

# *Waste and Resources Management Strategy*

**2016-2021**

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# Executive Summary

*The Adelaide Hills Council is a diverse region containing natural, rural and residential areas and is located to the east of central Adelaide. The population has grown slowly since 1991, growing by less than 1,000 people between each census. The district has limited potential for population growth and new development due to its bushfire prone location within Adelaide's water catchment. Commercial, tourism and agricultural activities form a strong economic base for the district benefiting from the scenic locality and proximity to the adjacent Adelaide metropolitan area.*

This strategy builds on the Council's previous 2010-2015 Waste Management Strategy and sets the direction for waste and recycling resource management services into the future. Along with implementing the actions within this strategy, Council is committed to continuous improvement and will continue to survey residents and analyse options to provide a cost effective and adequate waste and resource management service that focuses on reducing waste disposed to landfill.

Waste and resource management is one of the single largest items of Council's annual expenditure and one of the most tangible services Council offers. It is essential that the entire suite of waste and resource services be well planned, justified and executed to minimise costs and ensure our environmental impact is reduced.

This plan includes 20 objectives in these 14 categories:

- Landfill
- Transfer Station/Resource Recovery Centre
- Salvage and Save
- EPA Licenced Sites
- Funding Projects
- Kerbside Collection Service Provision
- Kerbside Bin Services & Street Litter Bins
- Kitchen Caddy Program
- Green Organic Drop Off Days
- Hard Waste
- Illegal Dumping
- Household Hazardous Waste
- E-Waste
- Education.

In support of reaching the 20 objectives within the categories outlined above, this Plan contains 57 strategies. The objectives and strategies are summarised within Attachment 1 - Waste Management Strategy Implementation Plan 2016-2021.

By implementing the strategies and achieving the objectives identified within this plan Council aims to reduce waste to landfill, increase recycling and reduce Council's waste disposal costs, whilst also minimising the impact our community's waste has on the environment.

# 1. Introduction

## 1.1 Council Profile

The Adelaide Hills Council is located to the east of metropolitan Adelaide (Figure 1). The Council area extends from Mount Bold Reservoir in the south, the South Para Reservoir in the north and from the hills face escarpment in the west to the eastern boundary of the Onkaparinga watershed.

The Council area has a wide range of land uses including natural landscapes, agriculture, residential, retail, commercial/ industrial and tourism. It is predominantly rural with substantial rural, residential and township areas. The Council encompasses a total land area of 795 square kilometres, including significant human use water catchment areas. Residential development varies from the more urban areas of the foothills and the main settlement areas of Crafers, Stirling, Heathfield, Aldgate and Bridgewater to the numerous smaller townships and villages.

The dispersed population is well provided for with numerous facilities and community services including libraries, community centres, recreation facilities and halls. The enumerated population has increased very marginally over the last 15 years, rising from nearly 36,000 in 1991 to nearly 37,000 in 2006. The total estimated resident population (ERP) as per the ABS ERP<sup>1</sup>, as of 2015 was 40,031.

The Adelaide Hills are well known for their natural environment and built character, wineries, eateries and a range of attractions and events. The Adelaide Hills area is also a biodiversity hot spot with numerous threatened species. The unique character of the Adelaide Hills Council area and proximity to metropolitan Adelaide have created many opportunities for tourism and unstructured recreation with residents and visitors driving, riding, cycling, and walking to experience the Hills' natural landscapes and iconic towns and villages.

## 1.2 Waste and Resource Management

This Waste and Resource Management Strategy builds upon Council's 2010-2015 Waste Management Strategy which outlined a number of key priorities that have now been completed including:

- Kerbside green bins within townships and urban areas
- Free green organic drop off days
- Completion of the Heathfield Resource Recovery Centre upgrade
- Outsourcing of the Heathfield Resource Recovery Centre operations
- Discontinuing free dumping tip passes and the introduction of green organic vouchers
- Limited food organics collection and composting service
- Completion of regional kerbside collection tender
- Provision of an E-waste recycling service at Heathfield Resource Recovery Centre
- Limited on call hard waste collection service.

As a result of these measures, we achieved the following outcomes between 2010/11 and 2012/13:

- Waste disposed to landfill reduced by 842 tonnes
- Green organics collection increased by 2,039 tonnes
- Recycling collection reduced by 340 tonnes, and recycling contamination at the materials recovery facility also reduced by 300 tonnes.

Council seeks to use the most effective waste and resource management technologies and methods available and also strives to protect environmental and public health. Council's aim is to provide an environmentally sustainable waste and recycling management service consisting of:

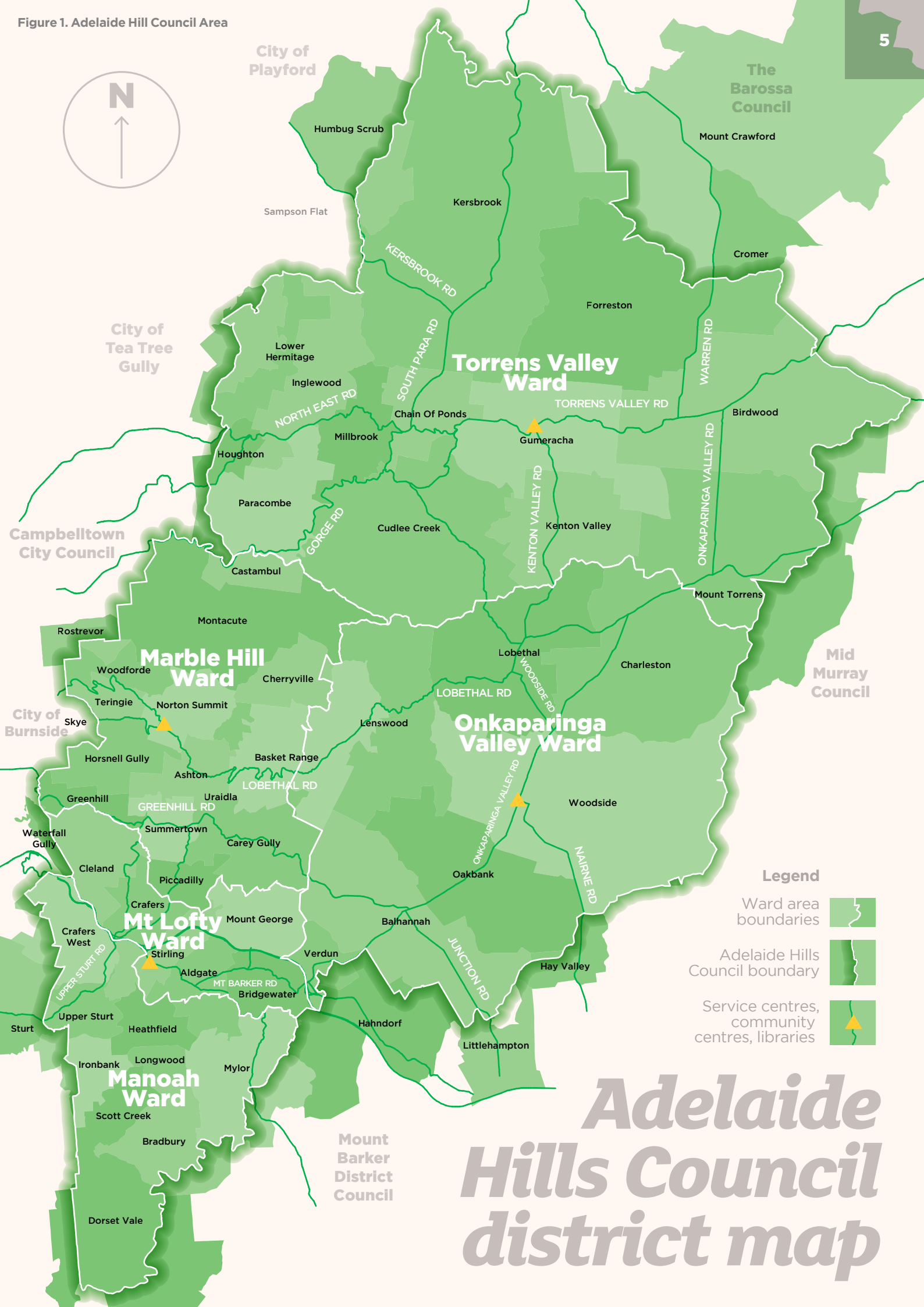
- A strategic direction for waste and recycling services
- Domestic and commercial waste and recycling collection
- Provision of a transfer station/resource recovery site
- Education and information on reducing consumption and resource recovery.

The Adelaide Hills Council is a member of the Adelaide Hills Region Waste Management Authority (AHRWMA). The AHRWMA is a regional subsidiary of the Rural City of Murray Bridge, the Adelaide Hills Council, the Mount Barker District Council and the Alexandrina Council. The Authority operates the Brinkley landfill to receive waste from its member Councils and commercial customers in the region. In 2012, the AHRWMA also began operating the Heathfield Resource Recovery Centre on behalf of the Adelaide Hills Council.

The Adelaide Hills Council is also a member of the Eastern Waste Management Authority, which is a regional subsidiary of the Adelaide Hills Council, the City of Burnside, the Campbelltown City Council, the City of Mitcham, the Town of Walkerville and the City of Norwood, Payneham and St Peters. East Waste's primary purpose is to provide effective waste collection and resource recovery services for its member Councils. East Waste provides Adelaide Hills Council's kerbside and street litter collection services.

1. ABS Estimated Resident Population 2015

Figure 1. Adelaide Hill Council Area



City of Playford

The Barossa Council

City of Tea Tree Gully

**Torrens Valley Ward**

Campbelltown City Council

**Marble Hill Ward**

**Onkaparinga Valley Ward**

**Mt Lofty Ward**

**Manoah Ward**

Mount Barker District Council

**Legend**

Ward area boundaries

Adelaide Hills Council boundary

Service centres, community centres, libraries

# Adelaide Hills Council district map

# 2. Policy Context

## 2.1 Internal Drivers

### 2.1.1 The Adelaide Hills Council Strategic Plan

The Adelaide Hills Council Strategic Plan 2014-2018, “Lofty Aspirations, Sustainable Actions”, has been prepared with an emphasis on community, environment, economy and governance. The goals that are central to achieve this vision are:

- A Safe and Connected Community
- Sustainable Natural and Built Environs
- A Prosperous Economy
- A Recognised Leading Performer.

Waste Management contributes most significantly to the second goal of the Strategic Plan:

#### *Sustainable Natural and Built Environs (Goal 2)*

##### **Waste Management (Action 2.3)**

Manage waste through increased diversion from landfill and re-use options. Sustainable action is a key direction for Council and the community. Council is leading by example in reducing waste from its facilities, services, activities and programs. Council is the provider of waste management services with an emphasis on reducing waste to landfill through the continual provision of collection and recycling facilities.

Undertake a review of the Waste Management Strategy focussing on continued diversion of waste from landfill, further opportunities to re-use or recycle and providing zero waste education and information within the community (Action 2.3.2).

Roll out the household food organics mini bins to supplement the green waste bin service and reduce waste to landfill (Action 2.3.3).

Ongoing and continuing to improve Provide waste collection services, re-use and recycling facilities and evaluation of waste collection service activities to determine the success of the process changes and continuing sustainable approaches (Action 2.3.4).

Liaise with the Environmental Protection Authority (EPA) to manage past landfill sites to monitor gas emissions and groundwater quality (Action 2.3.6).

At the time of preparation of this Waste and Resource Management Strategy a new Strategic Plan was being developed providing Council and the community an opportunity to reflect on previous goals and outcomes and to look ahead to the future. Any waste and resource management activities identified in the new Strategic Plan will be considered and actioned.

## 2.2 External Drivers

### 2.2.1 Adelaide Hills Region Waste Management Authority Strategic Plan

The AHRWMA has developed a Strategic Plan in which its vision is 'sustainable waste management through shared services for the communities of Adelaide Hills, Alexandrina, Mount Barker and Murray Bridge', and its mission is<sup>2</sup>:

- To meet Zero Waste SA resource recovery targets across the region, where economically and environmentally justified
- To continue to develop and manage the Brinkley landfill as an EPA compliant model regional landfill that provides the most cost effective disposal option for member Councils and commercial customers
- To educate the regional community on responsible waste choices that enhance and maintain their environment.

The AHRWMA Strategic Plan has outlined the following objectives:

- To take a leadership role in resource recovery and community education
- Responsibly develop and manage the Brinkley landfill to be a model regional landfill meeting all legislative requirements and operating benchmarks
- Financial sustainability in waste services for member Councils by pursuing a shared services model
- Advocate, research and promote best practice waste management and actively represent member councils in all forums
- A fully compliant regional subsidiary that meets the highest standards in governance, financial and human resource management.

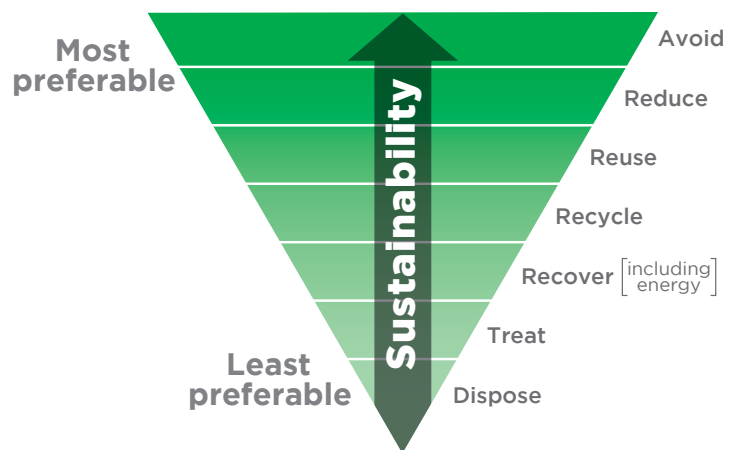


Figure 2. Waste Management Hierarchy

### 2.2.2 Eastern Waste Management Authority Business Plan 2015-2024

The East Waste Business Plan 2015-2024<sup>3</sup> outlines the strategic direction for East Waste for the next ten years. The objective of the 10 Year Business Plan is to provide a roadmap for the continued success and development of East Waste.

The plan outlines East Waste's Vision Statement, as follows:

- Providing a safe, high quality, low cost, waste and resource recovery collection service that responds to our community's needs, while using innovation and technology to drive efficiencies, reduce costs, and have a minimal impact on the receiving environment
- 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
- Providing a responsive and proactive waste and resource recovery collection service that enhances streetscape amenity and assists in promoting a healthy lifestyle.

The Business Plan outlines 15 key actions with timelines, which will drive East Waste's operations over the next 10 years. Five of these key actions include:

- Continuing to provide core services as defined by the Charter
- Enhancing and growing the at-call hard waste services
- Increasing street and park litter bin collections
- Facilitating community education and promotion
- Developing a new specific service offer to undertake waste and recycling collections from multi-unit dwellings which include apartment buildings or townhouses.

2. Adelaide Hills Region Waste Management Authority 10 year Strategic Plan, 2007

3. Eastern Waste Management Authority Business Plan 2015-2024.

### 2.2.3 South Australia's Strategic Plan

South Australia's Strategic Plan 2011 (the Plan)<sup>4</sup> has three visions for the environment outlined below:

- South Australians think globally, act locally and are international leaders in addressing climate change
- We look after our environment
- We value and protect our water resources

The environmental goal in the Plan related to waste management is *'we aim for zero waste – recycling, reusing and reducing consumption all we can'*. Target 67 of the plan supports this goal, where South Australia will aim to reduce waste to landfill by 35% by 2020 (baseline: 2002-03).

### 2.2.4 Zero Waste SA Waste Strategy

Zero Waste SA (ZWSA) has reviewed South Australia's waste strategy and the following three objectives have been developed for the 2015-2020 strategy<sup>5</sup>:

- 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
- 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.

The existing institutional arrangements underpinning the strategy ended on 1 July 2015 when Zero Waste SA was replaced by a new organisation, Green Industries SA. Green Industries SA commenced operations from 1 July 2015 when it took custodianship of South Australia's waste strategy in recognition of the important economic contribution and role provided by the waste management and resource recovery industry.

Green Industries SA is responsible for many functions previously undertaken by Zero Waste SA and some new areas of endeavour. Building on the success of Zero Waste SA, Green Industries SA aims to increase South Australia's capabilities and leadership in green industries.

South Australia's Waste Strategy 2015-2020 reflects the principles in the *Zero Waste SA Act 2004*<sup>6</sup>, namely:

- The waste management hierarchy
- Ecologically sustainable development
- Best practice methods and standards
- Policy development through open dialogue and consultation.

The waste management hierarchy, as illustrated in Figure 2, plays an essential role in the strategy. The hierarchy is internationally recognised as an aspirational framework for sustainability.

The Waste Management Hierarchy places emphasis on the need to:

- Operate at the highest possible level of the hierarchy, considering social, environmental and economic practicalities
- Make decisions using sound knowledge and education
- Conserve materials and energy by acting to avoid waste and reduce wasteful consumption
- Preserve the values of materials used, through source separation and reduced contamination.

The strategy positions South Australia at the higher levels of this waste hierarchy, where an emphasis is placed on sustainability and greater community engagement. The following targets for metropolitan Adelaide have been included within the South Australian waste strategy:

- Municipal solid waste – divert 70% of municipal solid waste from landfill
- Commercial and industrial – divert 80% of commercial and industrial waste from landfill
- Construction and demolition – divert 90% of construction and demolition waste from landfill

The target for non-metropolitan areas is to maximise diversion to the extent practically achievable.

South Australia's strategic plan target relating to landfill is:

- 35% reduction in landfill disposal from the 2002-2003 level by 2020
- milestone of 30% by 2017- 2018.

Per capita waste generation target:

- 5% reduction in waste generation per capita by 2020 (from 2015 baseline).

South Australia's Waste Strategy 2015-2020 outlines a number of approaches in order to meet the above targets. Council's waste management decisions should align with the waste strategy and exceed them where possible.

4. South Australia's Strategic Plan.

5. South Australia's Waste Strategy 2015-2020.

6. Zero Waste SA Act 2004.



### 2.2.5 Environment Protection Act 1993

The *Environment Protection Act 1993* requires Council to take all reasonable and practicable measures to minimise or prevent environmental harm pursuant with general environmental duty contained within Section 25 of the Act.

Council is also obliged by the licencing provisions within the Act to hold EPA licences for its current and former landfills and waste transfer station. These licences contain certain conditional requirements which Council must comply with<sup>7</sup>.

### 2.2.6 Waste Disposal Levy

There is a State Government waste disposal levy attached to each tonne of waste disposed to landfill. The levy is partially used to fund programs including waste minimisation, resource recovery and the KESAB litter strategies. The levy also supports the EPA in administering the *Environment Protection Act 1993* which includes licencing, waste tracking and compliance.

The waste disposal levy for the period 2013/14 to 2016/17 is shown in Table 1. The Adelaide Hills Council waste disposal levy charges have a metropolitan and non-metropolitan component, with the appropriate charge applying to each stream.

The waste disposal levy is set to increase to \$103 per tonne for metropolitan areas and \$51.50 for non-metropolitan areas by 2019/20. The intent of the annual increase in the waste disposal levy is to incentivise Councils and industry to dispose of less waste in landfill and expand and create new industries in processing and reuse.

A number of strategies to minimise waste to landfill and maximise recycling are included in this strategy, aiming to reduce the impact of the waste disposal levy.

Financial Year	Solid waste – non-metropolitan (per tonne)	Solid waste – metropolitan (per tonne)
2013-14	\$23.50	\$47.00
2014-15	\$26.00	\$52.00
2015-16	\$28.50	\$57.00
2016-17	\$31.00 (July 1 to 31 Aug)	\$62.00 (July 1 to 31 Aug)
	\$38.00 (1 Sept to 30 June)	\$76.00 (1 Sept to 30 June)

Table 1. Waste Disposal Levy Charges

7. EPA Licences Numbers 353, 305 and 337.

Hazardous waste	Medical waste
Liquid waste	Tyres (including whole earth moving tyres)
Oil	Aggregated cardboard and paper
Vehicles	Aggregated metal
Aggregated glass packaging	Aggregated vegetative matter
Aggregated PET or HDPE plastic packaging	Aggregated PVC or PS plastic packaging
Aggregated PP or LDPE plastic packaging	Computer monitors and televisions, including components, subassemblies and consumables that are part of the equipment when discarded (September 2013)
Fluorescent lighting and any other lighting that contains mercury (September 2013)	Other electrical and electronic equipment not referred to above (September 2013)
Whitegoods	
Lead acid batteries	

Table 2. List of Wastes Banned from Landfill as of September 2013

### 2.2.7 Waste to Resources Policy 2010

The *Environment Protection (Waste to Resources) Policy 2010* (W2R EPP) has been developed by the EPA and is a tool for all South Australian industry and Government to better manage waste.

The W2R EPP has developed two waste management objectives:

- Achieve sustainable waste management by applying the waste management hierarchy (refer Figure 2) consistently with the principles of ecologically sustainable development
- To meet the waste management objective, waste management in this State should also:
  - a) promote best practice and accountable waste management, taking into account regional difference within the State
  - b) include effective recording, monitoring and reporting systems with respect to waste transport, resource recovery and waste disposal
  - c) promote environmental responsibility and involvement in waste avoidance, waste minimisation and waste management within the community.

The W2R EPP contains a number of key elements including, but not limited to, landfill bans (refer Table 2), compulsory weekly collection of waste for metropolitan Councils, and requirements for the treatment of waste prior to disposal to landfill.

### 2.2.8 National Waste Policy

The National Waste Policy 2009<sup>8</sup> sets the direction for Australia until 2020 in reducing waste for disposal and manages waste as a resource in order to deliver economic, environmental and social benefits. The National Waste Policy 2009 highlights progress in relation to waste management and resource recovery and presents the drivers for change, including:

- Large scale growth in the generation of waste and the increasingly complex and potentially hazardous nature of the growing waste stream
- A prospective need for additional infrastructure which faces increasing environmental and community constraints and can take time to develop
- Significant change in markets for waste and recovered resources and the way services are delivered
- Existing regulatory and quasi-regulatory settings, which in combination, act as impediments to achieving current waste and resource recovery policy outcomes and to establishing effective secondary markets for waste
- Potential for waste management to reduce greenhouse gas emissions, improve energy and water efficiency, soil health and use of resources
- Changing community expectations and aspirations
- The opportunity for managing waste as a resource to improve economic and job outcomes and encourage innovation and the development of technology and infrastructure
- The absence of fundamental data and analytical tools, as identified in 1992, on many aspects of waste management, to enable governments, business and communities to make sound decisions.

The practical outcome of implementing the National Waste Policy will be that all waste, including hazardous waste will be managed consistently with Australia's international obligations, and for the protection of human health and the environment. Several aims have been stated in the policy which are as follows:

- Avoid the generation of waste
- Reduce the amount of waste (including hazardous waste) for disposal
- Manage waste as a resource
- Ensure that waste treatment, disposal, recovery and re-use is undertaken in a safe, scientific and environmentally sound manner
- Contribute to the reduction in greenhouse gas emissions, energy conservation and production, water efficiency, and the productivity of the land.

8. Australian Government, National Waste Policy 2009

The policy's preferred outcome is to have less waste and more resources by 2020, including:

- Australia manages waste, including hazardous waste, in an environmentally safe, scientific and sound manner, and has reduced the amount per capita of waste disposed
- Waste streams are routinely managed as a resource to achieve better environmental, social and economic outcomes, including saving water, energy, greenhouse gas emissions and finite resources, and to increase productivity of the land
- Australia has increased the amount of products, goods and materials that can be readily and safely used for other purposes at end of life
- Opportunities to safely manage, reduce and recycle waste are readily available to all Australians including approaches that have been tailored to meet the needs of remote and rural communities
- The risks associated with waste and hazardous substances are understood and managed to minimise current and intergenerational legacy issues
- The interaction of regulatory frameworks and operational processes across government agencies align with world's best practice and facilitates waste avoidance, resource recovery and appropriate end of life management arrangements within their own operations as well as by business and the community
- There are efficient and effective Australian markets for waste and recovered resources, and local technology and innovation are sought after internationally
- Government, industry and the community have embraced product stewardship and extended producer responsibility approaches.

The policy sets six directions and identifies sixteen priority strategies that would benefit from a national or coordinated approach:

- Taking responsibility – shared responsibility for reducing environmental, health and safety footprint of products and materials across the manufacture-supply-consumption chain at end of life
- Improving the market – efficient and effective Australian markets operate for waste and being sought after internationally
- Pursuing sustainability – less waste and improved use of waste to achieve broader environmental, social and economic benefits
- Reducing hazard and risk – reduction of potentially hazardous content of waste with consistent, safe and accountable waste recovery, handling and disposal
- Tailoring solutions – increased capacity in regional, remote and indigenous communities to manage waste and recover and re-use resources
- Providing the evidence – access by decision makers to meaningful, accurate and current national waste and resource recovery data and information in order to measure progress and educate and inform the behaviour and the choices of the community.

The policy recognises that Local Government plays an important role in providing household waste collection and recycling services, managing and operating landfill sites, delivering education and awareness programs, and providing and maintaining litter infrastructure.

This 2016-2021 Waste and Resource Management Strategy acknowledges the variety of external drivers outlined above. Where relevant to Adelaide Hills Council, this strategy includes objectives and strategies that align with the external waste and recycling outcomes identified above.

# 3. Waste and Recycling Management and the Adelaide Hills Council

## 3.1 Waste and Recycling Resources Generated in the Adelaide Hills Council Area

During the 2014/15 financial year, the Adelaide Hills Council area generated 7,742 tonnes of waste collected from the blue lidded waste bins, 3,493 tonnes of recyclables from the yellow lidded recycling bins, and 3,047 tonnes from the green lidded organic bins as indicated in Table 3. The green organics tonnes increased significantly in 2012/13 when green lidded bins were introduced to townships and urban areas. Since 2014/15 the waste and recycling resource tonnages appear to be resetting to a new baseline, following the major service implementation of green lidded bins in 2012/13, which saw a change in tonnes across the board.

The percentage diversion is the combined volume of green organic tonnes and recycling tonnes as a percentage of the total waste and recycling resource stream. Table 3 demonstrates there has been a positive trend with the percentage diversion rate increasing by 12% since 2010/11, mainly attributable to the introduction of the green organics service.

Graph 1 demonstrates waste and resources generated per person per week within the Adelaide Hills Council area. Waste to landfill per person has increased since 2012/13, however is lower than 2011/12. In 2015/16 waste to landfill was 3.84kg per person per week, compared to 3.91 kgs per person per week in 2011/12.

The Zero Waste SA Kerbside Three-Bin System Waste Report 2012-2013 details that the statewide diversion/recovery rate was 44.5%, metropolitan areas had an average recovery rate of 48.8%, while regional areas had an average recovery rate of 32.5%. The highest recovery rates were achieved in regions with the highest proportions of three-bin systems – Southern and Hills (41.0% recovery) and South East (40.4%). The Adelaide Hills Council is achieving a recovery

rate of 47% which is well above the regional average and closer to the metropolitan area rate of 48.8%.

Graphs 1 through 4 demonstrate the Adelaide Hills Council waste and resource generation in comparison to South Australia as a whole and to regional South Australia. The Adelaide Hills Council falls within a small portion of metropolitan Adelaide, however is largely a rural Council. Within the Zero Waste SA Kerbside Three-Bin System Waste Report 2012-2013 the Adelaide Hills Council is reported along with the metropolitan Councils.

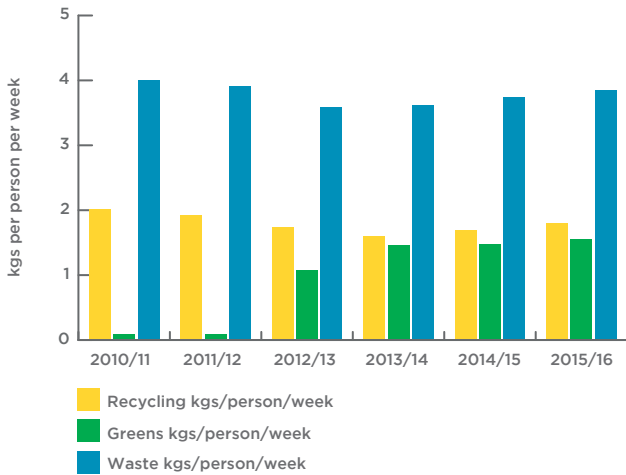
Table 4 illustrates the types of materials collected in the yellow lidded recycling bin over the period 2011/12 to 2014/15. Contamination has remained fairly steady but high over the years, which is of significance and is an area to target for improvement. These contamination rates are provided by the processor, and studies throughout other Council areas indicate that the contamination rates reported at the processor may vary from that at the kerbside. A detailed kerbside audit would need to be completed to determine more reliable kerbside contamination rates.

Year	Waste Tonnes	Green Organics Tonnes	Recycling Tonnes	Percentage Diversion	Waste kg/hh/wk*
2010/11	8246	172	4132	34	9.61
2011/12	8076	168	3946	34	9.41
2012/13	7404	2207	3606	44	8.63
2013/14	7490	3002	3300	46	8.73
2014/15	7742	3047	3493	46	9.02
2015/16	8000	3239	3743	47	9.32

\* kg/hh/wk = Kilograms per household per week

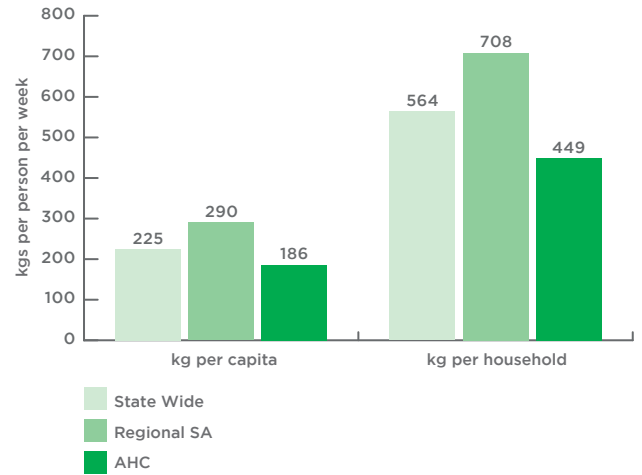
Table 3. Adelaide Hills Council kerbside tonnages

**Waste and Resource Streams within Adelaide Hills Council Per Person**



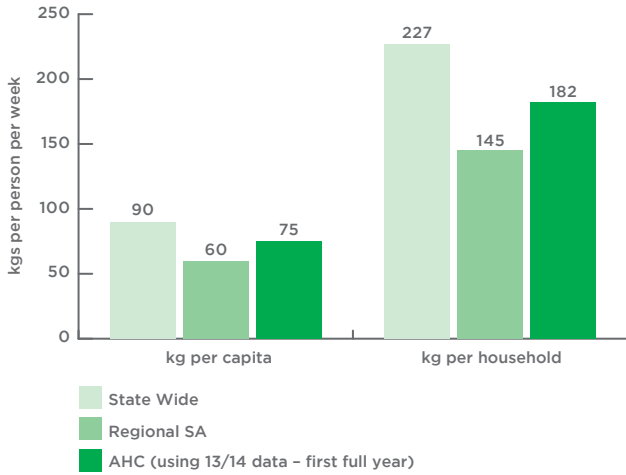
**Graph 1. Waste and Resources Generated per Person per Week.**

**Waste Disposed to Landfill 2012/13**



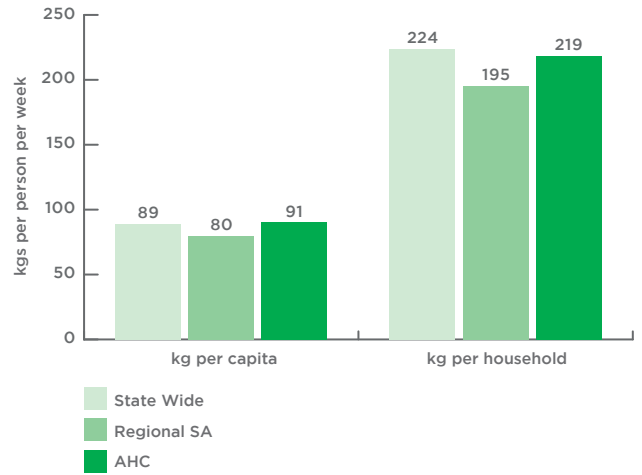
**Graph 3. Waste Collected Across SA and Adelaide Hills Council.**

**Green Organics for Composting 2012/13**



**Graph 2. Green Organics Collected Across SA and Adelaide Hills Council.**

**Recyclables 2012/13**



**Graph 4. Recyclables Collected Across SA and Adelaide Hills Council.**

Material Types Collected at Yellow Recycling Bins				
	2011/12	2012/13	2013/14	2014/15
<b>TOTAL collected (including contamination)*</b>	4071	3737	3509	3973
<b>Cardboard / Paper</b>	2656	2631	2291	2594
<b>TOTAL GLASS</b>	147	193	127	144
<b>TOTAL PLASTICS</b>	91	51	78	89
<b>TOTAL ALUMINIUM (CANS) / Steel (Cans, tins etc )</b>	68	53	59	66
<b>Contamination (tonnes)</b>	1109	809	954	1080
<b>Contamination (percentage)</b>	27.2%	21.6%	27.2%	27.2%

*Please note the information included here is a result of audits completed at the recycling plant on a one off basis throughout the year and therefore differs from the actual tonnes collected presented within Table 3.*

**Table 4. Kerbside recycling materials (tonnes)**

# 4. Sources of Information

The following sources have been used to guide the development of the Adelaide Hills Council 2016-2021 Waste and Resources Management Strategy.

## 4.1 Community Phone Survey

A resident phone survey undertaken by McGregor Tan Research was completed in December 2014<sup>10</sup>. This phone survey of 400 people across the Council area found:

- 78% of survey respondents did not place all food scraps into the green bin
- 66% of people without a green lidded bin composted food scraps.

Table 5 details the results from the phone survey that asked respondents what bin they would use to dispose of the items listed. Table 6 highlights that the yellow lidded recycling bin and blue lidded waste bin are the two predominant methods of disposing of recyclable items.

The survey found:

- The Adelaide Hills Council has an optional 'Kitchen Caddy Program' for food scraps as outlined in section 5.8 and therefore has some uptake of food scraps being placed in the green lidded bin. However, the survey results indicate that food scraps are not always being placed within the green lidded bin
- In the situation where the public are unsure of whether something could be recycled or not through Council's kerbside collection service, 43% of respondents said that they would put it into the garbage and 25% of respondents would check to see where it should go. In addition, 23% of survey respondents said if they were unsure on what bin to place an item in they would put the item in the recycling bin
- The main items that the public would like to be able to recycle and think they currently are unable to do so are electrical appliances, polystyrene / styrofoam, batteries, soft plastic and light bulbs

- The main perceived influence in encouraging people to recycle was publicity about helping the environment (39%), just as influential was a desire to be socially responsible (37%)
- Half of all people surveyed (49%) feel that they do not have enough information on what happened to recycled items
- The top most preferred ways of getting the information about what happened to recycled items was via letter drops from the Council (54%), followed by email (23%) and the internet (20%). Ten percent of respondents mentioned articles in the local Messenger newspaper
- The main obstacle to correct recycling was perceived to be lack of knowledge.

Given the increase to the Waste Disposal Levy to \$103 per tonne for metropolitan waste and \$51.50 per tonne for non-metropolitan waste by 2019/20 (refer section 2.2.6) there is ongoing environmental and financial incentive to reduce the volume of material going to landfill that could be diverted to recycling.

10. McGregor Tan Research 2014 Waste Management-Resident Survey

Item	Yellow Bin	Blue Bin	Don't Know	Other
Junk mail	85%	7%	7%	
Clean waste paper	85%	8%		
Other clear glass including broken glass	48%	62%		
Steel cans (e.g. canned pet food, soup, etc.)	90%	8%		
Plastic containers such as take-away food, shampoo bottles, cleaning products etc.	71%	43%		
Aerosol cans	33%	59%		
Food scraps, egg shells etc.		54%	31%	
Old mobile phones			40%	33% Australia Post bag, keep, give to children as toys
Car batteries			33%	40% recycling depot
Batteries from things like clocks, radios, cameras, smoke alarms, etc.	13%	60%	11%	
Paint tins		34%	25%	
Scrap steel			23%	57% recycling depot
Motor oil			59%	11% Recycling depot
Kitchen or household oils		31%	37%	12% (bury)
<p><i>Please note some respondents included multiple responses to the questions, ie they use both bins for the item and therefore the total adds to more than 100%. In other cases some respondents included answers outside of these categories and have not been included within this summary, which will result in the total being less than 100%.</i></p>				

**Table 5: Summary of Phone Survey Results**



Figure 3: Visual Landfill Audit

## 4.2 Landfill Audit

A visual landfill audit was completed at Brinkley landfill in September 2014 which focused on the Adelaide Hills Council waste collection trucks and the types of materials that were being disposed to the landfill via the blue lidded kerbside bin. The landfill audit identified there are still materials that could be placed in recycling bins being disposed of to landfill, including common items:

- Milk cartons
- Tin cans
- Steel
- Cardboard / shredded paper
- Green waste
- Plastic (shampoo bottles, yogurt containers and many more)
- E-waste.

Some of the recyclable materials were only recorded in minimal volumes however they are still ending up in landfill. The visual audit identified that food scraps were being disposed of to landfill where they produce undesirable gasses. This compostable resource can be recycled through the green lidded organic bins and processed to create composted soils.

The images below show some of the findings of the visual landfill audits. The following items can be seen within these images:

- Soft plastic
- Rigid plastic
- Green organics
- Food scraps
- Milk cartons
- Refundable containers
- Paper / cardboard.

The landfill audit reflected the findings of the telephone survey described in section 4.1 demonstrating there are additional opportunities to reduce waste to landfill and increase recycling material.

## 4.3 Visual Bin Audits

Council staff undertook kerbside visual bin audits in July 2014. These audits found:

- Generally recycling across the Council area is clean and being undertaken well by rate payers
- Green lidded bins were not always presented for collection
- Contamination in green lidded bins was minor
- Blue lidded bins in a number of areas were not full
- A number of yellow lidded and green lidded bins were full and next to them were blue lidded bins with the excess recycling or green materials in them
- Plastic bags were observed in recycling bins.

The findings of the visual bin audits support that there are opportunities to reduce the amount of material being disposed of at landfill through increased recycling.



## 4.4 Bin Tagging

In July 2015 a trial bin tagging program was undertaken where 150 bins were inspected and tagged over a four week period. Waste bins were tagged four times (once each week) and recycling bins were tagged twice (once each fortnight). Green lidded bins were also inspected but not tagged in this trial. The tags included a smile face or a sad face depending on how well the household was using their bins. The tags also included some education information and highlighted the area of contamination, if contamination was identified. An example tag is pictured right (figure 4).

The results of the bin tagging trial are outlined in Table 6 and 7 and provide evidence that the trial was very successful.

Waste	Sad faces	Smile faces
Week 1	52%	48%
Week 2	23%	77%
Week 4 (final week)	11%	89%

Table 6. Bin Tagging Results for Waste Bins.

Recycle	Sad faces	Smile faces
Week 1	20%	80%
Week 4 (final week)	2%	98%

Table 7. Bin Tagging Results for Recycling Bins.

The bin tagging program was beneficial and an effective way to interact and educate residents. During the trial it was found that the vast majority of people were happy with the program and it was a good opportunity to spend time in the community and speak with people about their waste management practices.

Based on the sources of information provided above the following section outlines objectives and strategies that aim to improve the waste and recycling management practices of the Adelaide Hills Council and the community.



Figure 4: Recycling Bin Tag Example

# 5. Waste and Resource Management Objectives and Strategies

*Council is committed to reducing waste to landfill and increasing the amount of material being diverted to recycling. Twenty objectives and 57 strategies that cover a variety of waste and resource management activities have been developed. The objectives and strategies will assist Council and the community to minimise costs and environmental harm through increased recycling and reducing waste to landfill. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021, summarises the 20 objectives and 57 strategies.*

## 5.1 Landfill

The Brinkley landfill, operated by AHRWMA receives waste from its member Councils, including the Adelaide Hills Council, and commercial customers in the hills region. The facility is located within the Murray Bridge Council area at Brinkley. It is licensed to accept putrescible and inert wastes including intermediate soil and waste fill.

The AHRWMA is a regional subsidiary of Council and therefore Council has representation on the AHRWMA Board and can benefit from the collaboration and economies of scale opportunities available via a regional subsidiary. Via membership of the AHRWMA Council also benefits from the availability of specialist waste management advice.

Council aims to achieve cost effective and sustainable waste management and disposal services for its ratepayers and with that aim in mind will remain open to considering alternate arrangements at the same time as ensuring it derives full benefit from its membership. During such time as it remains a member of this regional subsidiary, Council will continue to contribute to the operations of the AHRWMA through board membership and will continue to evaluate the benefits of the regional subsidiary and value for member Councils with regard to the operation of the landfill and associated services.

### 5.1.1 Objectives

- 5.1.1.1 To ensure a cost effective and efficient waste disposal service that complies with environmental requirements
- 5.1.1.2 Continue to evaluate the benefits of Council's membership in the regional subsidiary to ensure value for member Councils.

### 5.1.2 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to landfill operation:

- 5.1.2.1 Contribute to the review of the AHRWMA Strategic Plan and Business Plan to ensure that the business will be professionally managed with regular review of achievement against performance expectations
- 5.1.2.2 Monitor Council resourcing requirements and demands through the AHRWMA
- 5.1.2.3 To support exploration of other regional opportunities through the AHRWMA that will benefit member councils
- 5.1.2.4 To support research and development trials undertaken by the Authority where these are of benefit to member Councils
- 5.1.2.5 In alignment with major landfill investments (ie prior to a new cell being established) ensure that a market evaluation of the AHRWMA landfill model is undertaken and reviewed
- 5.1.2.6 Keep up to date with regard to new and emerging technologies for the treatment and disposal of residual waste streams and implement changes where necessary.

## 5.2 Transfer Station/ Resource Recovery Centre

Council owns the Heathfield Resource Recovery Centre now operated by AHRWMA on behalf of Council. The outsourcing of the Heathfield Resource Recovery Centre was included in the 2010-2015 Waste Management Strategy. This facility provides a recycling and waste resource recovery centre where customers can dispose of their waste predominantly from cars and trailers. The resource recovery centre operates from 7:30am until 4:00pm Monday to Friday and 9:00am to 4:00pm Saturday and Sunday. AHRWMA reviews the operating hours to ensure efficient and effective operation and that customer service needs are met. If required, AHRWMA will adjust operating hours with agreement from Council.

The resource recovery centre is a multi-stream recycling facility, which handles items such as general waste, paper and cardboard, plastics, green garden organics, construction and demolition materials, metals, whitegoods, oils, tyres, e-waste, gas cylinders, chemical containers and mattresses. Furthermore, the resource recovery centre offers recycled products for sale including mulch and soil.

The following disposal services are available:

- Household waste
- Commercial and industrial (small loads only)
- Construction and demolition (residential small loads and Council generated material)
- Waste fill (clean fill, small loads)
- Green organics (garden vegetation)
- Recyclables including plastics, cardboard, metals, white goods and e-waste
- Oils
- Drum muster containers.

### 5.2.1 Objectives

- 5.2.1.1 To maximise recovery, reuse and recycling of materials entering the Heathfield Resource Recovery Centre
- 5.2.1.2 To operate the Heathfield Resource Recovery Centre in an economically viable manner
- 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.

### 5.2.2 Strategies

Council has developed the following strategies in conjunction with AHRWMA operating the site to achieve these objectives:

- 5.2.2.1 Ongoing review of the opening times of the transfer station to ensure they meet community demand
- 5.2.2.2 Regularly (at least annually) assess the gate fees to ensure they are sustainable and are in line with fees charged at other stations within the region
- 5.2.2.3 Explore regional opportunities for resource sharing through the AHRWMA
- 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
- 5.2.2.5 Consider expanding the construction and demolition recycling at the site
- 5.2.2.6 Monitor and manage the operation agreement with the AHRWMA.

## 5.3 Salvage and Save

Salvage and Save is a business initiative of Finding Workable Solutions (FWS). It is an independently resourced organisation that employs disadvantaged people. A facility has been proposed for the Heathfield Transfer Station/Resource Recovery Centre site. The facility will salvage materials for resale which would otherwise be disposed of at the resource recovery centre. The Salvage and Save facility would be established at the entrance to the resource recovery centre. FWS will sell the goods received, ranging from electrical, furniture, books and building materials. The planning approval process for this is complete and a lease is in place between Council and FWS.

### 5.3.1 Objectives

- 5.3.1.1 To maximise recovery, reuse and recycling by diverting hard waste from landfill.

### 5.3.2 Strategies

The following strategy has been developed to assist Council to achieve the objective relating to Salvage and Save.

- 5.3.2.1 To continue to support FWS establishment where practical and possible.

## 5.4 EPA Licenced Sites

Council has three EPA licenced sites for waste; two closed landfills and the Heathfield Resource Recovery Centre. The sites are operated and monitored in accordance with EPA licencing requirements to ensure environmental damage and the risk of EPA compliance action is minimised.

### 5.4.1 Objectives

- 5.4.1.1 Ensure licenced sites are operated, managed and monitored in accordance with licencing conditions, in order to minimise the risk of environmental harm or EPA compliance action.

### 5.4.2 Strategies

The following strategy has been developed to assist Council to achieve the objective relating to EPA licenced sites:

- 5.4.2.1 Regularly review and monitor sites in accordance with their EPA licence conditions.

## 5.5 Funding Projects

The AHRWMA was successful in a bid for 50% funding of mobile crushing equipment and Zero Waste SA contributed \$140,000 to the purchase of the equipment. This crusher provides the ability for Councils to crush their construction and demolition material via AHRWMA to create a useable product. AHRWMA was also successful in receiving funding for mobile baling equipment which can be used across the region to bale recyclables for transport and sale. The Adelaide Hills Council, the Mount Barker District Council and the Rural City of Murray Bridge have used these services successfully.

As outlined in section 2.2.6 Council pays a waste disposal levy for every tonne of waste disposed to landfill, which contributes to the Waste to Resources Fund. Via this fund, funding packages are available from time to time which aim to reduce waste to landfill, increase recycling and diversion and provide infrastructure for these services.

### 5.5.1 Objectives

- 5.5.1.1 To maximise recovery, reuse and recycling by taking advantage of funding opportunities where available.

### 5.5.2 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to funding projects:

- 5.5.2.1 To support the currently funded projects within the region and utilise these services where possible
- 5.5.2.2 To apply for suitable funding projects, regionally or individually, if and when they become available
- 5.5.2.3 Advocate for additional funding to be made available to Local Government via the Waste to Resources Fund, collected through the waste disposal levy.

## 5.6 Kerbside Collection Service Provision

The Adelaide Hills Council is a member of the regional subsidiary East Waste. East Waste operates in accordance with its Charter and collects kerbside waste, recycling and green organic bins on behalf of Council.

It was identified within the 2010-2015 Waste Management Strategy that Council should consider the benefits of moving to a commercial service provider aligning with neighbouring hills Councils. Adelaide Hills Council participated in a regional kerbside collection services tender process in 2014/15. As a result of the tender process it was decided that the best option for Council would be to maintain its membership with East Waste.

### 5.6.1 Objectives

- 5.6.1.1 To provide a cost effective and efficient waste and recycling kerbside collection service that focuses on reducing waste to landfill and maximises recycling.

### 5.6.2 Strategies

The following strategies have been developed to assist Council to achieve the objective relating to kerbside collection service provision:

- 5.6.2.1 Contribute to the review of East Waste strategic and business plans to ensure that the business is professionally managed with regular review of achievement against performance expectations
- 5.6.2.2 Contribute to the effective management and operation of the kerbside collection service through board membership and membership on committees of East Waste
- 5.6.2.3 To support exploration of other regional opportunities through East Waste that will benefit member Councils, such as community education
- 5.6.2.4 To support research and development trials undertaken by East Waste where of benefit to member Councils
- 5.6.2.5 Continue to evaluate the benefits of the regional subsidiary to ensure value for member Councils.

## 5.7 Kerbside Bin Services & Street Litter Bins

Approximately 16,500 properties are provided with a 140 litre blue lidded waste bin and a 240 litre yellow lidded recycling bin. Approximately 10,200 township and urban households have also been provided with a 240 litre green lidded organics bin. The blue lidded waste bin is collected weekly with the yellow lidded and green lidded bins collected on a fortnightly basis on alternating weeks. Table 3 indicates the amount of waste and resources generated from kerbside bins in the Adelaide Hills Council from 2010/11 to 2014/15.

Council receives a payment for every tonne of material recycled in the yellow lidded recycling bin thanks to a processing contract with East Waste. Accordingly, it is important that recyclables are not contaminated as the financial benefit realised will reduce with increased contamination.

Council also provides approximately 440 street litter bin services across the region. The street litter bin services are currently for waste collection only. East Waste undertakes Council's street litter bin service and Council works closely with East Waste to monitor the street litter bin service provisions and aims to ensure these services meet demand, without exceeding service requirements.

A survey of community expectations for kerbside collection services in South Australia (McGregor Tan Research 2000) indicated that the community has the following expectations for kerbside collections:

- Regularly provided
- Convenient
- Consistent
- Provided at a reasonable cost.

The South Australian community expects that items placed in the recycling bin will genuinely be recycled and not disposed to landfill. They also expect best practice and environmental management in overall waste management infrastructure and services. It is likely that residents within the Adelaide Hills Council area will have similar expectations to that of greater Adelaide. The services that Adelaide Hills Council provides are currently in line or exceeding services provided by other Councils across the region.

Future items that may be considered which have potential to encourage diversion from landfill include:

- Reduced cost for additional recycling and green organics bins
- Commercial green organics collection services for properties within the service area, targeting food organics
- Changing collection frequencies – reducing waste collection (where possible) and increasing recycling collection (it is currently a legislative requirement that waste bins within the Adelaide Hills Council area are collected weekly)
- Using emerging technologies, such as:
  - o Solar street litter bins
  - o Electronic bin tags
  - o Other technologies as and when they become available and viable
- Public place recycling services within main streets and prominent locations
- Event recycling services
- Plastic bag recycling.

Council currently has a green organics service policy. However, it does not have a waste services policy. A waste services policy will be developed, which will supersede the green organics service policy and cover all kerbside waste and resource services. As part of this project the green organics service areas will be reviewed, based on the applications received and approved since the green organics service was implemented.

### 5.7.1 Objectives

- 5.7.1.1 To provide a kerbside bin service that meets the community's expectation
- 5.7.1.2 Provide kerbside bin services that focus on reducing waste to landfill and increasing recycling.

### 5.7.2 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to kerbside bin services and street litter bins:

- 5.7.2.1 In conjunction with the AHRWMA undertake visual waste audits at least every two years at the Brinkley landfill
- 5.7.2.2 Investigate the opportunity to undertake a kerbside waste audit in conjunction with Councils waste collection service provider East Waste
- 5.7.2.3 Monitor the kerbside bin service to ensure the community's expectations are being met, in conjunction with East Waste
- 5.7.2.4 Stay informed of new and emerging services and assess and implement these services where practical and viable
- 5.7.2.5 Consider public place recycling services within prominent locations
- 5.7.2.6 Develop and Implement a waste management policy for all waste management services
- 5.7.2.7 Consider the green bin service areas within the waste management policy
- 5.7.2.8 Consider commercial green organics collection services for properties within the service area, targeting food organics
- 5.7.2.9 Investigate the feasibility of implementing soft plastics recycling within the Council area, in conjunction with East Waste
- 5.7.2.10 Explore the benefits or otherwise of implementing fortnightly kerbside waste collection taking into consideration community views and the experiences of others
- 5.7.2.11 Subject to the identification of material benefits in strategy 5.7.2.10 advocate for legislative change to occur to provide the option for metropolitan Adelaide Councils to provide fortnightly kerbside waste collection services.

## 5.8 Kitchen Caddy Program

Green lidded bins are provided to township and urban properties within the Council area and are collected fortnightly. Garden vegetation, food scraps and other compostable material can be placed into the green lidded bin which is composted at a commercial composting facility.

To assist in minimising the volume of material going to landfill, kitchen caddies were introduced by Adelaide Hills Council in August 2013 for those properties that had access to a kerbside green organics collection. As part of the Zero Waste SA Food Waste Incentives Program, Adelaide Hills Council received a grant for \$11,900 to purchase the caddies, compostable bags and educational materials. Kitchen caddy starter kits were developed and included a caddy, roll of compostable bags and information brochure for 1,500 properties per year for three years. The kitchen caddy service is an opt in program with containers and compostable bags available for residents to collect from Council Service Centres.

As of July 2015 1,670 caddies had been issued out of a possible 10,000 eligible households. Whilst this has been a positive outcome the low uptake identifies the potential to increase the take up of the kitchen caddy service. Possible reasons for the low take up of kitchen caddies may be that people dispose of their kitchen scraps by home composting and other methods of recycling. There is a continuous, if somewhat small, trend towards the use of caddies and a positive sign that residents who have chosen to be part of this recycling initiative continue to use the product once they have it in their home.

An average home using the caddy and emptying it three times a week into the kerbside green organics bin would be diverting up to 3kg of compostable waste a week that previously would have gone to landfill. This equates to approximately 156kg a year per household. Based on the current number of kitchen caddies distributed approximately 260 tonnes of organics are diverted annually. Kitchen caddies have also been introduced to all Adelaide Hills Council kitchen areas. It is estimated that the organics diverted by Council kitchens over a 12 month period will equate to a diversion of up to 5 tonnes a year.

In May 2014 the need to source replacement compostable bags was addressed as the bags supplied with the starter kit were exhausted. Hardware stores stocked compostable bags, however the prices were very high and the feedback received was that residents were not prepared to pay such a large amount to continue to compost. To encourage residents with kitchen caddies to continue to use the service Council chose to purchase rolls of compostable bags to provide to residents at cost price. To date, 158 rolls of replacement bags have been sold. This is a positive outcome as it means people using the caddies are prepared to continue to do so but only if affordable. Replacement caddies can also be purchased from service centres.

Council has not targeted schools or kindergartens to process their food scraps through the kitchen caddy system. As an educational tool for future generations of recyclers a roll out of caddies in schools would be a proactive way to promote good waste behaviour. This approach would also provide further recycling promotion where parents are exposed to the caddy system through their children. For schools to be included in the kitchen caddy roll out they would need to be issued with kerbside green organic bins and be in the organics collection area.

### 5.8.1 Objectives

- 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 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to the kitchen caddy program:

- 5.8.2.1 Continue to roll out caddies until existing stocks have been exhausted and consider purchasing additional stock if there is resident demand
- 5.8.2.2 Upon request, provide caddies at no cost to those properties who do not have access to a kerbside green organics collection service to assist with their home composting practices
- 5.8.2.3 Consider introducing kitchen caddies to schools as part of a school education program
- 5.8.2.4 Maintain supplies of compostable bags for purchase.

## 5.9 Green Organic Drop off Days and Free Greens Vouchers

Council currently provides three green organic drop off days per year held at the Heathfield Resource Recovery Centre, Woodside and Gumeracha Depots. The green organic drop off days are provided free of charge to residents and aim to assist residents to undertake bushfire fuel reduction. Council holds these days before and after the fire danger season to provide opportunities to clean up green organics and dispose of material in an environmentally responsible manner.

In addition to the green organic drop off days, householders who are not entitled to a green organics bin are entitled to two free green organics vouchers for the Heathfield Resource Recovery Centre per year. The Heathfield Resource Recovery Centre is located at the southern end of the Council area which may be a disincentive for residents from the northern portion of the Council area to utilise free green organics vouchers.

### 5.9.1 Objectives

- 5.9.1.2 Maintain free green organic drop off services to assist the community with green organics disposal and minimising fire fuel loads.

### 5.9.2 Strategies

The following strategies have been developed to assist Council to achieve the objective relating to green organic drop off days and free green organic vouchers:

- 5.9.2.1 Continue to monitor green organic days and review requirements to meet demand
- 5.9.2.2 Explore opportunities for residents issued with free green organic vouchers to utilise disposal sites located outside of Adelaide Hills Council that are in close proximity to the northern part of the council area.

## 5.10 Hard Waste

Council has provided a limited hard waste collection service since 2014 which focuses on reuse and recycling where possible. The number of pickups available under the service was capped to ensure the service remained within budget. This service was provided over a six month period and was completed in March 2016. The provision of Council's limited hard waste service assists the community with removal of items that they are not able to take to the Heathfield Resource Recovery Centre themselves or recycle via other means and therefore should be continued.

### 5.10.1 Objectives

- 5.10.1.1 To increase the amount of materials recovered and reused instead of being disposed to landfill
- 5.10.1.2 To ensure the cost of waste disposal is realised and some cost recovery via the resident/user is achieved.

### 5.10.2 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to hard waste:

- 5.10.2.1 To support and encourage reuse and recycling of hard waste within the community
- 5.10.2.2 Explore options to maximise hard waste service delivery through procurement practices
- 5.10.2.3 Assist, where possible and practical, organisations/events such as Clean up Australia Day, who take a leading role in helping the community with waste management, on a case by case basis.

## 5.11 Illegal Dumping

Council actively cleans up material illegally dumped throughout the region. Illegal dumping is an issue for Council as it is an environmental nuisance, unsightly and impacts Council's budget. Occurrences of illegal dumping appear to be increasing. Council will investigate the impact of illegal dumping to determine its significance and develop methods to reduce it.

### 5.11.1 Objectives

- 5.11.1.1 Determine the impact of illegal dumping and minimise its occurrence where possible.

### 5.11.2 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to illegal dumping:

- 5.11.2.1 Investigate the impact of illegal dumping, including the number of incidences and budget impact to Council
- 5.11.2.2 If required, determine and assess measures to reduce the occurrence of illegal dumping.

## 5.12 Household Hazardous Waste

A container recycling service is provided at the Heathfield Resource Recovery Centre via "drumMUSTER", which provides Australian agricultural and veterinary chemical users with a recycling service for eligible chemical containers.

ChemClear is another service available which provides Australian agricultural and veterinary chemical users with a collection and disposal pathway for unwanted chemicals. Chemicals eligible for collection at no cost under the program display the drumMUSTER/ChemClear eligible logo on the container. Waste holders can register eligible chemicals and the collection will be scheduled based on the number of registrations within an area. Chemicals not eligible may be collected at a cost. The ChemClear and drumMUSTER programs are funded by a levy collected under the Industry Waste Reduction Scheme.

Zero Waste SA operates a household hazardous waste depot at Dry Creek which is open on the first Tuesday of every month between 9:00am and 12:00pm. The depot accepts household hazardous waste for free, including:

- Pesticides (including insecticides, herbicides)
- Pharmaceuticals
- Solvents (including paint thinners, turpentine)
- Acids and alkalis
- Paints, varnishes and stains
- LPG gas cylinders (that hold up to 9.0 kg of gas)
- Photographic chemicals
- Batteries (nickel/cadmium, mercury, lithium, lead/acid)
- Pool chemicals
- Fluorescent light globes (including compact fluorescent light globes).

The Heathfield Resource Recovery Centre is not accredited for chemical disposal. If residents wish to dispose of chemicals they are encouraged to contact ChemClear and Zero Waste SA or attend the household hazardous waste depot.

Given the limited opportunity for the safe disposal of hazardous chemicals, a number of strategies are included aimed to improve the level of service provided for chemical disposal.

### 5.12.1 Objectives

- 5.12.1.1 Assist residents to dispose of their hazardous household waste.

### 5.12.2 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to household hazardous waste:

- 5.12.2.1 Ensure residents are directed to appropriate options for Chemical disposal
- 5.12.2.2 Provide advice to residents regarding appropriate disposal options
- 5.12.2.3 Participate in State Government funded hazardous chemical collection days when available
- 5.12.2.4 Lobby State Government to assist with funding for chemical collection services
- 5.12.2.5 Advocate for an expansion of current State Government services available for the disposal of hazardous chemicals.

## 5.13 E-waste

The Adelaide Hills Council together with the AHRWMA are providing access to a free drop off service for electronic (e-waste) items at the Heathfield Resource Recovery Centre. E-Waste is banned from landfill across South Australia as a result of the implementation of the *Environment Protection (Waste to Resources) Policy 2010*. The free e-waste disposal service is provided under the National Product Stewardship Scheme. Processing/recycling of e-waste is undertaken at no cost to Council with funding provided by the scheme and ultimately paid for by consumers of electronic products.

The following items are accepted at the Heathfield Resource Recovery Centre at no charge:

- Televisions
- Computer towers and monitors
- Keyboards
- Mouses
- Printers
- Scanners
- DVD/VCR players
- Backpack/data storage drives
- Other computer equipment (cords etc).

The National Product Stewardship Scheme for the disposal of e-waste allows electronic devices to be disposed of at any participating site and is not restricted to Local Government areas. Accordingly, residents within Adelaide Hills Council and not in close proximity to the Heathfield Resource Recovery Centre can dispose of their e-waste at other participating sites.



### 5.13.1 Objectives

- 5.13.1.1 Provide e-waste recycling services to residents, either free where required via the National Product Stewardship Scheme or at cost.

### 5.13.2 Strategies

The following strategies have been developed to assist Council to achieve the objective relating to e-waste:

- 5.13.2.1 Partner with organisations under the National Product Stewardship Scheme or consider providing a service at cost if a partner organisation is not available
- 5.13.2.2 Promote e-waste recycling as being free of charge to dispose of at any participating site in addition to the Heathfield Resource Recovery Centre.

## 5.14 Education

Community education is essential to promote waste minimisation and increase recycling. Providing our community and schools with education programs will assist in reducing resources going to landfill. The choices our householders, community groups and local businesses make directly impacts on Council's waste disposal and recycling services.

Educating our community will enhance and promote better waste practices reflected by reducing the tonnages destined for landfill and increase materials to be recycled into renewable materials, or simply avoid using certain materials that may end up as waste. The reduction of contamination in our recycling and green organic bins will be a cost benefit for Council, and ultimately the community, as the materials destined for processing facilities will be cleaner and more beneficial to the processor with less going to landfill.

### 5.14.1 Objectives

- 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 Strategies

The following strategies have been developed to assist Council to achieve the objectives relating to education:

- 5.14.2.1 Provide education to all community members
- 5.14.2.2 Support and participate in regional education opportunities via East Waste and AHRWMA
- 5.14.2.3 Develop a waste education communication strategy
- 5.14.2.4 Undertake bin tagging targeting small areas (50 to 100 households) on an ongoing basis throughout the year
- 5.14.2.5 Review bin tagging information tags provided to ensure they are efficient to use and informative
- 5.14.2.6 Provide additional waste education material via a mailbox drop at the same time as undertaking bin tagging.

## 6. Resourcing and Implementation

*The majority of strategies will be implemented within existing recurrent waste management budgets. However, where items cannot be funded with existing resources they will be costed annually and presented to Council as bids for consideration as part of annual budget deliberation processes.*

To assist strategies requiring funding beyond recurrent budgets, Council will continue to advocate for funding to be made available via the Waste to Resources Fund as outlined in Strategy 5.5.2.3.

Attachment 1 - 2016-2021 Waste Management Strategy Implementation Plan summarises each of the objectives and strategies contained within this strategy. This plan identifies when each of the strategies is scheduled to occur and whether they will be funded by recurrent budgets or be presented for consideration as a budget bid as part of the annual budget deliberation process.

## 7. Conclusion

*The 2016-2021 Waste and Resources Management Strategy provides direction to Council for the following five years.*

By implementing the objectives and strategies, Council aims to reduce waste to landfill, increase recycling and reduce Council's waste disposal costs while reducing the impact our community has on the environment. By implementing this strategy the waste management

services of Council will correspond with State and National waste policies, including the waste management hierarchy with a focus on avoiding waste and regarding waste as a resource.

# 8. References

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# 9. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
5.1 Landfill	<p>5.1.1.1 To ensure a cost effective and efficient waste disposal service that complies with environmental requirements</p> <p>5.1.1.2 Continue to evaluate the benefits of Council's Regional Subsidiary to ensure value for member Councils and to AHC</p>	5.1.2.1 Contribute to the review of the AHRWMA Strategic Plan and Business Plan to ensure that the business will be professionally managed with regular review of achievement against performance expectations	<p>AHC AHRWMA Board Members</p> <p>Director – Strategy and Development</p> <p>Manager – Waste, Health and Regulatory Services</p> <p>Regional Waste Strategy Coordinator</p>	Ongoing	Within budget
		5.1.2.2 Monitor Council resourcing requirements and demands through the AHRWMA	<p>AHC AHRWMA Board Members</p> <p>Director – Strategy and Development</p> <p>Manager – Waste, Health and Regulatory Services</p> <p>Regional Waste Strategy Coordinator</p>	Ongoing	Potentially outside of budget
		5.1.2.3 To support exploration of other regional opportunities through the AHRWMA that will benefit to member councils	<p>AHC AHRWMA Board Members</p> <p>Director – Strategy and Development</p> <p>Manager – Waste, Health and Regulatory Services</p> <p>Regional Waste Strategy Coordinator</p>	Ongoing	Generally within, potentially outside of budget
		5.1.2.4 To support research and development trials undertaken by the Authority where of benefit to member councils	<p>AHC AHRWMA Board Members</p> <p>Director – Strategy and Development</p> <p>Manager – Waste, Health and Regulatory Services</p> <p>Regional Waste Strategy Coordinator</p>	Ongoing	Generally within, potentially outside of budget

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
		5.1.2.5 In alignment with major landfill investments (ie Prior to a new cell being established) ensure a market evaluation of the AHRWMA landfill model is undertaken and reviewed	AHC AHRWMA Board Members Director – Strategy and Development Manager – Waste, Health and Regulatory Services Regional Waste Strategy Coordinator In conjunction with AHRWMA Executive Officer	Prior to major landfill investments	Outside
		5.1.2.6 Stay informed of new and emerging technologies for the treatment and disposal of residual waste streams	AHC AHRWMA Board Members Director – Strategy and Development Manager – Waste, Health and Regulatory Services Regional Waste Strategy Coordinator In conjunction with AHRWMA Executive Officer	Ongoing	Outside

# 9. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021 (continued)

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
5.2 Transfer Station/Resource Recovery Centre	5.2.1.1 To maximise recovery, reuse and recycling of materials entering the Heathfield Resource Recovery Centre	Via AHRWMA operation of the site	AHRWMA Executive Officer  Regional Waste Strategy Coordinator	Annually and as required	Within budget
	5.2.1.2 To operate the Heathfield Resource Recovery Centre in an economically viable manner				
	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	5.2.2.1 Ongoing review of the opening times of the Transfer Station, to ensure they meet community demand			
		5.2.2.2 Regularly (at least annually) assess the gate fees to ensure they are sustainable and are in line with fees charged at other stations within the region	AHRWMA Executive Officer  Regional Waste Strategy Coordinator	Annually June	Within budget
		5.2.2.3 Explore regional opportunities for resource sharing through the AHRWMA	AHRWMA Executive Officer  Regional Waste Strategy Coordinator	Ongoing	Within budget
	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	

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
		5.2.2.5 Consider expanding the Construction and Demolition recycling at the site	AHRWMA Executive Officer Manager, Waste Health & Regulatory Services Regional Waste Strategy Coordinator	July 2018	Outside budget
		5.2.2.6 Monitor and manage the operation agreement with the AHRWMA	Manager, Waste Health & Regulatory Services Regional Waste Strategy Coordinator	Ongoing	Within budget
<b>5.3 Salvage and Save</b>	5.3.1.1 To maximise recovery, reuse and recycling by diverting hard waste from landfill	5.3.3.1 To continue to support FWS establishment where practical and possible	Manager, Waste Health & Regulatory Services Regional Waste Strategy Coordinator	June 2017	Potentially outside budget
<b>5.4 EPA Licenced Sites</b>	5.4.1.1 Ensure licenced sites are operated, managed and monitored in accordance with licencing conditions, in order to minimise the risk of environmental harm or EPA compliance action	5.4.2.1 Regularly review and monitor sites in accordance with their EPA Licence conditions	Manager Waste, Health & Regulatory Services Regional Waste Strategy Coordinator	Ongoing Every 6 months	Within budget Unexpected occurrences outside budget
<b>5.5 Funding Projects</b>	5.5.1.1 To maximise recovery, reuse and recycling by taking advantage of funding opportunities where available	5.5.2.1 To support the currently funded projects within the region and utilise these services where possible	Manager, Waste Health & Regulatory Services Regional Waste Strategy Coordinator	Ongoing	Potentially outside budget
		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
		5.5.2.3 Advocate for additional funding to be made available to Local Government via the Waste to Resources fund, collected through the Waste Levy	Regional Waste Strategy Coordinator	Ongoing	Within budget

# 9. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021 (continued)

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
<b>5.6 Kerbside Collection Service Provision</b>	5.6.1.1 To provide a cost effective and efficient waste and recycling kerbside collection service that focuses on reducing waste to landfill and maximises recycling	5.6.2.1 Contribute to the review of East Waste Strategic and business Plans to ensure that the business is professionally managed with regular review of achievement against performance expectations	AHC East Waste Board Members Director – Strategy and Development Manager – Waste, Health and Regulatory Services Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.6.2.2 Contribute to the effective management and operation of the kerbside collection service through Board membership and membership on committees of East Waste	AHC East Waste Board Members Director – Strategy and Development Manager – Waste, Health and Regulatory Services Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.6.2.3 To support exploration of other regional opportunities through East Waste that will benefit to member councils, such as community education	AHC East Waste Board Member Director – Strategy and Development Manager – Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Generally within, potentially outside of budget
		5.6.2.4 To support research and development trials undertaken by East Waste where of benefit to member councils	AHC East Waste Board Member Director – Strategy and Development Manager – Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Generally within, potentially outside of budget



Topic	Objectives	Strategies	Responsibility	Timeline	Budget
		5.6.2.5 Continue to evaluate the benefits of the Regional Subsidiary to ensure value for Member Councils	AHC East Waste Board Members Director - Strategy and Development Manager - Waste, Health and Regulatory Services Regional Waste Strategy Coordinator	Ongoing	Within budget
<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 5.7.1.2 Provide kerbside bin services that focus on reducing waste to landfill and increasing recycling	5.7.2.1 In conjunction with the AHRWMA Undertake visual waste audits at least every two years at the Brinkley landfill	Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.7.2.2 Investigate the opportunity to undertake a kerbside waste audit in conjunction with Councils waste collection service provider East Waste	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Outside
		5.7.2.3 Monitor the kerbside bin service to ensure the community's expectations are being met, in conjunction with East Waste	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Within budget Potentially outside budget
		5.7.2.4 Stay informed of new and emerging services and assess and implement these services where practical and viable	Regional Waste Strategy Coordinator	Ongoing	Within budget Potentially outside budget
		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

# 9. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021 (continued)

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
		5.7.2.6 Develop and Implement a Waste Management Policy for all waste management services	Waste Coordinator Regional Waste Coordinator	March 2017	Within budget
		5.7.2.7 Consider the green bin service areas within the Waste Management Policy	Manager Waste, Health and Regulatory Services Waste Coordinator Regional Waste Strategy Coordinator	March 2017	Outside budget
		5.7.2.8 Consider commercial green organics collection services for properties within the service area, targeting food organics	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	March 2017	Outside budget
		5.7.2.9 Investigate the feasibility of implementing soft plastic recycling within the Council area, in conjunction with East Waste	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	July 2017	Outside budget
		5.7.2.10 Explore the benefits or otherwise of implementing fortnightly kerbside waste collection taking into consideration community views and the experiences of others.	Regional Waste Strategy Coordinator	July 2017	Within budget
		5.7.2.11 Subject to the identification of material benefits in strategy 4.8.2.6 advocate for legislative change to occur to provide the option for metropolitan Adelaide Councils to provide fortnightly kerbside waste collection services.	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator	July 2018	Within budget

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
<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	5.8.2.1 Continue to roll out caddies until existing stocks have been exhausted and consider purchasing additional stock if there is resident demand	Waste Coordinator Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.8.2.2 Upon request, provide caddies at no cost to those properties who do not have access to a kerbside green organics collection service to assist with their home composting practices.	Waste Coordinator Regional Waste Strategy Coordinator	June 2017	Within budget
		5.8.2.3 Consider introducing kitchen caddies to schools as part of a school's education program	Waste Coordinator	Ongoing	Within budget
		5.8.2.4 Maintain supplies of compostable bags for purchase	Waste Coordinator	Ongoing	Within budget
<b>5.9 Green Organics Drop Off Days and Free Greens Vouchers</b>	5.9.1.1 Maintain free green organics drop off services to assist the community with green organics disposal and minimising fire fuel loads	5.9.2.1 Continue to monitor green organics days and review requirements to meet demand	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Within budget Potentially outside budget
		5.9.2.2 Explore opportunities for residents issued with free green organic tip passes to utilise disposal sites located outside of AHC that are in close proximity to the northern part of the council area.	Manager Waste, Health and Regulatory Services Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Outside budget

# 9. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021 (continued)

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
5.10 Hard Waste	5.10.1.1 To increase the amount of materials recovered and reused instead of being disposed of to landfill  5.10.1.2 To ensure the cost of waste disposal is realised and some cost recovery via the resident/user is achieved	5.10.2.1 To support and encourage reuse and recycling of hard waste within the community	Manager Waste, Health & Regulatory Services  Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.10.2.2 Explore options to maximise hard waste service delivery through procurement practices	Manager Waste, Health & Regulatory Services  Regional Waste Strategy Coordinator	Prior to October 2016	Within budget
		5.10.2.3 Assist, where possible and practical, organisations/ events, such as Clean up Australia Day, who take a leading role in helping the community with waste management, on a case by case basis	Waste Coordinator	Ongoing	Within budget
5.11 Illegal Dumping	5.11.1.1 Determine the impact of illegal dumping and minimise its occurrence where possible.	5.11.2.1 Investigate the impact of illegal dumping, including the number of incidences and budget impact to Council	Regional Waste Strategy Coordinator  Waste Coordinator	July 2017  (Time is required in order to capture data)	Within budget
		5.11.2.2 If required, determine and assess measures to reduce the occurrence of illegal dumping	Regional Waste Strategy Coordinator  Waste Coordinator	December 2017	Within budget
5.12 Household Hazardous Waste	5.12.1.1 Assist residents to dispose of their hazardous household waste	5.12.2.1 Ensure residents are directed to appropriate options for Chemical disposal	Waste Coordinator  Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.12.2.2 Provide advice to residents regarding appropriate disposal options	Waste Coordinator  Regional Waste Strategy Coordinator	Ongoing and when available	Within budget

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
		5.12.2.3 Participate in State Government funded hazardous chemical collection days when available	Regional Waste Strategy Coordinator	When opportunities arise to submit correspondence regarding funding opportunities	Within budget
		5.12.2.4 Lobby State Government to assist with funding for chemical collection services	Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.12.2.5 Advocate for an expansion of current state government services available for the disposal of hazardous chemicals	Regional Waste Strategy Coordinator	Ongoing	Within budget
<b>5.13 E-waste</b>	5.13.1.1 Provide E-waste recycling services to residents, either free where required via the National Product Stewardship Scheme or at cost	5.13.2.1 Partner with organisations under the National Product Stewardship Scheme or consider providing a service at cost if a partner organisation is not available	AHRWMA Regional Waste Strategy Coordinator	Ongoing	Within budget
		5.13.2.2 Promote e-waste recycling as being free of charge to dispose of at any participating site in addition to the Heathfield Resource Recovery Centre	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Within budget
<b>5.14 Education</b>	5.14.1.1 To educate our community regarding waste reduction and recycling	5.14.2.1 Provide education to all community members	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing	Within budget
	5.14.1.2 To educate the community with a direct approach	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

# 9. Attachment 1 – Waste Management Strategy Implementation Plan 2016-2021 (continued)

Topic	Objectives	Strategies	Responsibility	Timeline	Budget
		5.14.2.3 Develop a waste education communication strategy	Regional Waste Strategy Coordinator	March 2017	Within budget Potentially Outside budget
		5.14.2.4 Undertake Bin Tagging targeting small areas (50 to 100 households) on an ongoing basis throughout the year.	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing commencing 2017	Within budget
		5.14.2.5 Review Bin Tagging information tags provided to ensure they are efficient to use and informative	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing Commencing 2017	Within budget
		5.14.2.6 Provide additional waste education material via a mailbox drop at the same time as undertaking bin tagging	Regional Waste Strategy Coordinator Waste Coordinator	Ongoing Commencing 2017	Within budget

***Adopted 8 November 2016.***



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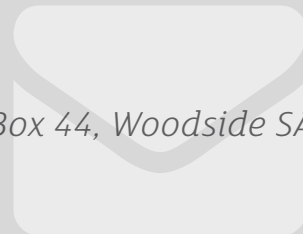
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