to ensure optimal outcomes for the community.

The partnership supports the implementation of South Australia's Waste Strategy and policy goals for the circular economy by, for example:

- coordinating and advocating for national solutions to problematic waste such as packaging and hazardous waste
- supporting the implementation of the

*Environment Protection (Waste to Resources)
Policy 2010*

- facilitating local government discussion of key issues relevant to the agency.

**Waste Management and Resource Recovery
Association of Australia**

The Waste Management and Resource Recovery Association of Australia (WMRR) SA Branch represents and advocates on behalf of its members issues which impact on the sector's operations. This partnership with WMRR provides valuable input into decision-making processes and is a conduit to linking the industry with Green Industries SA. The deliverables under the Service Level Agreement include:

- holding regular events presentations, conferences and webinars to improve industry knowledge, expertise and networking opportunities; and
- administering working groups on specific issues and distributing information to members regarding the work program of Green Industries SA and related legislative proposals and industry activities.

KESAB *environmental solutions*

Keep South Australia Beautiful *environmental solutions* (KESAB) delivers programs to schools and the community on litter measurement, reduction, education and awareness under its three-year Service Level Agreement with Green Industries SA.

The deliverables under this agreement have the purpose of reducing waste in targeted community groups and industry sectors to support *South Australia's Waste Strategy*. Green Industries SA has

entered into a new three-year agreement for 2019-21—2021-22.

Litter data and research and branded litter monitoring

KESAB has been monitoring litter incidence at 151 sites throughout South Australia since 1998, providing the best continuous data set for measuring litter incidence in Australia.

This program helps Green Industries SA to maintain effective litter data on trends, item types and locations, and develop community education and awareness campaigns. Data is stored and analysed in ZEUS.

In 2021-22 KESAB will undertake two counts in May and November and maintain a comprehensive database and trend line of litter streams in South Australia.

Following a national review of the annual National Litter Index in 2018-19 a new methodology for the conduct and analysis of litter surveys will be considered in 2020-21. The objective is to have a methodology in place which will be used by all Australian jurisdictions.

**Wipe Out Waste Schools Education Program and
Community Litter Education**

Wipe Out Waste (WOW) is a whole school community approach to waste management and learning. This state-wide program assists all sites, from pre-school to year 12 to:

- improve systems to reduce waste and recover resources in schools
- monitor progress and continually improve resource recovery (waste) outcomes in the schools

- encourage and influence people to adopt more sustainable behaviour.

The program offers professional development sessions for teachers, bin material audits and a range of education resources to support waste management. In response to COVID-19 social isolation measures KESAB will be developing new on-line teaching resources.

The *Community Litter Education, Resources and Campaigns Program* has been merged into Wipe Out Waste to enable better integration of litter awareness activities, such as the *Litter Less* 'learning through action' program.

Which Bin 1300 telephone hotline

The *Which Bin 1300* recycling telephone hotline provides a service to the community seeking information on options for recycling a wide range of different materials.

CORPORATE SUPPORT

Communications, media and marketing

Green Industries SA's communications, media and marketing activities target industry, state and local government and the community. The Communications Unit provides expert advice on communications planning and works closely with program managers to deliver high quality publications, photography and video case productions and social media assets. It identifies opportunities for media announcements and manages sponsorships and community and stakeholder engagement activities aligned with the agency's core objectives.

The agency's new corporate web site completed in 2020-21 will continue to be updated with news about grant funding, progress with implementing key initiatives, and the release of policy reports, guidance material, plans and strategies.

Board support

Green Industries SA provides policy, governance and administrative support to the Board of Green Industries SA and its two committees - the Governance Committee and Strategic Communications and Engagement Committee.

The Board usually meets 10 times a year, with additional meetings including industry site visits scheduled as required. Board members (excluding public servants) receive remuneration.

This budget item is for Board meeting operational costs, an annual strategic planning session, training, conference attendance and staff salaries and on-costs allocated to support the Board function.

Corporate services

A budget is allocated for the agency's administration support, including work health and safety, office lease payments, payroll, insurance, fleet management, telecommunications and purchasing, and management of the Green Industry Fund.

Staff training and development

This budget is allocated for staff professional development such as attending short courses and conferences to enhance industry and policy knowledge relating to the agency's core policy areas or to maintain professional technical skills. Executive leadership team coaching will be undertaken. An experienced leadership coach will be contracted to deliver an Executive Leadership Team development program to enhance performance, management competencies and strategic thinking.

FUNDING PROVISIONS

Funding for Green Industries SA's programs comes from the solid waste component of the waste depot levy, collected under the Fees and Levies regulations of the *Environment Protection Act 1993*. The Environment Protection Authority collects the levy of which 50% is paid into the Green Industry Fund as set out in the *Green Industries SA Act 2004*. The expenditure authority for the 2021-22 business plan is \$88.227 million.

Department of Treasury and Finance Approved Revenue, Expenditure and Cash balance as at 17 February 2022

	2021-22 (\$)	2022-23 (\$)	2023-24 (\$)
Revenue	56,532,000	57,927,000	51,738,000
50% of waste levy payments from Environment Protection Authority (EPA)	46,199,000	48,420,000	50,710,000
National Partnership on Recycling Infrastructure - funding from the Commonwealth Government	10,000,000	8,960,000	0
Charitable Recyclers Subsidy Program - budget transferred from EPA	242,000	242,000	244,000
Transfer of interest and principal repayments from SAFA to GISA for the Recycling Infrastructure Loan Program	65,000	305,000	784,000
Interest earned from Commercialising Innovation – loan scheme	26,000	0	0
Currently approved expenditure authority	88,227,000	54,914,000	32,812,000
GISA expenditure authority	32,016,000	25,391,000	15,678,000
Climate change initiative funding	56,211,000	29,523,000	17,134,000
Result of Income Statement	(31,695,000)	3,013,000	18,926,000

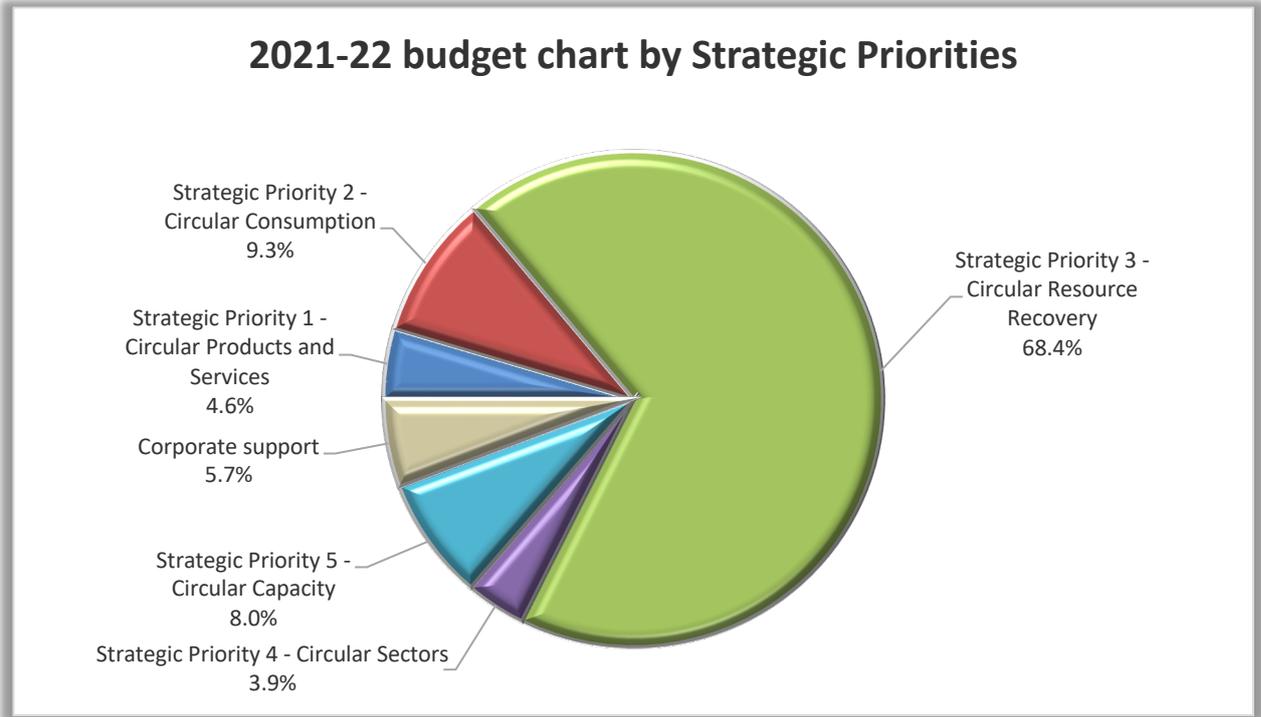
Cash balance			
Cash Opening Balance	89,835,000	59,062,000	62,020,000
Net movement in cash held	(30,773,000)	2,958,000	18,871,000
Cash Closing Balance	59,062,000	62,020,000	80,891,000

Expenditure	2021-22 (\$)	2022-23 (\$)	2023-24 (\$)
Strategic Priority 1 - Circular Products and Services			
Circular Economy Market Development Grants Program	562,000	368,000	369,000
Business Sustainability Program	888,000	750,000	782,000
Trade Waste Initiatives	30,000		
Single-use plastic products and plastic-free precincts (refer to Waste Strategy and Policy)	-	-	-
Sub-total	1,480,000	1,118,000	1,151,000
Strategic Priority 2 - Circular Consumption			
Household Recycling Education Program	922,000	1,129,000	1,136,000
Council transition and Regional Transport Subsidies Program	1,812,000	1,010,000	910,000
Makerspaces (refer to Circular Economy Policy and Implementation)	-	-	-
Charitable Recyclers Subsidy Program	256,000	256,000	258,000
Sub-total	2,990,000	2,395,000	2,304,000
Strategic Priority 3 - Circular Resource Recovery			
Recycling Infrastructure Grants Program (industry and local government) including Commonwealth Government Recycling Modernisation Fund	17,484,000	13,909,000	5,104,000
Waste Strategy and Policy (including Single-use plastic products and South Australia's food waste strategy)	1,202,000	1,316,000	1,180,000
Household Hazardous Waste Collections	584,000	813,000	1,269,000
Backlight	52,000	62,000	67,000
Disaster Waste Management	132,760	109,000	109,000
Bushfire Tree Clean-up	2,444,000	-	-
Sub-total	21,898,760	16,209,000	7,729,000
Strategic Priority 4 - Circular Sectors			
South Australia's Food Waste Strategy (refer to Waste Strategy and Policy)	-	-	-
Local Government Program (food waste)	1,253,000	1,169,000	487,825
Other sectors (refer to Circular Economy Policy and Implementation)	-	-	-
Sub-total	1,253,000	1,169,000	487,825
Strategic Priority 5 - Circular Capacity			
Circular Economy Policy and Implementation - Roadmap for South Australia - Measurement - Centre of Excellence and Global Leadership Program - Women's Leadership Award	1,422,000	1,103,000	1,110,000
Commercialising Innovation Program	144,000	639,000	283,000
Waste Audits and Recycling Activity Study	218,000	196,000	182,000
Zero Waste Environment User System	179,000	191,000	171,525
Cyber Security	24,000		
Local Government Association of South Australia	108,633	109,599	111,243
Waste Management and Resource Recovery Association of Australia (SA Branch)	35,194	35,774	36,368
<i>KESAB environmental solutions</i>	-	-	-
Litter Data and Research and Branded Litter Monitoring	62,329	63,537	64,776
Which Bin?®1300 information line and website	21,012	21,540	22,079

Expenditure	2021-22 (\$)	2022-23 (\$)	2023-24 (\$)
Wipe Out Waste and Community Litter Education	357,833	365,529	323,417
Sub-total	2,572,001	2,724,978	2,304,408
Corporate support			
Communications, Media, Marketing and Website	135,500	129,000	130,000
Board Support	321,000	260,000	264,000
Corporate Services	1,290,739	1,311,021	1,232,767
Staff Training and Development	75,000	75,000	75,000
Sub-total	1,822,239	1,775,021	1,701,767
APPROVED EXPENDITURE AUTHORITY¹	32,016,000	25,391,000	15,678,000

¹ Excludes funding for climate change initiatives.

BUDGET DISTRIBUTION CHART



BUSINESS PLAN PROJECTS AND ACTIVITIES ALIGNED AGAINST OBJECTIVES UNDER THE *GREEN INDUSTRIES SA ACT 2004*

Key objective 1: Promoting innovation and business activity in the waste management, resource recovery and green industry sectors

Infrastructure investment

Recycling Infrastructure Grants Program (industry and local government)

Circular Economy Market Development Grants Program

Business enabling

Business Sustainability Program

Council Transition and Household Education - State Budget Measure

Local Government Program (food waste)

Council Modernisation and Regional Transport Subsidies Program

Household Recycling Education Program

Charitable Recyclers Subsidy Program

Circular economy and innovation

Circular Economy Policy and Implementation

Commercialising Innovation Program

Key objective 2: Promoting waste management practices that, as far as possible, eliminate waste or its consignment to landfill

Strategies, policies and national issues

Waste Strategy and Policy (including Single-use plastic products and South Australia's food waste strategy)

Knowledge management

Waste Audits and Recycling Activity Study

Zero Waste Environment User System

Household hazardous waste

Household Hazardous Waste Collections

Backlight

Partnerships

Local Government Association of South Australia

Waste Management and Resource Recovery Association of Australia (SA Branch)

Community education

KESAB environmental solutions

Litter Data and Research and Branded Litter Monitoring

Which Bin?[®]1300 information line

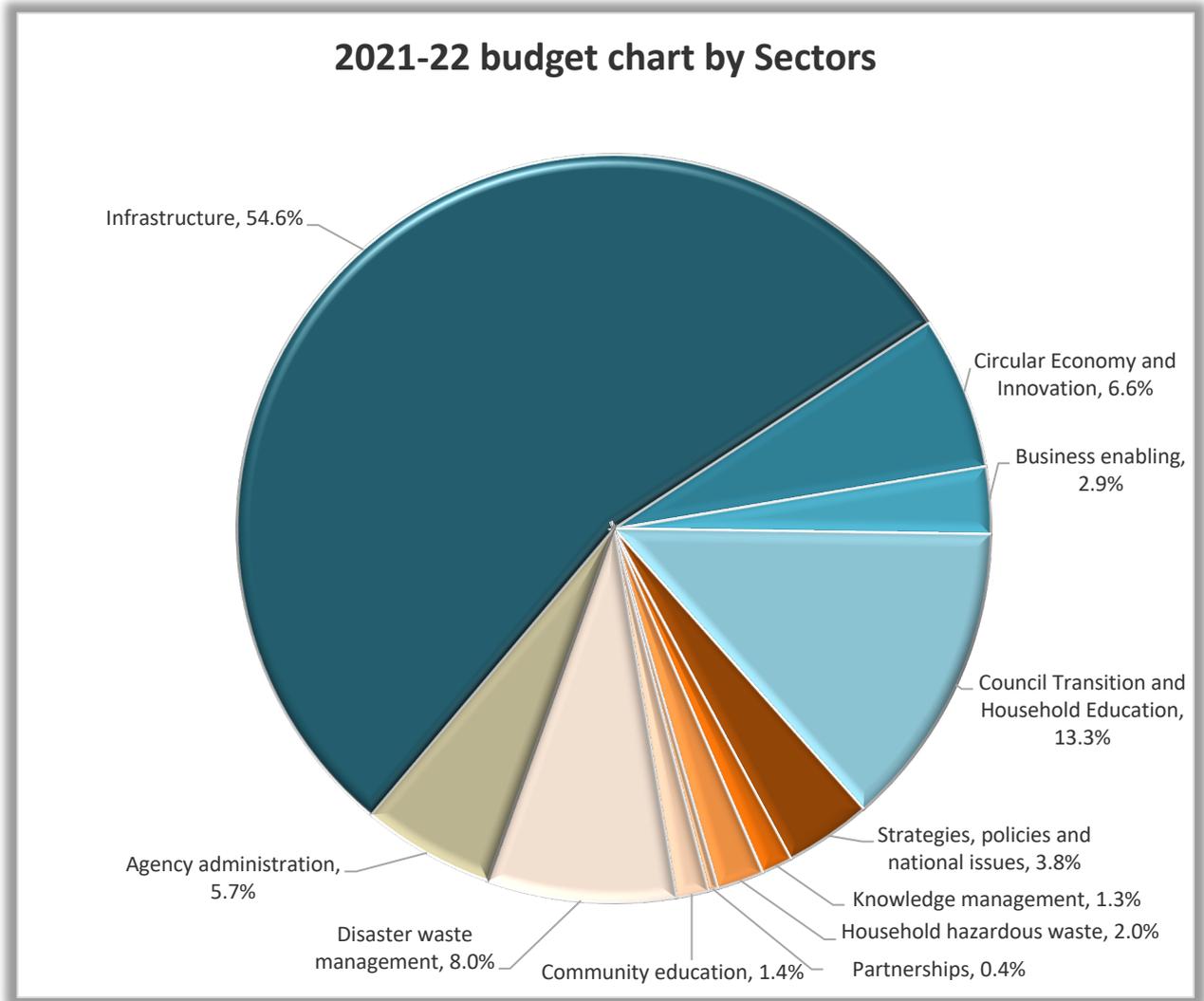
Wipe Out Waste and Community Litter Education

Disaster waste management

Disaster Waste Management Capability Plan Implementation

Corporate support

- Communications, Media, Marketing and Website
- Board Support
- Corporate Services
- Staff Training and Development



Note: funding for climate change initiatives is excluded