GREEN INDUSTRIES SA

2016 – 2017

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# Fast facts

Over $1 billion estimated value of the South Australian waste and recycling sector

$500 million contributed to Gross State Product (directly and indirectly) by the waste and recycling sector

4,800 people employed in the waste management and resource recovery sector in South Australia

More than $100 million of waste levy funds invested in projects that have stimulated councils, businesses and the community to reduce, recover, reuse and recycle since 2003

81.5% of material diverted from landfill(3.91 million tonnes) in South Australia during 2015–16, a rate which is among the world’s best

29% reduction in waste to landfillsince 2002

$200 million direct market value of recovered materials

1.18 million tonnes of CO2-equivalent greenhouse gas emissions savings from material diverted from landfill in 2015-16

15,130 terajoules of energy savings from material diverted from landfill in 2015-16

12,720 megalitres of water savings from material diverted from landfill in 2015-16

7,249 kilograms of hazardous materials safely collected from South Australian households and farmers in 2016-17

6,217 kilograms of lamps and light globes collected for recycling in 2016‑17

150,000 households have access to food waste recycling systems

1,625 people have used the free monthly household hazardous waste and farm chemicals collection service provided at the Dry Creek Depot

# Highlights of 2016–17

## Establishment of Green Industries SA

On 1 February 2017, the *Green Industries SA Act 2004* was proclaimed into operation following legislation passing Parliament in November 2016.
On 9 February 2017, members were appointed to the new Board of Green Industries SA.

Green Industries SA (‘GISA’) is building on the achievements of Zero Waste SA, increasing South Australia’s capabilities and leadership in green industries, and encouraging innovation and economic growth through the development of the green economy.

## Release of *Creating value: the potential benefits of a Circular Economy in South Australia*

On 26 May 2017, the Premier of South Australia, the Hon Jay Weatherill MP, released a report commissioned by GISA on the potential benefits of pursuing a more circular economy in the State. The *Creating value* report is the first step in providing quantified information on employment, carbon emissions, energy and materials use if South Australia adopted practices to become a more Circular Economy.

## Commercialising innovation

In 2016-17, GISA provided a loan of $750,000 to South Australian-based company Innovyz to run a fast-tracked mentoring and business development program. Innovyz has identified the waste and recycling sector as one with high potential for the development of new technologies and systems that would have global implications. Successful companies will establish a presence in South Australia and launch into world markets

## Investment in infrastructure

GISA approved more than $2.8 million in grant funding for Local Government, industry and not-for-profit waste management and resource recovery infrastructure projects in 2016-17. The projects will help deliver more than 60 jobs and attract more than $10 million in investment to the State.

A further $745,000 was approved to Local Government organisations in kerbside performance incentives to encourage household food waste recycling systems.

## South Australian Government Trade Waste Initiative

In 2016-17, GISA approved $263,517 in grants to 14 South Australian businesses under the Trade Waste Initiative. This comprised $122,165 through two rounds of resource productivity assessment grants and $141,352 for a food and beverage implementation grant, with five other implementation grants pending approval at the end of the financial year.

Further rounds of funding will be available in 2017-18, with grant payments scheduled in accordance with project milestones that span into 2018-19.

## Seventh Regional 3R Forum in Asia and the Pacific

Recognising South Australia’s leadership in waste management and resource recovery, the Seventh Regional 3R Forum in Asia and the Pacific was held in Australia for the first time in 2016. It is a prestigious global forum where political leaders and decision-makers from the Asia-Pacific region meet to guide policy and strengthen international co‑operation in the 3Rs – waste reduction, recycling and reuse.

## Waste infrastructure planning

In September 2016, GISA released a draft State-wide Waste and Resource Recovery Infrastructure Plan and held a number of workshops and regional consultations. The agency also commissioned updated modelling using more recent data for projections and economic impacts.

The Plan will provide a clear guide for infrastructure needs over the next 10 and 30 years, and supports a resource efficient economy in South Australia. A final plan will be released in 2017-18.

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# Outcomes of GISA Programs in 2016-17

## 1. To keep South Australia at the forefront of green innovation in the waste, recycling and resource recovery sectors

### Industry Program

GISA’s Industry Program (now known as the renamed Business Sustainability Program) provides expert advice and assistance in identifying and implementing eco‑efficiency, waste reduction and lean production improvements for South Australian businesses and organisations.

In 2016-17, GISA undertook projects in partnership with individual businesses, industry associations, and other agencies, providing advice, guidance and financial support for outcomes relating to waste avoidance and reduction; resource efficiency and productivity; lean production; and feasibility studies for bioenergy production. Specific projects included:

* Production and publication of video and written case studies showcasing SA’s leading wineries in environmental management, available on the GISA website.
* Report on options for improved management of winery waste (primarily stems and stalks) across five SA wine regions.
* Feasibility studies for bioenergy production at two South East businesses.
* Completion of lean production review for South Australian vineyard operations.
* Publication of a lean production benchmarking report and ‘seven waste’ identification list for South Australian wineries, and a case study on Kay Bothers achievements in lean production practices.
* Waste and recycling review of Adelaide University laboratories.
* Continued support for biogas trial at a Barossa Valley winery.
* Grant funding provided to Dairy SA to complete an investigation into improved management of waste whey for SA small-to-medium cheese manufacturers.
* Grant funding provided to the Motor Trade Association of SA for the development of learning and educational resources to encourage improved waste management for the automotive industry.
* Updated the Sustainable Business in Food Guide which offers guidance to food manufacturers on improving operations to be more efficient and productive.
* Collaboration with the Department of Environment, Water and Natural Resources (DEWNR) to implement improved waste and recycling segregation for its (and GISA’s) Waymouth Street facilities, including development of signage resources now available for other business sites.

### South Australian Government Trade Waste Initiative

The objective of the Trade Waste Initiative is to help SA businesses, primarily those in the food and beverage manufacturing sector improve the way trade waste is managed, focusing on volume reduction and quality improvement.

By reducing the amount of waste and contaminants discharged by sewer or other means, the Trade Waste Initiative aims to improve operating costs and environmental outcomes for food and beverage producers. Removal or treatment of trade waste at the source reduces the risk of contaminants impacting on re-use options or the receiving environment. By looking at trade waste in conjunction with the broader operations of the business and use of resources, further opportunities for improving performance and productivity may be identified.

The Trade Waste Initiative offers matched grant funding to eligible businesses in two ways:

* Resource productivity assessments to identify opportunities for improving the way trade waste is managed, along with other opportunities for resource efficiency and productivity improvements such as those associated with energy, materials and water management. Assessments take a holistic view of business operations when considering improvement opportunities (i.e. not solely focusing on end-of-pipe solutions), and in many instances are a requirement before applying for implementation grants (below).
* Food and Beverage Implementation Grants are available to eligible food and beverage producers/manufacturers. Funding can be directed towards implementation activities that are expected to lead to reductions in trade waste volume and/or contaminant loading.

In 2016-17, two rounds of productivity assessment grants were completed and one round of implementation grants, with final results of implementation grant applications expected to be known in the first quarter of 2017-18. In total, GISA approved $263,517 in grant funding to 14 South Australian businesses, which will be matched by an equal amount of investment from those businesses.

Further rounds of grant funding will be available in 2017-18.

### Commercialising innovation

The waste and recycling sector has high potential for the development of new technologies and systems with global implications, and which has potential to generate economic growth for South Australia.

In 2016-17, GISA entered into an agreement with SA-based company Innovyz to manage a fast-tracked mentoring and business development program for the waste and recycling sector. The agency has provided a loan of $750,000 for the program.

Innovyz will develop up to 10 companies that are leading innovators in the sector. A condition of approval is that successful applicants must have or establish a presence in South Australia.

The program started in April 2017 and will continue in 2017-18.

### Export opportunities and international policies

SA is recognised internationally for its leadership in waste management and resource recovery. Opportunities are emerging for the State to be a training destination for overseas practitioners, whether these are in behavioural change or systems design and deployment, or alternative technology policy.

India

GISA commissioned Austrade, with the assistance of the Department of State Development (DSD) to undertake a market assessment of opportunities in solid waste management training in the India market. The assessment confirmed the opportunities for SA to leverage its experience and knowledge in solid waste management through the development of professional development courses. The assessment also provided advice on potential partnering organisations and how to engage with the India market.

China

In 2016-17, GISA worked to identify local businesses which have an interest in developing export and investment opportunities and facilitated a number of inbound business delegations, particularly from Shandong Province. This follows the agency’s previous participation in a fact finding mission to Shandong and subsequent visits from Chinese companies to SA.

As a result of this work, GISA has entered into a Memorandum of Understanding on environment protection collaboration with the Shandong Province Department of Environment Protection, along with DEWNR and the EPA.

### Development of post-graduate courses

In 2016-17, GISA invited tertiary and research institutions to provide proposals for the development and provision of accredited training courses in solid waste management. Two types of course delivery were envisaged: A course delivered in SA for participants at graduate or post graduate levels; and a shorter course part-delivered in India and SA which targets participants living in India.

GISA expects to finalise arrangements for pilot course delivery in 2017-18.

### United Nations Centre for Regional Development

SA is the only Australian jurisdiction to be involved with the United Nations Centre for Regional Development (UNCRD). Recognising our leadership in waste management and resource recovery, the Seventh Regional 3R Forum in Asia and the Pacific was held in Australia for the first time from 2 to 4 November 2016, at the Adelaide Convention Centre. The Forum was jointly chaired by the State Minister of the Environment, Japan (Mr Tadahiko Ito) and the South Australian Minister for Sustainability, Environment and Conservation (Hon Ian Hunter MLC).

With the theme ‘Advancing 3R and Resource Efficiency for the 2030 Agenda for Sustainable Development’ more than 350 senior representatives from 40 countries attended the forum. 26 organisations participated in the International 3R Trade Exhibition of which 14 were from Australia. Participants committed to the Adelaide Declaration which identifies a range of actions towards the promotion of the Circular Economy to achieve resource efficient societies in Asia and the Pacific under the 2030 Agenda for Sustainable Development. Outcomes from the Forum included:

* Strengthening coordination among and within countries to progressively adopt and implement circular economy plans
* Promoting sustainable urban planning and practices which can lead to profitable and employment generating business opportunities
* Discouraging all forms of end-of-pipe waste disposal and encouraging diversion of waste from landfill to recycling and recovery facilities
* Facilitating the environmentally sound management of disaster waste in response to the increasing frequency and magnitude of natural disasters and the resulting large amounts of disaster waste.

Benefits to South Australia from GISA hosting the Forum include:

* Development of Circular Economy policy work
* Assessment of export opportunities for post-graduate training courses in India and China (Shandong)
* Disaster waste management and business continuity planning guides from Japan
* Greater awareness and understanding of Japanese waste to energy technology
* Identifying opportunities and networking SA green businesses with countries, including developing countries, across the region

### Benchmarking green industries

In response to the SA Government’s policy goals to realise the full potential of the ‘Green Economy’ and help to keep South Australia at the forefront of green innovation, GISA is undertaking a benchmarking study aiming to better understanding of green industries in the State, the relevant industry sectors and companies which fall within the definition, its size and to identify barriers and opportunities for its growth.

In 2016-17, GISA completed internal work to define green industry for the project and the associated industry sectors that fall within the definition for a green industry company database.

Collaborative work with the Australian Bureau of Statistics (ABS) to supply descriptive statistics on a number of economic variables for identified business datasets commenced in 2016-17 and will continue in 2017-18. The project is the first of its kind for the ABS to collaborate and use information held within its Business Longitudinal Analytical Data Environment for a State Government project.

## 2. To deliver reduced waste to landfill and increase the State’s capacity for recycling

### Waste audits and recycling activities survey

SA’s Strategic Plan has a target of reducing waste to landfill of 35% by 2020, compared to a 2002-03 baseline. The previous target of a 25% reduction in waste disposed to landfill was surpassed in the 2013-14 financial year.

On 28 June 2017, the Recycling Activity Survey for South Australia based on 2015‑16 data was released. It shows that 81.5% of all waste generated (equating to 3.91 million tonnes) was diverted from landfill. Other key findings include:

* Total landfill disposal fell 2.6% compared to 2013-14; a 29% reduction from 2002-03
* Resource recovery of standard materials (metals, organics, cardboard and paper, glass and plastics) produced a recovery rate of 79.3%
* The total direct market value of recovered material was estimated to be $203 million
* Resource recovery activities in 2015-16 led to the following estimated savings:
	+ Greenhouse gas emissions of 1.18 million tonnes of CO2 equivalent (equating to taking about 272,000 cars off the road)
	+ Energy of 15,130 terajoules (equivalent to around 2.7 million barrels of oil)
	+ Water of 12,716 megalitres (around 5,090 olympic sized swimming pools)

Although the percentage of waste diverted from landfill has increased dramatically over recent years, the overall amount of waste being generated has steadily increased. Total waste generated was higher in 2015-16 (4.80 million tonnes) than in 2013‑14 (4.50 million tonnes).

### Zero Waste Environmental User System

The Zero Waste Environmental User System (ZEUS) is a web‑based system developed by (then) Zero Waste SA to facilitate the monitoring, analysis and reporting on waste reduction targets in South Australia’s Waste Strategy.

ZEUS allows the electronic capture, storage and reporting of waste and recycling data across the state. Councils can use ZEUS at no cost, with training and support provided free-of-charge by GISA.

ZEUS collects data from:

* annual surveys of recycling activities;
* landfill quantities and audits of landfills;
* public and industry sector specific surveys in waste and recycling such as composting and plastics industry surveys;
* council returns on kerbside collections of waste, dry recyclables, organic material and incidences of illegal dumping;
* container deposit returns;
* litter incidence data from KESAB *environmental solutions*;
* hazardous waste including household hazardous waste and farm chemicals collections; and
* electronic waste collections.

In addition, ZEUS stores information on all GISA reports, contracts and grants, effectively acting as the agency’s contract register.

In 2016-17, GISA continued to collect, store and monitor data in ZEUS. Data was used for the 2015-16 Recycling Activity Survey and National Waste Report 2016, provision of information to assist tackle illegal dumping, undertake benchmarking of green industries in the State, and provide trend data in relation to the targets of *South Australia’s Waste Strategy 2015-2020*.

### Waste strategy and policy

*South Australia’s Waste Strategy 2015-2020* was released in November 2015. The Strategy continues to advocate for high levels of recycling and reuse of waste through targets and actions to reduce waste to landfill, requiring innovative policy and regulatory solutions.

The Waste Strategy contains three objectives:

* a resource efficient economy where the best or full value is secured from products and materials produced, consumed and recovered across the State;
* a stable and efficient market for investors through a clear policy framework providing a solid platform for investment decisions; and
* a culture enabling the South Australian community, businesses and institutions to continue to strengthen their role in implementing zero waste strategies and programs locally, nationally and internationally.

The Waste Strategy will encourage further investment and growth of the SA economy through:

* greater net benefits from kerbside recycling in the future, particularly if food waste is optimally recycled;
* developing the Circular Economy by opening up activity in product development, remanufacturing and refurbishment to create new jobs;
* new infrastructure investment for the recycling industry during the next 10 to 15 years, which is estimated to be in the hundreds of million dollars range;
* expanding the significant potential for further resource efficiency and productivity gains in SA businesses;
* encouraging savings in government through advanced procurement of waste and recycling services across all agencies; and
* reducing cost of living pressures for SA through high performance recycling systems which keeps council rates lower than they would otherwise be and through the rapidly growing momentum of the collaborative economy.

### Planning for waste infrastructure

In September 2016, GISA released a draft State-wide Waste and Resource Recovery Infrastructure Plan for public consultation. A number of workshops and regional consultation sessions were conducted during the public consultation period.

Following public consultation, an update to the modelling projections and the associated economic impacts was commissioned and feedback from public consultation was taken into consideration. A final plan will be released in the first half of 2017‑18.

The Infrastructure Plan fulfils the commitment in the 2017 update of the *30‑Year Plan for Greater Adelaide:* delivery of long-term planning for waste and resource recovery infrastructure to identify locations to meet the future demand and support a resource efficient economy.

It provides a clear guide for future waste and resource recovery infrastructure needs over the next 10 and 30 years, and supports a resource efficient economy in the State. It will also support the objectives of *South Australia’s Waste Strategy 2015-2020*, in particular, the objective of ‘a stable and efficient market for investors through a clear policy framework providing a solid platform for investment decisions’.

### Circular Economy – new green economies

A Circular Economy refers to the better use of materials within the economy and involves greater remanufacturing, repair and reprocessing activities. It is a generic term for an [industrial economy](https://en.wikipedia.org/wiki/Industrial_economy) that is producing no [waste](https://en.wikipedia.org/wiki/Waste) and [pollution](https://en.wikipedia.org/wiki/Pollution), by design or intention. The Circular Economy presents an opportunity to engage the commercial and private sector in change that will make the most of opportunities and addresses risks associated with the linear ‘make, use, dispose’ mode of our existing economies.

On 26 May 2017, the report commissioned by GISA – *Creating value: The potential benefits of a Circular Economy in South Australia –* was released by the Premier, the Hon Jay Weatherill MP.

The report examined scenarios including business as usual (existing trends and plans); efficient and renewable energy (e.g. actions under the Climate Change Strategy 2015-2050); materials efficiency (use of secondary materials, longer product life etc.); and a Circular Economy (combination of the renewable energy and materials efficiency scenarios) to provide quantified, reliable information about the likely benefits of a Circular Economy in SA.

It conservatively estimates that by 2030, a Circular Economy could create an additional 25,700 jobs and reduce greenhouse gas emissions by 27 per cent in SA when compared to a business as usual scenario.

A Circular Economy model would help build on our current achievements and activities in reducing waste, improving material and energy efficiency, and decreasing greenhouse gas emissions. It also aligns closely with the State Government’s goals and economic priorities in stimulating employment and building resilient local economies, as well as developing a low carbon economy.

The first steps in facilitating a more Circular Economy require GISA to focus on developing and providing important experience, data and learnings to guide future ongoing delivery.

Program outcomes will therefore initially be focussed on Communication and Collaboration; Policy and Analysis; Projects and Business support and include.

* Communications which inform, influence and guide community understanding of the Circular Economy, including developing case studies and appropriate metrics to highlight benefits and outcomes;
* Building upon initial investigations and further identify, understand and prioritise areas of Agency focus in South Australia; and
* Development of Circular Economy business innovation support services for delivery by GISA.

### Collaborative consumption and the sharing economy – Share N Save

The ‘Share N Save’ website uses web and mobile technology to expand traditional forms of sharing and collaboration to promote community based sharing through bartering, lending, swapping and collaboration. It helps to create economic, social and environmental benefits within a community by enabling access to what people need from what is already surplus or available around them.

The site maps a range of community sharing activities in the following categories:

* Share and Swap – sharing or exchanging items or services, for example, food swaps, car sharing;
* Doing Things Together – collaborative activities, for example, community gardens, Men’s Sheds; and
* Borrow Things – for example, toy libraries and the Adelaide City Bike Share program.

The website lists over 200 local initiatives to help people access what they need from what is already around them, helping people save money and avoid resources being wasted.

In 2016-17, GISA engaged with DEWNR on Share N Save. The Adelaide and Mount Lofty Ranges Natural Resources Management (NRM) Board is now a partner, with the Urban Engagement Unit from the NRM Board investing in Share N Save software development and training.

Another key outcome from 2016-17 was the development of a one-to-one sharing functionality (‘I Have’ and ‘I Need’). This function has been incorporated into the digital map to allow users to identify a surplus and to signal a need, including intent to start an activity in their area. The one-to-one functionality enables individuals to connect around offers and needs of both skills/knowledge and physical things related to mutualisation and sharing of resources.

### Collaborative consumption and the sharing economy – international speakers

High calibre international speakers bring knowledge and experience that, under the GISA banner, assists to establish South Australia as a forerunner of emerging economic and environmental trends, like the circular, regenerative and collaborative economies.

In 2016-17, the following experts were brought to SA by GISA, in partnership with other State Government agencies and organisations:

* Michel Bauwens, Peer to Peer and Collaborative Economy (October 2016) – was invited to Adelaide for the 2016 Open State Festival and the Adelaide Festival of Ideas.
* Joshua Vial & Damian Sligo-Green (Enspiral), Social Enterprise (December 2016) – visited Adelaide as part of an Australian tour regarding economic models, focused not just on financial sustainability but also social responsibility.
* Trebor Scholz, Platform Co-operativism (May 2017) – attended Adelaide during a national tour regarding platform cooperatives.

### Partnerships

In 2016-17, GISA continued its partnerships with the Local Government Association of SA (LGA), SA Branch of the Waste Management Association of Australia (WMAA) and KESAB *environmental solutions*. Information on outcomes under each of the service level agreements (SLA) with these organisations is summarised below:

Local Government Association of South Australia

*South Australia’s Waste Strategy 2015–2020* recognises the important role Local Government fulfils in reducing waste to landfill and managing municipal waste generated by households and small businesses.

The successful partnership between GISA and the LGA has been supported through an SLA between the organisations. Under the SLA, GISA provides the LGA with annual funding to employ a person who provides waste management support to local councils. GISA and the LGA’s agreement provides for broad advocacy, guidance and practical assistance to councils to support implementation of the Waste Strategy.

Many councils have also worked cooperatively with GISA to establish regional waste management plans, which complement and support the Waste Strategy.

The LGA serves a valuable role in providing this service to councils. The LGA also contributes to the assessment of applications for grants under GISA’s Infrastructure Grants program.

Waste Management Association of Australia (SA Branch)

The Waste Management Association of Australia – SA Branch (WMAA) coordinates and represents its members’ views, and provides a link between the industry and State Government. It has several working groups including Landfill SA, Carbon Committee and Waste Educators SA Working Group.

GISA supports WMAA to:

* organise events to improve industry knowledge and expertise and provide networking opportunities; and
* administer working groups and distribute GISA information to members.

In 2016-17, GISA sponsored five events that WMAA organised, hosted or contributed to, with more than 400 attendees. The events comprised the Waste SA Conference (September 2016), ‘When is waste a waste?’ (April 2017), Low Carbon Waste Forum (May 2017) and ‘Green is the new black: how a Circular Economy can benefit South Australia’ (June 2017). WMAA also assisted the agency with arrangements for the Seventh Regional 3R Forum for Asia and the Pacific and associated International Trade Exhibition at the Adelaide Convention Centre (November 2016),

KESAB *environmental solutions*

Keep South Australia Beautiful (KESAB *environmental solutions*) has a valued role as a partner delivering programs to schools and households on litter measurement, reduction, education and awareness, and on illegal dumping and compliance awareness.

Individual KESAB programs are funded by the agency under a service level agreement which defines the community education and engagement outcomes to support the objectives of the Waste Strategy.

Activities undertaken under the agreement in 2016-17 are summarised below, with further information available in the KESAB Annual Report 2016–17 located at <http://www.kesab.asn.au>.

*Litter data and research and branded litter monitoring*

KESAB has monitored litter incidence at 151 sites across the State since 1998.

Counts are undertaken at beaches, industrial sites, retail sites, parks, highways, car parks and shopping centres. This data provides a longitudinal analysis of trends relating to the total amount of litter (items and volume), the different materials in the litter stream and the geographical distribution of litter across South Australia. The base data is then collated to provide trend comparisons between items and volumes for different materials and acrossdifferent sites.

The data collected by KESAB is compiled into a national report prepared by Keep Australia Beautiful, available at [www.kesab.asn.au/publications/litter-statistic-reports/](http://www.kesab.asn.au/publications/litter-statistic-reports/). Discussions regarding a review of the National Litter Index began in 2016-17 with State and Territory jurisdictions with a view to enhancing data collection and information.

Litter data is also stored and analysed in GISA’s ZEUS system.

Based on the May 2017 count, the KESAB Litter Index findings show a reduction in litter for the 2016 – 2017 period of 15.3% when compared to the May 2016 count. Cigarette butts continue to be the most littered item (34%), and highway sites are the most littered (29%).

*Community litter, education, resources and campaigns*

KESAB develops and implements a range of litter awareness resources and information materials and collaborates with stakeholders to increase awareness of proper litter disposal and the environmental impacts of littering.

Highlights during 2016-17 included the relaunch of the transformed iconic ‘Bazza the Bunyip’ and the new mobile/interactive display. Bazza has been physically and technically refurbished creating a mobile standing display fitted with electronic voice box allowing interactivity through signage and voice messages. Launched in Barmera for the 2017 Easter holiday period, councils and tourist attraction sites in South Australian regional areas welcomed Bazza’s return. Messages include facts about container deposit legislation (CDL), and impacts of littering and poor disposal habits, recreational behaviour and safety embracing the River Murray environment.

The ‘Litter Less’ teacher resource was updated and is now available through a microsite on the KESAB website. The updated resource includes interactive elements with the content reviewed to include CDL and Local Nuisance and Litter Control community reporting of litter and illegal dumping information, as well as details on the ‘Dob In A Litterer’ app.

Displays and graphics were updated at the Statewide Recycling Centre to include story boards of the CDL process and an audio tour. A new interactive video will be produced in 2017-2018 which will meet contemporary litter and recycling engagement for teachers, students and visiting tour groups.

KESAB partnered with Scout Recycling, Statewide Recycling and Recyclers SA supporting the South Australian EPA promotion celebrating 40 years of CDL in the State. A community event was held in Rundle Mall and launched by the Minister for Sustainability, Environment and Conservation, the Hon Ian Hunter MLC.

*Wipe Out Waste schools program*

Wipe Out Waste (WOW) is a State-wide educational program delivered by KESAB *environmental solutions* which encourages schools to reduce waste and increase learning about waste and resource recovery. It is free and open to schools, pre‑schools and kindergartens in all sectors. It has been vital in changing students’ knowledge, attitudes and behaviour towards waste through education. Highlights during 2016-17 included:

* Finalising a partnership with the Department of Education and Child Development to undertake audits at school sites to gather data for changes to the Department’s resource and waste management systems from 2018-19.
* A visit to Mongolia in April 2017, working with the Khangarid Rotary Club on a waste education project with a teaching university, school and waste management conference. Presentations on WOW were made to 25 teaching lecturers, 30 teaching students, a class of Year 4-5 students, 25 school teachers and conference presentation to approximately 150 people, including the Australian Ambassador, attracting media interest.
* An extensive program of outreach with Professional Development sessions held in metropolitan and regional areas, including family day-care educators, primary and secondary schools, waste audits conducted at pre-schools, primary schools, secondary and tertiary institutions and *Wally the Wipe Out Waste Wizard* performances.

*Recycle Right 1300 telephone information line and website*

The Recycle Right® education program was developed in close collaboration with the SA Waste Educators Working Group of the South Australian branch of WMAA, the LGA and the recycling and waste industry.

On 29 July 2016 the SLA was varied to enable the operation of the 1300 recycling telephone hotline and website to be transferred to KESAB *environmental solutions*. In 2016‑17 the 1300 telephone hotline received 424 incoming calls and in response to other enquiries there were 70 outgoing calls.

The website <https://www.recycleright.sa.gov.au/> is a comprehensive database which enables householders to search by council area on what materials go into each of the two or three bins collected at kerbside. It also provides recycling solutions and disposal options for materials which should not be placed in any bin, such as batteries, globes and electronic waste. In 2016‑17 there were 189 web‑generated enquires through the Recycle Right® website.

### Industry and Local Government infrastructure grants program

GISA (and formerly Zero Waste SA) has delivered a range of grant programs that have assisted the construction of new and upgraded infrastructure and processing systems; improved kerbside recycling systems; introduced resource efficiency and lean production measures; identified options for higher value uses of waste; and supported community resource recovery projects.

More than $17 million in grant funding has been directed towards 158 waste infrastructure projects across the State since 2003. In metropolitan areas this has supported recycling infrastructure targeting plastics, organics, mixed waste and e‑waste. Funding in regional areas has supported upgraded and new transfer stations using state-of-the-art technologies and baling equipment.

Everyone in the community benefits from the reinvestment of the waste levy through access to new or improved household kerbside recycling services, creation of jobs to construct, operate and maintain new and expanded re-processing and sorting facilities throughout the State, and industry-focused programs resulting in less waste produced and reduced operating costs.

In 2016-17, GISA approved $2.88 million in industry and Local Government infrastructure grant funding in 2016-17. A further $745,000 was approved in 2016-17 for Local Government organisations in kerbside performance incentives to encourage the uptake of household food waste recycling systems.

### Infrastructure grants – Shared Fabrication Spaces

Shared fabrication spaces, also known as fabrication laboratories or ‘makerspaces’, are open-access community based workshops that enable the community to access diverse networks of people and skills, as well as high-end equipment and tools.

Makerspaces enable the community to access a combination of high-end machines, tools and software, as well as traditional manufacturing equipment that is normally only available in expensive commercial settings. They foster a collaborative culture where people can develop networks and share skills and knowledge in developing their ideas and prototypes. The spaces can also demonstrate zero waste and the Circular Economy by providing the opportunity for things to be reused, repaired and fixed, and transmitting the knowledge of how to do so.

On 19 June 2017, GISA issued a call for Expressions of Interest where up to $300,000 in grants is available for the establishment of shared fabrication spaces. The grants will help identify and support infrastructure projects that encourage production and design in South Australia, boosting economic activity, extending the life of materials and things, while fostering innovation, collaboration and skills development. Applications closed on 31 July 2017 and grants will be awarded in 2017‑18.

### Household hazardous waste and farm chemical collection program

Household chemicals can be dangerous without safe storage and disposal. GISA offers SA households a responsible, safe and free disposal service for unwanted chemicals through its Household Hazardous Waste program. The program provides options to dispose unwanted chemicals through the Hazardous Waste Depot at Dry Creek, which is open on the first Tuesday of every month from 9am to 12 noon.

From March 2004 to June 2017, 2,311 tonnes of unwanted hazardous materials have been collected across the State. In 2016-17, 72.49 tonnes of hazardous material was collected at the depot.

In 2016-17, GISA developed an Expression of Interest for industry and Local Government to establish two permanent household hazardous waste facilities. The agency also undertook planning to recommence mobile household hazardous waste events in 2017-18 in conjunction with local councils.

### BackLight program infrastructure development and employment growth

GISA’s BackLight Household Light Globe Recycling Program enables householders to drop off a range of fluoro globes for recycling at Mitre 10, True Value and Banner Hardware stores, providing households access to nearly 60 stores across the State.

All household globes are accepted for recycling, free of charge, including mercury-containing globes, incandescent and halogen globes. The program ensures that globes are recycled instead of going to landfill and prevents mercury contained in some globes from harming the environment.

This program supports the *Environment Protection (Waste to Resources) Policy 2010* which included a ban on fluorescent and other mercury containing lighting from landfill, from September 2012 in metropolitan Adelaide, and September 2013 for the rest of the State.

Since its inception, the program has assisted the collection of more than 280,000 lamps and globes from householders for recycling, equating to more than 26,000 kilograms.

## 3. To build the State’s capability and resilience in the area of disaster waste management

### Disaster Waste Management Plan

Building on the Phase One SA *Disaster Waste Management Scoping Study*, GISA received $175,000 in funding to undertake Phase Two of the Disaster Waste Management project in 2016-17. This funding has been provided in accordance with the 2015‑17 National Partnership Agreement on Disaster Resilience.

The Phase Two Disaster Waste Management project will include the following major components:

* developing a Disaster Waste Management Plan to sit under the authority of the State Emergency Management Plan;
* developing Guidelines for each disaster waste removal and management process outlined in the Plan to provide best practice operational guidance by disaster waste types with the aim to maximise recycling opportunities and local employment in disaster waste management whenever possible; and
* providing recommendations and developing an Implementation Plan for the Disaster Waste Management Plan and Guidelines to guide future work.

Following a public tender process, GISA awarded a consortium comprising local and international experts to undertake this work. The Phase Two work is being undertaken under the guidance of a Project Steering Committee which comprises key State Government agencies and the LGA. Extensive stakeholder engagement and consultation has occurred during 2016-17 via information sessions and workshops.

Further stakeholder consultation will be undertaken to assess and validate the Plan in 2017-18 prior to consideration by the State Emergency Management Committee.