

# ***Resource Recovery and Recycling Strategy***

Edition 1 - 2019



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# 1 Introduction

Council is committed to the ongoing development of kerbside recycling practices and activities with the aim of minimising the impact on the environment and minimising Council's cost for residual waste disposal.

The principal purpose of this Resource Recovery and Recycling Strategy (the Strategy) is to:

- Increase the amount of recycling material placed in the kerbside yellow and green bin from material currently going to landfill

Notwithstanding the above, the importance of avoiding, reducing and reusing virgin and recycled materials in the first instance is recognised in accordance with the Waste Management Hierarchy (refer Section 4) and therefore the Strategy also aims to:

- Educate the community on the Waste Management Hierarchy to minimise the generation of waste and recycling material in the first instance followed by appropriate recycling practices
- Practice and promote circular economy principals

The Strategy intends to support and enhance existing plans, policies and strategies towards maximising recycling practices. The Strategy has been developed by Adelaide Hills Council staff, with input from key stakeholders including regional subsidiaries the Eastern Waste Management Authority, trading as East Waste, and the Adelaide Hills Region Waste Management Authority.

The Strategy builds upon Council's Waste and Resources Management Strategy 2016-2021 which outlines a number of objectives and strategies to assist with reduction of waste to landfill.

The need for additional actions has been identified to ensure that Adelaide Hills Council continues to be proactive and responsive to recycling trends and requirements. This document is intended to address this requirement. The existing strategies and policies that Council currently has in place are still relevant and will be complemented by actions identified in the Strategy.

## 2 Council Profile

The Adelaide Hills Council area extends from Humbug Scrub in the north to Dorset Vale in the south and Mount Torrens in the east to Rostrevor in the west (Figure 1). The region is a short drive from Adelaide's CBD and can be reached via the South Eastern Freeway as the main feeder route. The Adelaide Hills Council area is bordered by eight Councils including metropolitan and non-metropolitan Councils. The official population of Adelaide Hills Council as of 30 June 2017 was 39,652.

The Council area covers 795 square kilometres. The land use is predominantly rural with rural - residential township areas. The diversity of land use ranges from fruit growing, conservation, farming and market gardening to urban townships. Urban areas such as the settlements of Stirling, Aldgate and Bridgewater are complimented by smaller townships and villages scattered throughout the Council region. There are several main arterial roads throughout the district with sub arterial roads completing the network.

The Council is divided into two wards, the Ranges Ward and Valleys Ward. For kerbside waste and recycling collection Council provides up to three kerbside bins for each ratable property, including a blue-lidded domestic waste bin, a yellow-lidded recycling bin, and a green-lidded organic bin (for townships only).



**Figure 1 - Adelaide Hill Council Area**



Domestic waste bins are collected weekly and recycling and green waste bins on alternating fortnights by Council's waste subsidiary, East Waste. The bins are collected predominantly from the verge area of most premises. Due to the vast distance between some properties and accessibility issues for the large waste trucks, bin banks are utilised in some cases. Bin banks consist of a number of bins clustered together at an appropriate location with waste collected from this point. This minimises trucks travelling a long distance to collect a minimal amount of waste and also assists with minimising risk by not having large waste collection vehicles travelling along roads that are not suitable for this type of vehicle.

### 3 Background

Given Council's commitment to minimise waste to landfill and maximise community kerbside recycling rates, Adelaide Hills Council has existing strategies and policies in place to realise this objective. The current Waste and Resource Management Strategy 2016-2021 is Council's primary document in relation to waste and recycling management. This document is supported by Council's Strategic Plan, specifically Strategy 3.7 *"We will drive further reduction in waste consigned to landfill"*. The prelude to the current Waste and Resource Management Strategy 2016-2021 was the Waste Management Strategy 2011-2015 adopted by Council in June 2011.

Notwithstanding Council have well established actions in reducing waste to landfill and maximising recycling, Council needs to remain aware of and responsive to contemporary challenges and opportunities in the waste and recycling industry. Most notable of these challenges were the limitations placed on global recycling markets in 2017 and 2018 by the Chinese Government known as the 'China National Sword Policy'.

The China National Sword Policy (China Sword) resulted in stockpiling of some recyclable materials in Australia as recyclable materials that had previously been sent to China were no longer accepted. This resulted in the need for the materials to be stored until future opportunities were found to recycle. Council also experienced a financial loss due to China Sword through the loss of a rebate paid for Council's recycled material. Further, Council now had to pay for the processing of recycled material collected through the kerbside recycling bins. Collectively, loss of the rebate and the need to pay for processing of recycled material resulted in a net loss of over \$360,000 per annum.

Noting the impacts of China Sword and Council's longstanding commitment to minimise waste to landfill and maximise community kerbside recycling rates, the following action was adopted by Council in June 2018.

*"Develop a Strategy, to Councils satisfaction, that considers approaches, for the future collection and processing of recyclables with a view to maximising environmental outcomes, reduce contamination rates and provide a cost effective kerbside recycling service".*

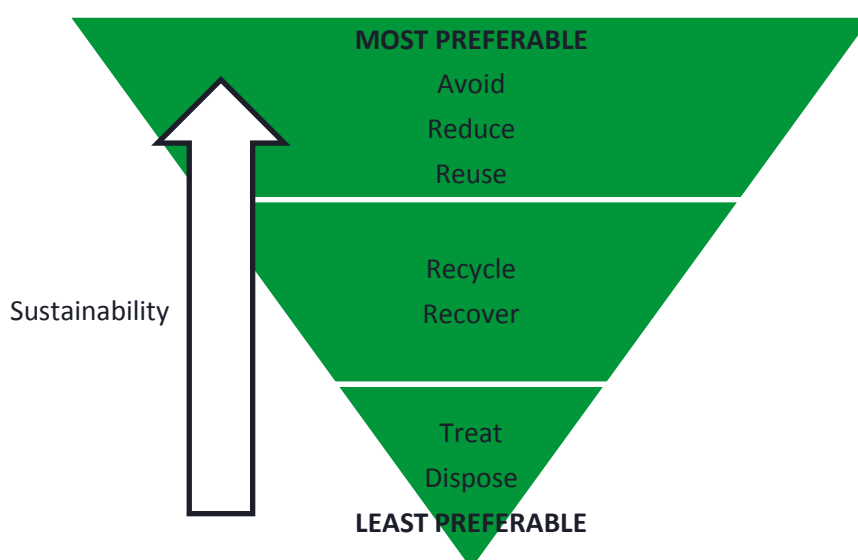
In addition to the above action, at the Ordinary Council Meeting held on 26 March 2019 Council resolved a climate emergency. The climate emergency Motion on Notice recognised the precarious position that requires urgent action by all levels of Government, including local Councils. It also reaffirms Council's commitment to both mitigating against, and adapting to, the adverse impacts of climate change within the Adelaide Hills Council. Implementation of the Strategy will assist in mitigating the climate emergency.

Taking the above into consideration and to guide decision making and the allocation of resources the Waste Management Hierarchy needs to be considered and referred to in the first instance when considering strategies relating to reducing waste to landfill and increasing recycling.

### 4 Waste Management Hierarchy

The Waste Management Hierarchy, as illustrated in Figure 2, is an internationally recognised framework to guide and prioritise waste and recycling practices and activities and is identified in the *Green Industries SA Act 2004*.

**Figure 2: Waste Management Hierarchy**



The Waste Management Hierarchy is an order of priority for the management of material in which avoiding, reducing and reusing are the most preferable activities. Recycling and recovery is the second level preference followed by treatment with disposal of material to landfill as the least preferable activity. The aims of the Strategy focus on the first and second level preferences of:

- Avoid
- Reduce
- Reuse
- Recycle
- Recover

## 5 Consumption

Following the preferences of the Waste Management Hierarchy it is important to encourage the community to reduce their consumption of items by avoiding, reducing and reusing in the first instance. Traditionally, Council's community education practices have focused on the recycle and recover components of the Waste Management Hierarchy. Noting the preference of the Waste Management Hierarchy is to avoid, reduce and reuse as the first priority, the relationship between consumption of items and the subsequent disposal of residual material needs to be communicated to residents to increase their understanding of the complete Waste Management Hierarchy. Accordingly, the Strategy includes a number of actions to focus on reduced community consumption in addition to recycling and recovery activities, these include:

- **Strategy 1.1** We will provide education to the community on the need to practice the Waste Management Hierarchy
- **Strategy 1.4** We will create an electronic (available if needed in hard copy) Waste Management Hierarchy kit
- **Strategy 1.8** We will undertake specific community education on the Waste Management Hierarchy with a view to reducing consumption in the first instance
- **Strategy 2.2** We will investigate providing smaller general waste bins and larger recycling and organic bins to residents
- **Strategy 2.14** We will work with partners to analyse the benefits and feasibility of introducing a fee incentive to property owners to produce less waste and recycle more in relation to the kerbside bin service

As a community leader Council needs to demonstrate practices that align with the Waste Management Hierarchy. The Strategy includes activities that aim to avoid, reduce and reuse material in relation to Council's consumption including participation in a pilot project to set a sustainable procurement target and to measure and record the amount of recycled material used in Council's Capital Works Program. The Strategy also includes actions to consider adoption of waste and recycling criteria for Council events and functions and to undertake investigation and research into circular economy products for use at Adelaide Hills Council.

## 6 Waste and Recycling Diversion Rate

Council's kerbside waste collection diversion rate has steadily increased since 2010. The diversion rate is the volume of recycled and green organic material expressed as a percentage of the total volume of material that would have normally gone to landfill.

**Table 1:** Diversion Rate - Adelaide Hills Community

	Waste Tonnes	Green Organics Tonnes	Recycling Tonnes	Percentage Diversion
<b>2010/2011</b>	8246	172	4132	34
<b>2011/2012</b>	8076	168	3946	34
<b>2012/2013</b>	7404	2207	3606	44
<b>2013/2014</b>	7490	3002	3300	46
<b>2014/2015</b>	7742	3047	3493	46
<b>2015/2016</b>	8000	3239	3743	47
<b>2016/2017</b>	8372	3903	3628	47
<b>2017/2018</b>	7933	3737	3421	48

Prior to 2012-13 a 'trial' green organics kerbside collection was provided to approximately 200 homes in the Rostrevor, Woodforde and Teringie areas. This trial accounted for the small tonnages of green organics shown in Table 1 for 2010-11 and 2011-12. The disposal path of green organics prior to the introduction of kerbside green organic bins to all township areas in 2012-13 is unknown. However, it is likely that green organics would have been burnt, went into the kerbside general waste bin or were composted.

Table 1 show's that the introduction of green organic bins to all township areas did result in a marked increase in the diversion rate at the time of 10% between 2011-12 and 2012-13. Since the introduction of green organic bins in 2012-13 the diversion rate as steadily increased from 44% to 48% in 2017-18.

Figure 3 below shows the tonnes of waste, organics and recycling material collected between 2010-11 to 2017-18. The solid black line shown in Figure 3 for each of the material streams shows the 'trend' overtime for each material.

**Figure 3: Waste, Organics and Recycling Tonnes and Trends 2010/11 to 2017/18**

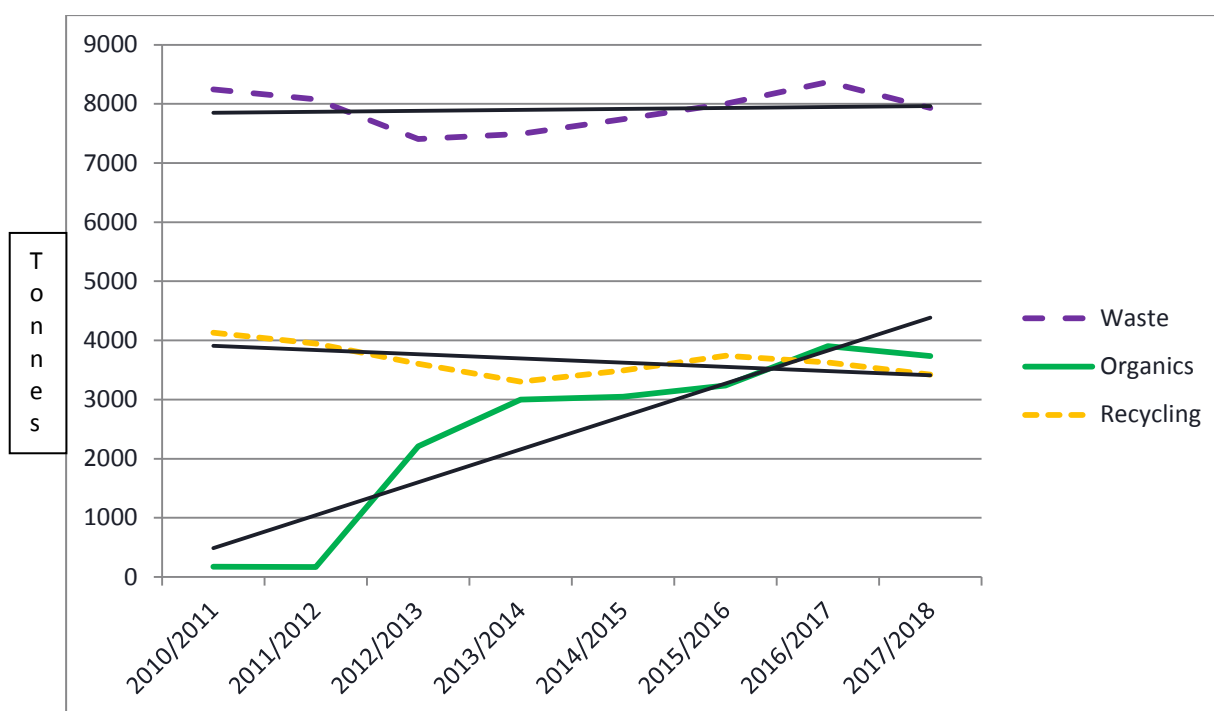


Figure 3 shows that the increase in the diversion rate is due to marked increases in the volume of green organics collected through the kerbside service over the period. Of note, the trend for waste material collected over the period has slightly increased in tonnes, whilst the trend line for recycling material has decreased in tonnes. Ideally, this outcome should be reversed and highlights the need for further work with the community to decrease waste tonnes and increase recycling. Notwithstanding these results, the introduction of the green organic bin service has achieved a positive result and without this action it is likely the increasing trend in waste tonnes demonstrated in Figure 3 would be far greater.

To assist with collecting food scraps that could be placed into the green organic bins, a grant from Zero Waste enabled Council to provide free kitchen caddy starter kits to residents in 2013-14. Initially they were only available to residents who had a kerbside green organic bin. However in 2018 it was decided that kitchen caddies would be made available to all residents. This decision was made to increase the uptake of the caddies so that residents who were home composting had access to a resource that would assist in their efforts to divert waste to landfill.

To make substantial and ongoing positive changes to the diversion rate a considerable change in current practice would be required, such as what occurred with the introduction of green organic bins to township properties. Given this need the Strategy contains several actions to investigate activities, services and resources required to make a material change to the diversion rate for future consideration by Council.

## 7 Shared Responsibility – Roles

Minimising waste to landfill and maximising recycled material is a shared responsibility between key stakeholders including:

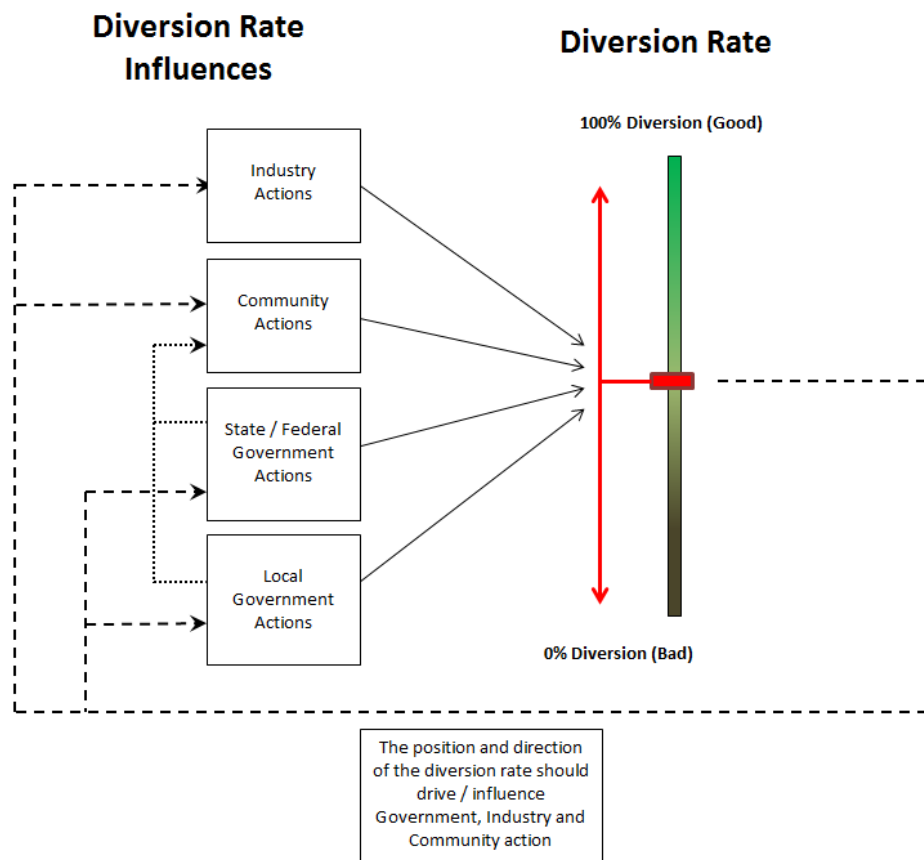
- Local, State and Federal Government
- Communities
- Individuals



- Industry

Figure 4 demonstrates the link between key stakeholders and the effect on the diversion rate. Collaborative participation by all stakeholders is key to increasing the diversion rate with no one single stakeholder working in isolation being able to effect a material change.

**Figure 4: Shared Responsibility**



### 7.1 Local Government

Councils have a role to provide waste management services including kerbside waste and recycling collection, disposal of residual waste, processing of recycled material and providing awareness and education to the community. Education is a vital role that Local Government provides to ensure that the community has the knowledge to recycle products in the correct manner and to minimise their waste to landfill. Council also has a role in leading by example, advocating for change on behalf of the community, facilitating to bring parties together and as a partner with other key stakeholders.

### 7.2 State and Federal Government

The primary responsibility of waste management is driven by State and Federal Government in accordance with legislation, policies and programs. They are responsible for legislation, strategies and policies for waste and recycling management frameworks. Examples include: 2009 National Waste Policy, Environmental Protection Act 1993 and Green Industries SA Act 2004.

### 7.3 Community and Individuals

Ultimately, the success or otherwise of minimising waste to landfill and maximising recycling of material is dependent upon the community and individuals. The community and individuals have a responsibility to ensure that they are sorting their waste and recycling materials into the correct streams. Further, the community need to alter their behaviour to align with the requirements of the Waste Management Hierarchy outlined in Section 4.

### 7.4 Industry

The waste and resources industry in South Australia is very well represented, with diverse businesses vying for recyclable materials. For the recycling industry to continue to thrive and improve, industry needs be responsive to emerging trends and technologies and implement additional recycling options for consumers where there is a gap. This will require investment from both industry and Government.

## 8 Regional Subsidiaries

Council utilises regional subsidiaries to provide waste and recycling collection and disposal services. Regional subsidiaries can be established under Section 43 of the *Local Government Act 1999* to provide a specified service or services; or to carry out a specified activity or activities; or to perform a function of the Councils establishing a regional subsidiary.

Relevant to waste and recycling management the Adelaide Hills Council is a member of two regional subsidiaries, these are:

- Eastern Waste Management Authority (East Waste)
- Adelaide Hills Region Waste Management Authority (AHRWMA)

East Waste is a regional subsidiary of the City of Burnside, the Campbelltown City Council, the City of Mitcham, the Corporation of the Town of Walkerville, the City of Prospect, the City of Norwood Payneham and St Peters and the Adelaide Hills Council. East Waste provides kerbside bin collections, at call hard waste collections and street litter bin services for Adelaide Hills Council.

The AHRWMA is a regional subsidiary of the Rural City of Murray Bridge, the Adelaide Hills Council, the District Council of Mount Barker and the Alexandrina Council. The AHRWMA operates a landfill site located at Brinkley near Murray Bridge where Adelaide Hills Council's residual waste is disposed of. The Heathfield Resource Recovery Centre (HRRRC) located at Heathfield is also managed by the AHRWMA on behalf of Council.

## 9 Waste Services

Currently Council's rateable properties have access to the following kerbside waste and recycling services.

### 9.1 Kerbside Collection

The following kerbside bins/collections are provided:

- 1 x 240L yellow lidded recycling bin, collected fortnightly.
- 1 x 240L green lidded organics bin, (in township areas), collected fortnightly.
- 1 x 140L blue lidded general waste bin, collected weekly.
- 1 x on call hard waste collection per year.

Where a service already exists, upon application, additional kerbside bins can be requested for an annual service fee.

### 9.2 Kitchen Caddies

Kitchen caddies are available to all households, schools, kindergartens and community groups to assist with food recycling practices. They are small containers for use in the kitchen to collect food scraps and organics that in turn can be placed in the kerbside organic bin or home composting systems.

### **9.3     *Green Organic Vouchers***

Residents who do not have access to a kerbside green organic collection may, via application, receive two vouchers per financial year to dispose of green organics at the HRRC. Each voucher entitles the resident to dispose of up to a 7x5 trailer load of green organics for free.

### **9.4     *Street Litter Collection***

Council provides street litter bins (general waste), throughout the region to sites including main streets, ovals, parks, cemeteries and bus stops/parking bay areas for the collection of foot traffic waste.

### **9.5     *Green Organic Drop off Days***

Green organic drop off days are offered to assist residents as an additional means to dispose of organic material. The green organic drops off days are provided at no cost with the aim to reduce fuel load for the fire danger season and assist residents with green organic recycling.

### **9.6     *Disposal Sites for Kerbside Services***

Currently Council's kerbside bins are processed as follows:

- Waste from blue lidded general waste bins is taken to Brinkley Waste and Recycling Transfer Station located at Murray Bridge and disposed to landfill.
- Recycling material from the yellow lidded bins is transported to the Northern Adelaide Waste Management Authority (NAWMA) located at Edinburgh. The products are sorted and processed to different recycling streams. NAWMA is a regional subsidiary established under the *Local Government Act 1999* and is owned by the Town of Gawler, the City of Playford and the City of Salisbury.
- Organic material from green lidded bins is transported to a commercial composter at Wingfield. The materials are sorted and composted which is available for purchase.
- Kerbside collected hard waste is processed at a facility located at Birkenhead where it is burnt as an 'energy from waste' activity.

### **9.7     *Additional Recycling Disposal Options***

Residents have access to a number of free specific recycling options at the HRRC. These options provide for items not permitted within the kerbside collection bins or quantities of recyclables over and above kerbside provisions.

The following items are accepted at HRRC without charge:

- x-rays
- whitegoods
- electronic waste
- steel
- vehicle oil
- cardboard
- drumMuster containers
- newspapers
- batteries

## **9.8 Household Chemical and Paint Drop Off Facility**

A household chemical and paint drop off facility is scheduled for installation at HRRC in mid-2019. This will provide for disposal of hazardous waste that cannot be placed into kerbside bins. There are legislative requirements that this waste is to be disposed of in the correct manner. The provision of this service will allow residents to safely and lawfully dispose of paint and chemical from their properties.

# **10 Internal Drivers**

Council has a number of internal drivers to facilitate a reduction of waste to landfill and increase recycling practices, these are:

## **10.1 Adelaide Hills Council Strategic Plan**

The Adelaide Hills Council [Strategic Plan](#) provides a framework for services that Council provides. It assists to drive new initiatives and improvements within the community. Council's Strategic Plan includes the following strategies that directly align with the Strategy.

*Goal 3 Places for people and nature*

*Strategy 3.1 We will work with our community to encourage sustainable living and commercial practices.*

*Strategy 3.7 We will drive further reduction in waste consigned to landfill*

*Goal 4 Explore*

*Strategy 4.6 We will actively pursue opportunities to share resources and partner with others for better community outcomes.*

## **10.2 Waste and Resources Management Strategy 2016 – 2021**

The [Waste and Resources Management Strategy 2016-2021](#) was adopted by Council in 2016. The strategy includes 20 objectives and 57 strategies that aim to reduce waste to landfill, increase recycling and reduce Council's waste disposal costs. Of the 57 strategies, twelve directly relate to kerbside recycling/diversion from landfill. These are:

- Improve the way that waste is deposited, handled and transported to landfill at the Heathfield Resource Recovery Centre in order to maximise resource recovery and provide the most effective management of received materials.
- Suitable funding projects, regionally or individually, if and when they become available.
- Investigate the opportunity to undertake a kerbside waste audit in conjunction with Council's waste collection service provider East Waste.
- In conjunction with AHRWMA undertake visual waste audits at Brinkley landfill.
- Consider public place recycling services within prominent locations.
- Consider introducing kitchen caddies to schools as part of a school's education program.
- Provide education to all community members.
- Support and participate in regional education opportunities via East Waste and AHRWMA.
- Develop a waste education communication strategy.
- Investigate the feasibility of implementing soft plastics recycling within the Council area, in conjunction with East Waste.
- Explore benefits or otherwise of implementing fortnightly kerbside waste collection.
- Subject to the identification of material benefits in strategy 5.7.2.10 advocate for legislative change to occur for metropolitan Adelaide Councils to provide fortnightly kerbside waste collection services



**Attachment 1** provides further information on the twelve strategies including an update on their implementation.

### **10.3     *Annual Business Plan 2018-19 and 2019-20***

The [2018-19 Annual Business Plan](#) incorporates waste and recycling initiatives to further drive reduction of waste consigned to landfill. The 2018-19 Annual Business Plan contains the following key initiatives:

- Undertake kerbside bin audits with the aim to reduce waste to landfill and maximise recycling in accordance with the Waste and Resources Management Strategy 2016-2021.
- Pursuant with Council's Waste and Resources Management Strategy 2016-2021 consider recycling services within prominent public places with the aim to reduce waste to landfill.
- Investigate the feasibility of implementing soft plastic recycling within the Council area, in conjunction with East Waste and Council's Waste and Resources Management Strategy 2016-2021.
- Provide a kerbside waste, recycling and green organics service and a hard waste collection service.
- Continued provision of free green organic drop off days to assist with bushfire fuel reduction for fire prevention.

The draft 2019-20 Annual Business Plan, currently out for public consultation, builds on the existing recycling initiatives outlined above in the 2018-19 Annual Business Plan with an additional initiative added:

- To develop a detailed scoping study in regards to the various options to achieve improved financial and environmental outcomes in relation to green waste.

**Attachment 2** provides further information on the above six initiatives including an update on their status.

### **10.4     *Adelaide Hills Region Waste Management Authority Agreement (AHRWMA)***

The AHRWMA Agreement for the HRRC includes recycling references, examples include:

- "encouraging diversion of materials from general waste streams by placing recycling drop off areas so that they can be reached before residual waste disposal areas".
- "The Operator must maintain knowledge and understanding of current and future developments, trends and policies in relation to resource recovery centres and report these findings to the Owner where appropriate".

These references assist with resource recovery at the HRRC and minimise waste to landfill.

### **10.5     *Climate Emergency Resolution***

As outlined in the Background section of the Strategy, Council declared a climate emergency at the Ordinary Council Meeting held in March 2019.

The climate emergency declaration acknowledged that Federal Government greenhouse gas emission data shows that total greenhouse gas emissions have increased in Australia compared to 2012, not decreased.

The Strategy will assist in reducing landfill gases such as methane through minimising waste to landfill. In turn, this outcome adds to and strengthens Council's activity in actioning the climate emergency resolution. The Strategy also encourages the reuse of recyclable materials which will result in less use of virgin materials and resources being required. This in turn leads to reduced consumption of inputs and manufacturing and transport environmental impacts, for example reduced fuel consumption in transport vehicles. By minimising waste to landfill from the Strategy it reaffirms Council's commitment to the climate emergency declaration.

## 11 External Drivers

There are a number of external drivers that support and align with Council's waste and recycling activities to ensure waste to landfill is minimised and recycling is maximised, these are:

### **11.1 Commonwealth National Waste Policy: Less Waste, More Resources Nov 2009**

The [Commonwealth National Waste Policy](#) sets a clear direction for Australia over the next 10 years toward producing less waste for disposal, and managing waste as a resource to deliver economic, environmental and social benefits. The Strategy supports the National Waste Policy principles to reduce the amount of waste generated in Australia, and increase our recycling.

### **11.2 South Australia's Waste Strategy 2015-2020**

[South Australia's Waste Strategy](#) was released by Green Industries in 2015. The Strategy supports the concept that we must continue to identify innovative solutions and new responses to waste management and to more efficiently manage our scarce resources. It acknowledges South Australia's leading role in waste management and encourages further growth in this area.

### **11.3 Environmental Protection Waste to Resources Policy 2010**

The objective of the [Environment Protection \(Waste to Resources\) Policy 2010](#) is to achieve sustainable waste management by applying the Waste Management Hierarchy consistently. The Policy prohibits a number of materials from landfill including e-waste and the contents from kerbside recycling bins.

### **11.4 Solid Waste Levy**

The Solid Waste levy is a charge paid by South Australian waste depot licence holders. The levy is based on every tonne of solid waste disposed of to landfill. The licence holders of landfills are required to pay the levy under the *Environmental Protection Act 1993*. The Environment Protection Authority collects the levy on behalf of the South Australian Government. Fifty percent of the levy is transferred to the Green Industries Fund, which Green Industries SA draws on to achieve its objectives.

The levy is charged in two categories, Adelaide metropolitan and non-metropolitan areas, depending on location of waste collected. Adelaide Hills Council has collection areas in both Adelaide metropolitan and non-metropolitan regions.

The Solid Waste levy has steadily increased in price from \$5 per tonne (metro) in 2002/03 to \$140 per tonne 2019/20.

## 12 China National Sword

Until recently, a large portion of Australia's recyclable products, predominantly cardboard and paper, had been shipped to China for processing. The shipping of these materials decreased significantly when China announced the introduction of China Sword. China Sword followed the adoption by China of Operation Green Fence in 2013 to prohibit the import of unwashed and contaminated recyclable materials. China Sword was introduced to increase the environmental standards of all recyclables entering China through application of very strict and unachievable contamination rates.

In December 2017, China informed the World Trade Organisation that from 1 March 2018 they would adopt strict 'contamination thresholds' for imported recyclables. The accepted contamination threshold was set at 0.5 per cent or less.

Whilst South Australia's contamination rates were considered low and the materials of high quality, the decision by China to lower their acceptable contamination rates was a challenge to the local, state, national and global recycling industry.

Due to low contamination rates found in the recycling material collected by East Waste it was still possible to access markets for Council's recycling products thus avoiding the need to stockpile or dispose of this material to landfill as was occurring in other parts of Australia.

As outlined previously, China Sword did however have a detrimental effect on Council's financial position. Prior to China Sword, Council was receiving between \$30.00 and \$35.50 per tonne for kerbside recycling products amounting to an income of approximately \$110,000 per annum since 2015. Following China Sword Council was required to pay a fee for the processing of kerbside recycling products resulting in a budgeted expenditure of \$268,000 in the 2018/19 financial year.

Given the implications of China Sword, Adelaide Hills Council needs to continue current recycling initiatives whilst looking to the future for new opportunities that will compliment and improve current waste disposal and recycling practices within our district. It is an opportune time to work collaboratively with other bodies and industry to identify and deliver on opportunities arising from the China Sword that will support the Circular Economy and Waste Management Hierarchy principals.

## 13 Circular Economy

The Circular Economy (Figure 5) is an economic model where resources are kept in circulation through recovery, recycling and reuse for as long as possible rather than the traditional ways of handling resources (take, make, use, and dispose). The Circular Economy model involves the most preferable levels of the Waste Management Hierarchy - avoid, reduce and reuse. The model reduces the demand for virgin materials and is seen as a growing driver for waste management into the future.

The *Green Industries SA Act 2004* identifies the principles of the Circular Economy as a reference to an economic model that contemplates the production of goods and services as follows:

- Reduced reliance on virgin materials.
- Continuously functioning utility and an extended lifecycle.
- In a manner that eliminates, as far as is reasonably practicable, waste or pollution, or harm to the environment.

**Figure 5: Circular Economy**



To develop and sustain a healthy Circular Economy changes in the waste and recycling sector will be required and ‘buy in’ from all stakeholders including Councils and the community.

There is an opportunity for Council to play a part towards a Circular Economy through the link between Council’s kerbside recycling material and the goods we purchase as part of our everyday business. For example, increasing the amount of goods purchased by Council that are made of locally and nationally collected/repurposed items will assist to provide additional markets for the recycled material.

The above outcome increases the demand for products manufactured from our kerbside recycled material and aligns within the Circular Economy model by maintaining these materials in circulation through recovery, recycling and reuse. An example of this is purchasing bollards and street furniture that has been created from soft plastics.

Actions in the Strategy relating to the Circular Economy include:

- **Strategy 2.6** We will seek evidence based assurance that our recycling material is being processed in an environmentally and circular manner.
- **Strategy 4.4** Undertake investigation and research into Circular Economy products for use at Adelaide Hills Council

## 14 Strategies









The Circular Economy outlined above contains five key components where waste and recycling decisions are made and actions undertaken or implemented on a daily basis by all stakeholders including Council and the community. There are a number of roles that Council can undertake to influence and drive change in the Circular Economy, these are:

- **Leader** - Council leading the community or the Local Government sector by, for example, setting directions to meet the community’s needs or role-modelling an approach.
- **Service Provider/Owner** - Council directly delivering services, providing assets or managing community funds.



- **Partner** - Council contributing funds or resources and or working collaboratively with others to deliver a service or initiative.
- **Facilitator** - Council bringing together other people and partners to achieve outcomes.
- **Regulator** - Council fulfilling a particular role as determined by legislation.
- **Advocate** - Council making representations on behalf of the community.

In addition to Council's role, many of our strategic initiatives help fulfil local, regional, state and national priorities which are indicated in the following table. The coded symbols used in this table are used throughout the Strategy.

<b>Symbol</b>	<b>Related Priority</b>
	<i>South Australia's Waste Strategy 2015/2020</i> , a culture enabling the South Australian community, businesses and institutions to continue and strengthen their role in implementing zero waste strategies and programs locally, nationally and internationally
	<i>Commonwealth National Waste Policy</i> , Avoid waste, improve resource recovery, increase use of recycled material and build demand and markets for recycled products
	<i>Environment Protection (Waste to Resources) Policy 2010</i> , promotes the implementation of the waste management hierarchy, improves resource recovery and reduces waste to landfill
	<i>Adelaide Hills Council Strategic Plan Strategy</i> , We will further drive reduction in waste consigned to landfill
	<i>Adelaide Hills Council Waste and Resources Management Strategy 2016-21</i> , provide a cost effective and adequate waste and resource management service that focuses on reducing waste disposed to landfill
	<i>Adelaide Hills Region Waste Management Authority Strategic Plan</i> , advocate, research & promote best practice waste management & actively represent member councils in all forums
	<i>Eastern Waste Management Authority Business Plan 2015-2024</i> , vision statement: providing flexible and responsive waste and resource recovery collection services that focus on safety, high order recycling, elevated service levels, less vehicle movements and lower emissions.
	<i>Regional Public Health Plan for the Southern Hills LGA, May 2015</i> , A focus on environmental health including food safety, health regulations, waste management and a range of other commitments.

Utilising the roles and related priorities outlined above existing strategies have been identified and new ones developed as a means to maximise environmental outcomes, reduce contamination rates and provide a cost effective kerbside recycling service. These new strategies, 35 in total, have been categorised into the following themes:

### **Themes**

- Education
- Kerbside Collection
- Emerging Trends and Technologies
- Sustainable Procurement
- Heathfield Resource Recovery Centre
- Participation and Knowledge Building






### **14.1 Education**

Council plays a pivotal role in educating the community to assist with reducing contamination levels within the kerbside collection and increasing recycling products in both the green organic and recycling kerbside bins. The sorting of materials begins in the home prior to being placed in the kerbside bins. Residents need to have access to accurate up to date information on what can and Adelaide Hills Council Resource Recovery and Recycling Strategy

cannot be recycled. They require the knowledge to ensure they can confidently and effectively place the correct items into each bin. Alternative disposal options need to be communicated to avoid contamination.

Whilst residents have a good understanding of basic recycling practices there is still room for improvement. This is partly due to the confusion surrounding different recycling requirements of different recycling facilities and the need to increase education and awareness to the next level. The basics of recycling cardboard, deposit containers and the like are assumed. It is the next tier of recycling that needs to be shared and encouraged. Items like soft plastics, hazardous waste and food scraps need to be recycled in the correct manner to obtain greatest benefits to reduce waste to landfill.

Food scrap recovery in particular needs to be addressed and education with our community in this space is a priority. Food scraps are one of the largest contaminants seen in kerbside bin audits. Recycling food scraps in the correct manner will support both the Circular Economy and Waste Management Hierarchy.

<b>Goal 1 Education</b>				
<b>Strategy</b>	<b>Role</b>	<b>Existing or New</b>	<b>Responsibility</b>	<b>Related Priorities</b>
<b>Strategy 1.1</b> We will provide education to the community on the need to practice the Waste Management Hierarchy	<ul style="list-style-type: none"> <li>• Leader</li> <li>• Service Provider</li> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• East Waste</li> <li>• AHRWMA</li> </ul>	
<b>Strategy 1.2</b> We will provide specific education to the community to increase their level of food scrap recycling	<ul style="list-style-type: none"> <li>• Leader</li> <li>• Service Provider</li> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• East Waste</li> <li>• AHRWMA</li> <li>• GISA</li> <li>• Community</li> </ul>	
<b>Strategy 1.3</b> We will increase the level of community recycling by providing recycling and waste information to residents	<ul style="list-style-type: none"> <li>• Service Provider</li> <li>• Partner</li> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• Community</li> </ul>	
<b>Strategy 1.4</b> We will create an electronic (available if needed in hard copy) Waste Management Hierarchy kit	<ul style="list-style-type: none"> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• Community</li> </ul>	
<b>Strategy 1.5</b> We will provide the Waste Management Hierarchy kit to newly built premises	<ul style="list-style-type: none"> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 1.6</b> We will support waste and recycling education programs undertaken by others	<ul style="list-style-type: none"> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	 

<b>Strategy 1.7</b> We will undertake specific community education on the Waste Management Hierarchy with a view to reducing consumption in the first instance	<ul style="list-style-type: none"> <li>Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> </ul>	<div>AHC WRMS</div> <div>AHC Strat</div>
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## 14.2 Kerbside Collections

It is a legislative requirement under the *Local Government Act 1995* and the *Environment Protection (Waste to Resources) Policy 2010* that Council must provide waste services. The following regional support and collection provisions assist Council to provide this service.

The Adelaide Hills Council is a member of the regional subsidiary East Waste. East Waste collects kerbside waste, recyclables and green organics on behalf of Council. Blue lidded 140L general waste and yellow lidded 240L recycling bins are provided to approximately 16,500 properties. Green lidded 240L green organic bins are provided to approximately 10,000 properties within township areas only. The blue lidded bins are collected weekly and the yellow and green lidded bins are collected fortnightly.

Residents are also entitled to a kerbside hard waste collection annually. East Waste facilitates the bookings and collections for this service. East Waste also collects waste from approximately 230 street litter bins which are provided for the community by Council.

Goal 2 Kerbside Collections				
Strategy	Role	Existing or New	Responsibility	Related Priorities
<b>Strategy 2.1</b> We will review the current Waste and Resource Recovery Service Policy to consider including a regulatory position on managing ongoing kerbside bin contamination from repeat offenders	<ul style="list-style-type: none"> <li>Service Provider</li> <li>Regulator</li> <li>Partner</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> <li>East Waste</li> </ul>	
<b>Strategy 2.2</b> We will investigate providing smaller general waste bins and larger recycling and organic bins to residents	<ul style="list-style-type: none"> <li>Service Provider</li> <li>Partner</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> <li>East Waste</li> </ul>	
<b>Strategy 2.3</b> We will undertake a scoping study in regard to the various options to achieve improved environmental outcomes in relation to Green Organics (subject to Budget approval 2019-20)	<ul style="list-style-type: none"> <li>Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> <li>East Waste</li> </ul>	





<b>Strategy 2.4</b> We will connect businesses generating food scraps with commercial composters	<ul style="list-style-type: none"> <li>• Facilitator</li> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• AHRWMA</li> <li>• GISA</li> </ul>	
<b>Strategy 2.5</b> We will continue to provide a kerbside waste, recycling and green organics service and a hard waste collection service	<ul style="list-style-type: none"> <li>• Service Provider</li> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• AHRWMA</li> <li>• East Waste</li> </ul>	 
<b>Strategy 2.6</b> We will seek evidence based assurance that our recycling material is being processed in an environmentally and circular manner	<ul style="list-style-type: none"> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• East Waste</li> </ul>	
<b>Strategy 2.7</b> We will continue to provide free green organic drop off days to assist with community bushfire fuel reduction	<ul style="list-style-type: none"> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 2.8</b> We will consider adoption of 'waste and recycling' criteria for Council events and functions and encourage others to do likewise	<ul style="list-style-type: none"> <li>• Service Provider</li> <li>• Partner</li> <li>• Advocate</li> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 2.9</b> We will explore opportunities as they arise to make a material change to the diversion rate for future consideration by Council	<ul style="list-style-type: none"> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 2.10</b> We will work with partners to analyse the benefits and feasibility of introducing a fee incentive to property owners to produce less waste and recycle more in relation to the kerbside bin service	<ul style="list-style-type: none"> <li>• Service Provider</li> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	  

### 14.3 Emerging Technologies

To improve recycling practices and assist with reducing waste to landfill, being aware of emerging trends and technologies will be crucial. There may be advances in technology that will assist with the waste diversion process and to ensure Council takes advantage of these opportunities, it is imperative they are explored and when beneficial supported or implemented.






An example of new technology is Radio Frequency Identification Device (RFID) tags. These small circular devices are fitted to kerbside bins, either retro fitted or newly fitted. They have the potential to record bin weight, frequency of collection, contamination issues and for bin identification purposes. This is valuable information for evaluating kerbside waste disposal practices.

<b>Goal 3 Emerging Trends and Technologies</b>				
<b>Strategy</b>	<b>Role</b>	<b>Existing or New</b>	<b>Responsibility</b>	<b>Related Priorities</b>
<b>Strategy 3.1</b> We will maintain awareness of emerging trends and technologies	<ul style="list-style-type: none"> <li>• Leader</li> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	 
<b>Strategy 3.2</b> We will encourage the building and construction industry to include recycling management systems in new home designs	<ul style="list-style-type: none"> <li>• Partner</li> <li>• Advocate</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 3.3</b> We will encourage supermarkets and others to supply compostable bags in the produce sections and to accept soft plastics	<ul style="list-style-type: none"> <li>• Partner</li> <li>• Advocate</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 3.4</b> We will explore opportunities to support and promote food research and reuse organisations	<ul style="list-style-type: none"> <li>• Partner</li> <li>• Facilitator</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 3.5</b> We will install radio frequency identification chips to all replacement and new bins as they arise	<ul style="list-style-type: none"> <li>• Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	

#### **14.4 Sustainable Procurement**

To assist with the Circular Economy model it is imperative for Council to participate in sustainable procurement. For example, plastic that is collected in kerbside bins is processed and remodelled into street furniture. This furniture could be purchased by Council and used within the Council area. Another example is glass that has been recycled can go back into the construction of a road base.

It is imperative that Council and industry as a whole supports the recycling industry by purchasing recycled products. If not, the Circular Economy industry may struggle. This function supports the Waste Management Hierarchy as the most preferred waste recycling option of reuse.

Goal 4 Sustainable Procurement				
Strategy	Role	Existing or New	Responsibility	Related Priorities
<b>Strategy 4.1</b> We will participate in a sustainable procurement pilot with other Councils towards establishing a sustainable procurement target	<ul style="list-style-type: none"> <li>• Partner</li> <li>• Service Provider</li> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> <li>• SALGA</li> </ul>	
<b>Strategy 4.2</b> We will measure, and report on, the amount and origin of recycled material used in Council's Capital Works programs, at least annually	<ul style="list-style-type: none"> <li>• Service Provider</li> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 4.3</b> We will participate in relevant working parties and consultations to maintain and improve knowledge of sustainable procurement	<ul style="list-style-type: none"> <li>• Partner</li> <li>• Advocate</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 4.4</b> Undertake investigation and research into the Circular Economy products for use at Adelaide Hills Council	<ul style="list-style-type: none"> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	
<b>Strategy 4.5</b> In partnership with others lobby for changes to packaging standards towards improved environmental and recycling outcomes	<ul style="list-style-type: none"> <li>• Partner</li> </ul>	<ul style="list-style-type: none"> <li>• New</li> </ul>	<ul style="list-style-type: none"> <li>• Council</li> </ul>	

#### 14.5 Heathfield Resource Recovery Centre (HRRC)

The HRRC is located at 32 Scott Creek Road Heathfield. The facility is operated by the Adelaide Hills Region Waste Management Authority on behalf of Council.

The HRRC provides for multi-stream recycling and waste disposal options including green organics, E-waste, cardboard, X-ray, motor oil, drumMuster, clean fill, and residential loads of construction and demolition materials. Green organic material (excluding food waste but including tree and shrub matter) when presented at the facility is shredded onsite. The benefit being product that has been recycled is then on sold which is supportive of the Circular Economy elements.

In addition to the current recycling and disposal options provided at the HRRC a household chemical and paint disposal facility is currently being constructed at this site. This facility will provide localised options to assist with disposal of products that are banned to landfill (for example, paints, chemicals and pesticides).






## Hard Waste

The strategy contains an action to investigate new opportunities to establish a 'salvage and reuse' facility at the HRRC. There is potential, subject to the establishment of a salvage and reuse facility at the HRRC, to improve the current disposal process of material collected through Council's hard waste collection service.

Residential properties have access to one kerbside hard waste collection per financial year. The collection is for a maximum size load of 2m<sup>3</sup> and bookings are made via East Waste. Guidelines apply for items to be presented for collection with alternate disposal options offered in line with the Green Industries SA A-Z guideline to household item disposal located at <https://www.whichbin.com.au/a-z-items>

East Waste collects hard waste items from verge areas and transports them to a commercial facility where they are processed into an engineered fuel product used to fire kilns. This outcome assists with reducing the use of non-renewable fossil fuels and reduces waste to landfill. Whilst this disposal method is on a lower level of the Waste Management Hierarchy it is still considered a preferred disposal method than products going to landfill. There is opportunity to improve on this disposal method and raise it to a higher level of the Waste Management Hierarchy.

If a salvage and reuse facility was available at the HRRC items collected as part of the hard waste collection could be sorted and products suitable could be on sold /reused. This outcome would elevate the disposal method of the hard waste collection service higher up the Waste Management Hierarchy to reduce/reuse as a more preferable disposal option. Transportation of the goods over a shorter distance may also assist with emission reduction.


Goal 5 Heathfield Resource Recovery Centre (HRRC)				
Strategy	Role	Existing or New	Responsibility	Related Priorities
<b>Strategy 5.1</b> We will continue to provide recycling and resource recovery services at the HRRC	<ul style="list-style-type: none"> <li>Partner</li> <li>Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> <li>AHRWMA</li> </ul>	 
<b>Strategy 5.2</b> We will work with project partners to establish and operate a Household Chemical and Paint Drop of Facility at the HRRC	<ul style="list-style-type: none"> <li>Service Provider</li> <li>Partner</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> <li>AHRWMA</li> <li>GISA</li> </ul>	
<b>Strategy 5.3</b> We will investigate new opportunities to establish a 'salvage and reuse' facility at the HRRC	<ul style="list-style-type: none"> <li>Service Provider</li> </ul>	<ul style="list-style-type: none"> <li>New</li> </ul>	<ul style="list-style-type: none"> <li>Council</li> <li>AHRWMA</li> </ul>	  

<b>Strategy 5.4</b> We will investigate providing a soft plastics recycling service at the HRRC (subject to 2019-20 budget approval)	• Service Provider	• New	• Council • AHRWMA	
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#### 14.6 Participation and Knowledge Building

Council has access to a number of opportunities to participate in meetings/networking and conferences to source waste and resource recovery information. These opportunities include local, interstate and international guest speakers. These opportunities provide valuable information on emerging initiatives for waste reduction that in turn assists diversion rates.

Annually Council staff have attended the Waste SA Resource Recovery Conference in Adelaide. This conference has provided valuable information relating to the many changes and uncertainties in the waste industry both locally and internationally. A number of items from this conference have assisted in creating the Strategy including Strategy 3.4 *We will explore opportunities to support and promote food research and reuse organisations.*

Goal 6 Participation and Knowledge Building				
Strategy	Role	Existing or New	Responsibility	Related Priorities
<b>Strategy 6.1</b> We will participate in waste and recycling groups and networks	• Partner	• New	• Council	
<b>Strategy 6.2</b> We will provide input into industry waste and recycling consultations as they arise	• Partner	• New	• Council	
<b>Strategy 6.3</b> We will attend relevant industry, workshops, seminars, conferences etc.	• Partner	• New	• Council	
<b>Strategy 6.4</b> We will seek recycling and waste management advice from the Sustainability Advisory Group as required	• Partner	• New	• Council	

## 15 Resourcing Strategy

Due to the development timing and adoption of the Strategy in late June 2019 no 'additional budget required' strategies are intended to be addressed in the 2019-20 financial year.

In early 2020 those strategies requiring additional budget will be identified, scoped and costed for inclusion in the Long Term Financial Plan and the 2020-21 budget and beyond. The implementation priorities contained within Attachment 3 will be used to schedule 'budget required strategies' within the Long Term Financial Plan.



To minimise the financial impact on Council and the community of implementing the Strategy, opportunities for funding will be explored and when appropriate applied for. For this reason Strategy 5.5.2.2 has been included:

- **Strategy 5.5.2.2** We will maximise recovery, reuse and recycling by taking advantage of funding opportunities where available.

## 16 Additional Context

As articulated in the Strategy, there are many specific initiatives in place and envisioned for the future, however it is important to note there are already a number of initiatives and actions being undertaken across the Adelaide Hills Council which add value in the Recycling and Sustainability space.

An investigation and analysis is currently underway into the life cycle of various road surface treatments, particularly in relation to extreme events and increased heat, which is utilising recycled plastic and glass encapsulating a Circular Economy approach.

Additionally, Council is investigating the potential for marginal material from local sources to be blended with quarry products to reduce the required cartage volumes of quarry material over extensive distances for the unsealed road re-sheet program. Council is looking to partner with industry and potentially a university partner to analyse materials and undertake a trial process.

Components of these approaches include: screening and reuse of road profiling as subgrade replacement material; crushing and reuse of construction and demolition waste (predominately concrete) as base material in sealed roads and footpaths, or under kerbs; testing of the recycled product for suitability as a road re-sheet material, use of Warm Mix Additive (WMA) in asphalt used in the reseal program, resulting in lower mix temperatures which reduce energy consumption at the asphalt plant; and the use of crumb rubber (predominantly comprised of recycled tyres) as a modified binder in our spray sealed renewal programme in the 2019-20 financial year.

In addition to Council's existing commitment to use recycled material, at the June 2018 Council meeting a Motion on Notice to measure and report on recycled material used in Council's Capital Works Program was considered.

Further to the above, Adelaide Hills Council staff are involved in a working group with the Local Government Association of South Australia to develop guidelines and processes in regards to Sustainable Procurement, and a premise of Councils involvement being the setting of sustainable procurement targets for the 2019-20 Financial Year. Council is also measuring the recycling components through enhanced tendering and procurement processes, as well as developing mechanisms to record the recycled material components within Capital Works and project delivery. These will be embedded within the Project Management Framework currently in development.

Council continue to advocate for the State Government (particularly Department of Planning, Transport and Infrastructure) to utilise 50% Recycle Asphalt Product (RAP) for treatments being upgraded in the Adelaide Hills Council area, an example being the intersection upgrades requiring deep lift as part of the Freight Access Upgrade project.

## 17 Conclusion

The Resource Recovery and Recycling Strategy supports and complements the Waste and Resources Management Strategy 2016-2021 and provides additional initiatives to reduce waste to landfill and

maximise recycling. The Strategy aims to improve environmental outcomes, reduce contamination rates whilst providing a cost effective kerbside recycling service.

The Strategy supports the Waste Management Hierarchy, the Circular Economy and external waste management requirements with an emphasis on increasing recycling practices which in turn assists with reducing waste to landfill.

Implementation of actions included in the strategy will build upon the previous successes achieved by Adelaide Hills Council in the waste and recycling area since 2012-13. However, tonnage volume trends in waste and recycling indicate there is much further work to be undertaken to lead to a material shift in the diversion rate for the better.

To achieve this change will require all stakeholders, including Council and the community, to participate and play their part. In addition, going forward business as usual will not result in the change required. Therefore, exploration and adoption of actions that will lead to a material shift in the diversion rate need to be seriously considered.

# 18 References

Adelaide Hills Council Strategic Plan.

Available at:

<https://www.ahc.sa.gov.au/ahc-council/Documents/AHC-strategic-plan-2016-FINAL-7b-web.pdf>

Adelaide Hills Region Waste Management Authority, 2007. Adelaide Hills Region Waste Management Authority 10 year Strategic Plan, 2007. Note: The Adelaide Hills Region Waste Management Authority is in the process of updating this Plan.

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[https://docs.wixstatic.com/ugd/046398\\_f89cfd1a2ae47569d07ca8bc588f051.pdf](https://docs.wixstatic.com/ugd/046398_f89cfd1a2ae47569d07ca8bc588f051.pdf)

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'Squaring the circular economy, the role of recycling within a hierarchy of material management strategies', Allwood, 2014, in *Handbook of Recycling*, Worrell, Reuter, 2014

Commonwealth National Waste Policy.

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*Green Industries SA Act 2004*

Available at:

<https://www.legislation.sa.gov.au/LZ/C/A/GREEN%20INDUSTRIES%20SA%20ACT%202004.aspx>

Regional Public Health Plan for the Southern Hills LGA 2015

Available at:

<http://www.lga.sa.gov.au/webdata/resources/files/150601%20Health%20Plan%20Directions%20Report%20FINAL%20AFTER%20PUBLIC%20EXHIBITION.pdf>

# Attachment 1 – Waste & Resources Management Strategy 2016-2021 Recycling Strategies

Topic	Objectives	Strategies	Responsibility	Timeline	Budget	Status as of May 2019
<b>5.2 Transfer Station/Resource Recovery Centre</b>	<p>5.2.1.1 To maximise recovery, reuse and recycling of materials entering the Heathfield Resource Recovery Centre</p> <p>5.2.1.2 To operate the Heathfield Resource Recovery Centre in an economically viable manner</p> <p>5.2.1.3 Continue to operate the Heathfield Resource Recovery Centre as a facility for the community to bring unwanted materials for reuse, recycling and disposal, in a cost effective manner</p>	5.2.2.4 Improve the way that waste is deposited, handled and transported to landfill in order to maximise resource recovery and provide the most effective management of received materials	AHRWMA Executive Officer Regional Waste Strategy Coordinator	Ongoing	Within budget	Forklift has been introduced at site (funded by Green Industries SA). Improves efficiencies of moving items and assists with WH&S considerations.

Topic	Objectives	Strategies	Responsibility	Timeline	Budget	Status as of May 2019
<b>5.5 Funding Projects</b>	5.5.1.1 To maximise recovery, reuse and recycling by taking advantage of funding opportunities where available	5.5.2.2 To apply for suitable funding projects, regionally or individually, if and when they become available	Regional Waste Strategy Coordinator	Ongoing and when funding projects become available	Outside budget	Funding has been sourced via grant for a Household Chemical Waste Facility at the Heathfield Resource Recovery Centre from Green Industries SA. Opportunity for grant funding for kitchen caddy bags has also been sourced.

Topic	Objectives	Strategies	Responsibility	Timeline	Budget	Status as of May 2019
<b>5.7 Kerbside Bin Services &amp; Street Litter Bins</b>	5.7.1.1 To provide a kerbside bin service that meets the community's expectation	5.7.2.1 In conjunction with the AHRWMA we will undertake visual waste audits at least every two years at the Brinkley landfill	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Within budget	A kerbside audit will be undertaken by KESAB in May /June 2019.
	5.7.1.2 Provide kerbside bin services that focus on reducing waste to landfill and increasing recycling	5.7.2.2 Investigate the opportunity to undertake a kerbside waste audit in conjunction with Councils waste collection service provider East Waste		Ongoing	Outside	
		5.7.2.5 Consider public place recycling services within prominent locations	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	June 2017	Outside budget	A trial recycling service for Stirling Markets, Uraidla Show and Sustainability Fair are currently being undertaken



Topic	Objectives	Strategies	Responsibility	Timeline	Budget	Status as of May 2019
		5.7.2.9 We will investigate the feasibility of implementing soft plastics recycling within the Council area, in conjunction with East Waste	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	18/19	Outside budget	
		5.7.2.10 We will explore the benefits or otherwise of implementing fortnightly kerbside waste collection	Regional Waste Coordinator	July 18	Within budget	
		5.7.2.11 Subject to the identification of material benefits in strategy 5.7.2.10 advocate for legislative change to occur for metropolitan Adelaide Councils to provide fortnightly kerbside waste collection services	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator	July 18	Within budget	

Topic	Objectives	Strategies	Responsibility	Timeline	Budget	Status as of May 2019
<b>5.8 Kitchen Caddy Program</b>	5.8.1.1 Provide services that focus on reducing food scraps and other compostable material going to landfill and increasing recycling	5.8.2.3 Consider introducing kitchen caddies to schools as part of a school's education program	Waste Coordinator	Ongoing	Within budget	Schools and Kindergartens now have access to free kitchen caddy starter kits.
<b>5.14 Education</b>	5.14.1.1 To educate our community regarding waste reduction and recycling  5.14.1.2 To educate the community with a direct approach	5.14.2.1 Provide education to all community members	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Within budget	School and community group education occurring on a regular basis. Pop In education stalls occurring at all Service Centres. Education stall at Council Forums has occurred with more scheduled for the future.

Topic	Objectives	Strategies	Responsibility	Timeline	Budget	Status as of May 2019
		5.14.2.2 Support and participate in regional education opportunities via East Waste and AHRWMA	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing and when available	Potentially Outside budget	East Waste assist with Waste Education material and Education Stalls.
		5.14.2.3 Develop a waste education communication strategy	Regional Waste Strategy Coordinator	March 2017	Within budget Potentially Outside budget	Commenced

# Attachment 2 - Recycling drivers from Adelaide Hills Council's Annual Business Plans 2018-19 and draft 2019-20 Plan

## Annual Business Plan 2018-19

Key Initiatives	Objectives	Status
<b>Kerbside bin audits</b>	Undertake kerbside bin audits with the aim to reduce waste to landfill and maximise recycling in accordance with Waste and Resource Management Strategy	Bin audit to be undertaken by KESAB on Council's behalf in May/June 2019.
<b>Public place recycling</b>	Pursuant with Council's Waste and Resource Management Strategy consider recycling services within prominent public places with the aim to reduce waste to landfill	<p>Soft Plastic recycling – East Waste will explore this initiative with assistance from Adelaide Hills Council. A soft plastic trial will be undertaken by East Waste at a Subsidiary Council. Once results of this trial are known they will be included within the new service agreement between East Waste and Council.</p> <p>A trial of recycling bins is currently occurring at the Stirling Market on a monthly basis.</p> <p>The Uraidla Show and Sustainability Fair trialled recycling at the Nov 2018 fair for the second year in a row.</p> <p>Results of 2018 Uraidla Show and Fair: Recycling occurred in over half of the bins. This was due to the event having predominantly compostable products for sale and the Sustainability Fair promoting within the fair. There was limited outside influence of products.</p> <p>Many events that are supported by Council for waste provisions are offered deposit container recycling bin options.</p>

Key Initiatives	Objectives	Status
<b>Soft Plastic Recycling</b>	Investigate the feasibility of implementing soft plastic recycling within the Council area, in conjunction with East Waste and Council's Waste and Resource Management Strategy	Scheduled within the Waste Strategy to discuss with East Waste in Feb to June 2019.
<b>Domestic Kerbside Collection</b>	Provide a kerbside waste, recyclables, green organics and hard waste collection service	<p>Kerbside collections:</p> <p>Rateable properties have access to a weekly 140L blue lidded bin, general waste collection a fortnightly 240L yellow lidded bin, recycling collection and a 240L green lidded bin, organic collection in the township areas only.</p> <p>Where the service already exists additional bins can be provided for an annual fee.</p> <p>Hard Waste collections:</p> <p>Council provides an at call hard waste kerbside collection. Residents are entitled to one collection per financial year.</p>
<b>Green Organic Drop Off Days</b>	Continued provision of free green organic drop off days to assist with bushfire fuel reduction for fire prevention	Council has held 22 opportunities to dispose of green organics at Drop Off Days in 2018-19. Four more opportunities are scheduled prior to June 2019.

## Draft Annual Business Plan 2019-20

Key Initiatives	Objectives	Status
<b>Green Waste Scoping Study</b>	To develop a detailed scoping study in regards to the various options to achieve improved financial and environmental outcomes in relation to green waste.	Not yet commenced awaiting final adoption of 2019/20 Annual Business Plan and Budget.
<b>Heathfield Resource Recovery Centre</b>	Installation of infrastructure to provide a new service for the free recycling of soft plastics.	Quotes received. Awaiting final adoption of 2019/20 Annual Business Plan and Budget.
<b>Solar bins / Smart Bin</b>	Funding for a pilot to see if solar bins can provide a more cost effective way of collecting waste in certain areas.	Quotes received. Awaiting final adoption of 2019/20 Annual Business Plan and Budget.
<b>Landfill Waste Reduction</b>	In order to understand residents waste disposal habits, kerbside bin audits are to be undertaken on a regular basis	Awaiting final adoption of 2019/20 Annual Business Plan and Budget.



## Attachment 3 – Resource Recovery & Recycling Strategy Implementation Plan

Goal	Strategies	Responsibility	Council's role	Priority	Budget
<b>Goal 1 - Education</b>	<b>1.1</b> We will provide education to the community on the need to practice the Waste Management Hierarchy	Waste Management Coordinator	Facilitator	New strategy Ongoing	Within budget
	<b>1.2</b> We will provide specific education to the community to increase their level of food scrap recycling	Waste Management Coordinator East Waste	Facilitator	New strategy Ongoing	Within budget

Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>1.3</b> We will increase the level of community recycling by providing recycling and waste information to residents	Waste Management Coordinator  Green Industries SA	Facilitator Partner	New strategy Ongoing	Within budget Unexpected costings to be included LTFP
	<b>1.4</b> We will create an electronic (available if needed in hard copy) Waste Management Hierarchy Information kit	Waste Management Coordinator  Green Industries SA	Facilitator Partner	New strategy Medium	Within budget Unexpected costings to be included LTFP
	<b>1.5</b> We will provide the Waste Management Hierarchy kit to newly built premises	Waste Management Coordinator	Facilitator	New strategy Medium	Within budget Unexpected costings to be included LTFP
	<b>1.6</b> We will support waste and recycling education programs undertaken by others	Kesab East Waste Green Industries SA	Facilitator	New strategy Ongoing	Within budget

Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>1.7</b> We will undertake specific community education on the Waste Management Hierarchy with a view to reducing consumption in the first instance	Waste Management Coordinator	Service Provider	New strategy High	Within budget
<b>Goal 2 - Waste and Recycling services</b>	<b>2.1</b> We will review the current Waste and Resource Recovery Service Policy to consider including a regulatory position on managing ongoing kerbside bin contamination from repeat offenders	Waste Management Coordinator East Waste	Facilitator Partner	New strategy Medium	Within budget
	<b>2.2</b> We will investigate providing smaller general waste bins and larger recycling and organic bins to residents	Waste Management Coordinator East Waste	Facilitator Partner	New strategy High	LTFP

Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>2.3</b> We will undertake a scoping study in regard to the various options to achieve improved environmental outcomes in relation to Green Organics (subject to Budget approval 2019-20)	Waste Management Coordinator	Leader Facilitator	New strategy High	LTFP
	<b>2.4</b> We will connect businesses generating food scraps with commercial composters	Waste Management Coordinator	Facilitator	New strategy Low	Within budget
	<b>2.5</b> We will continue to provide a kerbside waste, recycling and green organics service and a hard waste collection service	Waste Management Coordinator East Waste AHRWMA	Facilitator Partner	New strategy High	Within budget
	<b>2.6</b> We will seek evidence based assurance that our recycling material is being processed in an environmentally and circular manner	Waste Management Coordinator East Waste AHRWMA	Facilitator Partner	New strategy High	Within budget

Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>2.7</b> We will continue to provide free green organic drop off days to assist with community bushfire fuel reduction	Waste Management Coordinator AHRWMA	Facilitator Partner	New strategy Medium	Within budget
	<b>2.8</b> We will consider adoption of 'waste and recycling' criteria for Council events and functions and encourage others to do likewise	Waste Management Coordinator	Facilitator	New strategy High	Within budget
	<b>2.9</b> We will explore opportunities as they arise to make a material change to the diversion rate for future consideration by Council	Waste Management Coordinator	Facilitator	New strategy Ongoing	Within budget Initiatives maybe outside of budget and require LTFP consideration
	<b>2.10</b> We will work with partners to analyse the benefits and feasibility of introducing a fee incentive to property owners to produce less waste and recycle more in relation to the kerbside bin service	Manager Waste and Emergency Management	Service Provider	New strategy	Medium

Goal	Strategies	Responsibility	Council's role	Priority	Budget
<b>Goal 3 - Emerging Trends and Technologies</b>	<b>3.1</b> We will maintain awareness of emerging trends and technologies	Waste Management Coordinator	Facilitator	New strategy Ongoing	Within budget
	<b>3.2</b> We will encourage the building and construction industry to include recycling management systems in new home designs	Waste Management Coordinator	Facilitator	New strategy Medium	Within budget
	<b>3.3</b> We will encourage supermarkets and others to supply compostable bags in the produce sections and to accept soft plastics	Waste Management Coordinator	Facilitator	New strategy Medium	Within budget
	<b>3.4</b> We will explore opportunities to support and promote food research and reuse organisations	Waste Management Coordinator	Facilitator Leader	New strategy Low	Within budget



Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>3.5</b> We will install radio frequency identification chips to all replacement and new bins as they arise	Waste Management Coordinator East Waste	Service Provider Facilitator	New strategy Low	Within budget if fitted as part of bin replacement process. LTFP if bulk roll out required.
<b>Goal 4 - Sustainable Procurement</b>	<b>4.1</b> We will participate in a sustainable procurement pilot with other Councils towards establishing a sustainable procurement target	Manager Civil Services	Facilitator Partner	New strategy High	Within budget
	<b>4.2</b> We will measure, and report on, the amount and origin of recycled material used in Council's Capital Works programs, at least annually	Manager Civil Services	Facilitator	New strategy High	Within budget
	<b>4.3</b> We will participate in relevant working parties and consultations to maintain and improve knowledge of sustainable procurement	Sustainability Officer	Facilitator	New strategy Ongoing	Within budget

Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>4.4</b> Undertake investigation and research into the Circular Economy products for use at Adelaide Hills Council	Sustainability Officer	Partner	New strategy High	LTFP
	<b>4.5</b> In partnership with others lobby for changes to packaging standards towards improved environmental and recycling outcomes	Waste Management Coordinator	Partner	New strategy Low	Within budget
<b>Goal 5 - Heathfield Resource Recovery Centre</b>	<b>5.1</b> We will continue to provide recycling and resource recovery services at the HRRC	AHRWMA	Facilitator	New strategy Medium	Within budget
	<b>5.2</b> We will work with project partners to establish and operate a Household Chemical and Paint Drop of Facility at the HRRC	Waste Management Coordinator AHRWMA GISA	Facilitator Partner	New strategy High	Within budget with funding
	<b>5.3</b> We will investigate new opportunities to establish a 'salvage and reuse' facility at the HRRC	AHRWMA	Partner	New strategy High	LTFP

Goal	Strategies	Responsibility	Council's role	Priority	Budget
	<b>5.4</b> We will investigate providing a soft plastic recycling service at the HRRC (subject to 2019-20 budget approval)	AHRWMA Waste Management Coordinator	Service Provider	New strategy High	LTFP
<b>Goal 6 – Participation and Knowledge Building</b>	<b>6.1</b> We will participate in waste and recycling groups and networks	AHRWMA	Partner	New strategy Ongoing	Within budget
	<b>6.2</b> We will provide input into industry waste and recycling consultations as they arise	Waste Management Coordinator Manager Waste and Emergency Management	Partner	New strategy Ongoing	Within budget
	<b>6.3</b> We will attend relevant industry, workshops, seminars, conferences etc.	Council	Partner	New strategy Ongoing	Within budget
	<b>6.4</b> We will seek recycling and waste management advice from the Sustainability Advisory Group as required	Sustainability Advisory Group Waste Management Coordinator	Partner	New strategy Ongoing	Within budget