



WASTE EDUCATION PLAN

2018/19 - 2022/23

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1 Background

The City of Wanneroo (the City) is an expanding and thriving local government on the northern fringe of the Perth Metropolitan area, located approximately 12km from the Perth CBD at its nearest point and 62km at its furthest point.

In 2016, the City adopted the *Strategic Waste Management Plan 2016-2022* (the Strategy).

The objectives of the Strategy are to:

- Promote the delivery of efficient/effective Waste Management solutions;
- Reduce the City's ecological footprint, where possible;
- Align operations/disposal options with the principles of the Waste Hierarchy (Figure 1);
- Foster a Partnership Approach with Community and Industry;
- Develop a sound governance model for Waste Management for the City

In addition to these objectives, targets have been identified in the Strategy, including:

- Achieve an overall diversion of waste from landfill rate of 65% by 2020
- Increased recycling disposal to domestic disposal rate
- Reduction of total waste generated per capita

Five priority areas have been developed to address the objectives of the Strategy. Priority 5 is to “increase community awareness regarding waste management & environmental sustainability”; an output of which is this Waste Education Plan (the Plan).

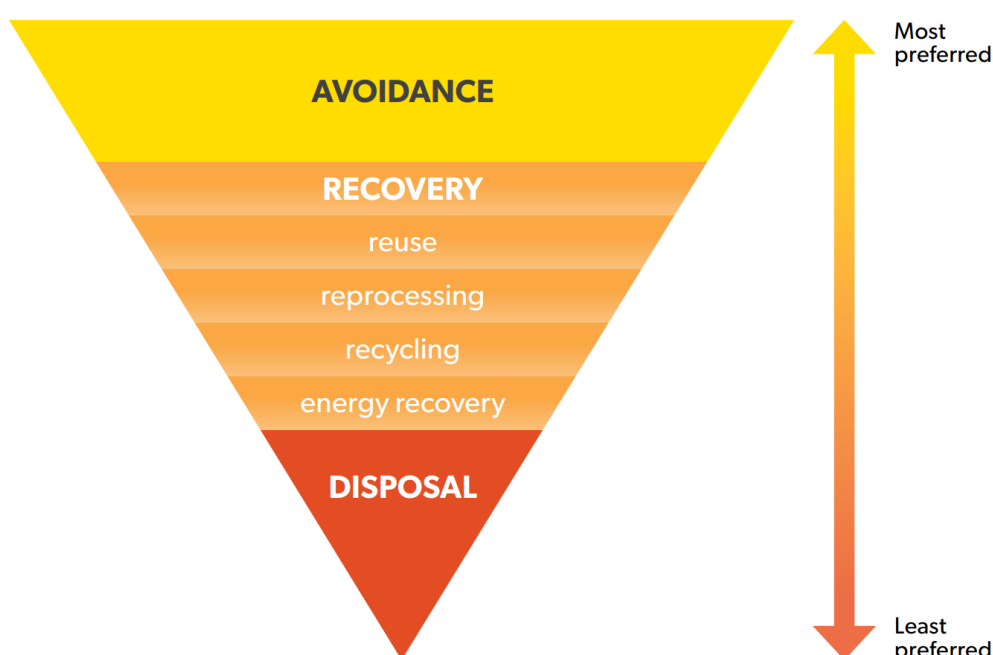


Figure 1: Waste Hierarchy (Waste Authority, Government of Western Australia, 2018)

The *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) established the Waste Authority and its functions, and prescribes the requirements of waste management for local governments. An integral principle of the WARR Act is the Waste Hierarchy (Figure 1), which informs the decisions of the Waste Authority and is considered a useful guide to assist in the development of waste education and communication programs.

In 2018, the City completed an integrated review of all Waste Services' operations to identify opportunities for improvement in waste management outcomes and service for the community, an outcome of which was the *Waste Services Service Delivery Review – Transition Plan* (Appendix 2). The Waste Education Plan will provide the foundations for community education and communications programs required to effectively implement this transition.

Drawing from existing best practice waste education programs and strategies, both locally and internationally, the Plan envisions that the City will facilitate education programs to support behaviour change. Additionally, key waste behaviours and waste diversion targets will be identified and communicated regularly to residents, in order to inform them of the importance of, and the theory surrounding, the Waste Hierarchy, in the hope of empowering the community to deal with their waste more sustainably. The waste management services available to residents through the City of Wanneroo and beyond will be highlighted and promoted. The Plan is subject to regular review to ensure continued relevance and effectiveness.

2 Waste Composition Audits

In 2017/18, audits of waste samples from City of Wanneroo residents' domestic waste bins were conducted by the Southern Metropolitan Regional Council (SMRC), at the request of the Mindarie Regional Council (MRC).

The objective of the audit was to gain an understanding of the materials being disposed of via the domestic waste bins of MRC member councils, including the City of Wanneroo. The resultant information has been utilised to develop plans to improve waste management strategies and will be used to inform the direction of some elements of the Waste Education Plan.

Audit samples were collected by City of Wanneroo waste trucks from suburbs that represent the social economic average for the City. These were delivered to the SMRC Audit Facility in Canning Vale for physical sorting and analysis prior to disposal.

Key findings

During the Winter and Summer audits, the domestic waste stream samples were found to contain 26.1% recyclable material (**Figure 2**). This finding is consistent with Perth metropolitan collections, resulting from residents not correctly sorting their waste into their two household bins (source separation).

This behaviour may be due to a number of factors including:

- Lack of understanding of what is recyclable;
- Insufficient space in the recycling bin;
- Lack of motivation or apathy.

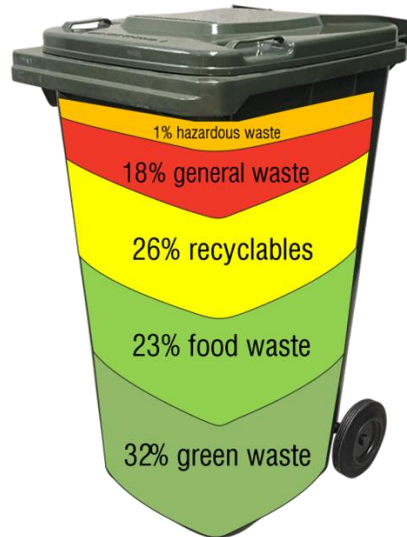


Figure 2: Composition of domestic waste bin waste stream
(Source: SMRC 2017/18 Municipal Solid Waste Audits)

There is scope to increase the amount of recyclables recovered from the waste stream, thereby increasing resource recovery and landfill diversion efforts. The Plan seeks to achieve this by addressing behaviours that stem from a lack of understanding and apathy.

3 Community Waste Survey

As part of the Waste Services Service Delivery Review completed in 2018, the City conducted a community survey to better understand the waste management requirements of residents and evaluate their preference in line with current waste management options offered both by the City and through contractors.

In order to gauge community expectations and preferences surrounding waste education, survey participants were asked a series of questions related to how much information they feel they receive, how they would prefer to receive such information and motivations towards adoption of environmentally friendly behaviours.

Key findings

There is an appetite for additional waste communications and education.

- 50% of respondents don't feel they are receiving enough information about waste in Wanneroo
- Additionally, when looking at motivations to change behaviour, 62% of respondents stated they would be motivated 'if I knew what to do'.
- Rates letters, email and Facebook are seen as key channels to distribute waste information effectively
- School programs and ad campaigns are seen as most appropriate to educate the community
- 82% of respondents are interested in being 'more environmentally friendly'.

4 Situational Analysis

4.1 Regional characteristics

The City covers an area of 684km², has 32 kilometres of coastline and is made up of 36 suburbs, comprising of an environment that offers coastal plains and wetlands, market gardens, bushland, urban development and industrial areas. It is one of Western Australia's fastest growing local government authorities.

According to the *Census of Population and Housing 2016* (ABS), the City is home to more than 195,000 people and around 12,500 businesses, providing 44,000 local jobs. The median age of residents is 33 years with:

- 30% aged less than 20 years
- 9.9% aged 65+ years
- 35% of households having one or more children below the age of 15
- 2.8 people per dwelling.
- 1.4% of residents are Aboriginal and Torres Strait Islanders

As the population grows in the City of Wanneroo, the number of schools and early learning centres (day cares) continues to increase. Currently, there are more than 50 early learning centres and more than 60 schools across the City.

Twenty percent of residents report speaking a language other than English at home, with 3.3% of residents indicating a difficulty speaking English. The top 5 languages spoken other than English are Vietnamese, Afrikaans, Arabic, Gujarati and Filipino/Tagalog.

4.2 Communication and education to date

The City's Waste Services operational staff provide behaviour change feedback to residents by placing stickers on bins and non-compliant waste materials, and post information flyers in relevant letter boxes. This practice has proven effective, as it highlights desired behaviours and encourages change to take place. The materials are continually reviewed, with changes made for improvement as required.

The City partners in a number of education programmes that engage schools and the community through the MRC. Messages and programs delivered are focussed intensively on the Waste Hierarchy, with emphasis placed upon reduce and reuse, along with diversion of waste from landfill and waste recovery. The MRC's *Strategic Community Plan 2018 – 2037* advocates for targeted, ongoing, broad spectrum/multi-faceted education campaigns with consistent messaging for maximum effectiveness.

The MRC's education program is based on the behaviour change practice of social diffusion, whereby educating members of the public allows them to spread information about waste and recycling to their friends, family and the wider community. This is achieved through:

- Tours of facilities
- Talks and visits to schools and community groups
- Roaming Recycler waste education displays at fairs, shows, concerts, shopping centres and other events
- Earth Carers; a waste related community outreach program

These educational tools are supplemented by traditional communication methods such as brochures, billboards, newspaper adverts, as well as the MRC website and social media.

The following table outlines the number of early learning centres and schools within the City which have received a tour of MRC facilities or a visit from an MRC representative to present a talk or activity in recent years. Repeat visits or tours by the same school in the same calendar year is counted once to more accurately reflect the number of schools participating, rather than the depth of participation, in the MRC education program.

Activity	2015	2016	2017
Tour of MRC facilities	10 schools & 1 early learning centre toured Tamala Park 0 tours of RRF	6 schools & 2 early learning centres toured Tamala Park 1 school toured RRF	10 schools & 3 early learning centres toured Tamala Park 1 school toured RRF
Talks and visits to schools	12 schools & 9 early learning centres	9 schools & 6 early learning centres	12 schools & 19 early learning centres

Table 1: Number of early learning centres, primary schools, secondary schools and home school groups who participated in an MRC Waste Education activity

The following chart depicts the ratio of City of Wanneroo schools (primary and secondary) which have participated at least once in the MRC's Waste Education Program (tour and/or school visit) in the past 3 years.

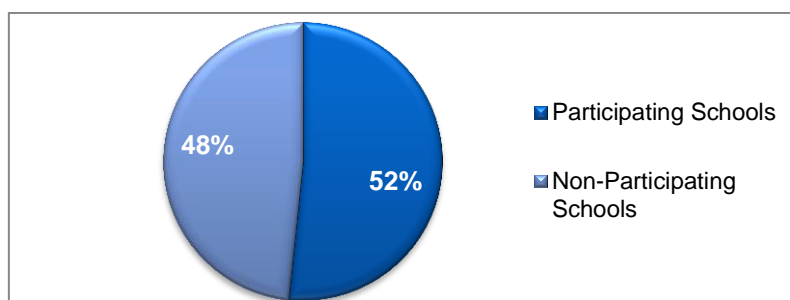


Figure 3: Participation rates of City of Wanneroo Primary and Secondary Schools in Mindarie Regional Council's Waste Education Program (2015-2017)

The City's Waste Education Officer, employed since June 2017, has begun implementing additional waste education initiatives, including the creation and distribution of an annual waste and recycling guide, school visits, tours of waste facilities, community waste awareness workshops and static displays in City libraries. Many of these initiatives are driven through collaboration between other Service Units.

Beyond local waste education and community engagement initiatives, the Waste Authority has six key messages (Figure 4) that aim to foster engagement and behaviour change in individuals and communities across the State. Existing waste education programs beyond the City support and promote these messages. Future waste education programs developed by the City will align with a majority of these messages.

<p>Your actions make a difference</p> <ul style="list-style-type: none"> • Everyone can choose to do the right thing and adopt smarter waste management practices in the home, business and public open spaces. <p>Put it in the right bin</p> <ul style="list-style-type: none"> • Everyone needs to be involved - it's important to not only put litter in the bin, but also in the right bin. <p>Accept and take responsibility</p> <ul style="list-style-type: none"> • It's time for everyone to accept and take responsibility for their waste, as it is a valuable resource that can be recovered and recycled to reduce the use of raw materials and protect our environment. • Actions to avoid and minimise waste – such as not using plastic bags, only buying food that will be used and reusing drink cups and bottles – benefit the environment and also save you money. <p>Driving smarter waste management</p> <ul style="list-style-type: none"> • We support the community, business and industry to improve the management of waste and recycling in WA. <p>We invest the landfill levy in waste programs</p> <ul style="list-style-type: none"> • We use the landfill levy to fund key programs and incentives, and work collaboratively to create the right environment for Western Australians for decades to come. <p>Waste recycling has true value</p> <ul style="list-style-type: none"> • Recycling is good for the environment and has positive economic benefits including creating more jobs than landfill

Figure 4: Waste Authority Key Messages

4.3 Stakeholders

The following groups have a stake in our Waste Education Plan, by being either interested in, concerned about, affected by, having a vested interest in, or are involved in some way other with the issue of waste.

Primary Stakeholders

- Residents, schools, businesses, sporting/leisure associations and environmental organisations of the City of Wanneroo
- Staff and elected members of the City of Wanneroo

Other Stakeholders

- Mindarie Regional Council
- Western Australian Minister for Environment
- Western Australian Local Government Association (WALGA)
- Department of Water and Environmental Regulation (DWER)
 - The Waste Authority of WA
 - Waste Wise Schools
 - Keep Australia Beautiful WA
- WMAA Waste Educators Working Group
- Department of Education and Sustainable Schools WA
- Waste management service providers
- Not-for profit environmental organisation/programs, including but not limited to:
 - Mobile Muster

- Planet Ark (National Recycling Week, Close the Loop cartridge recycling)
- Switch Your Thinking
- AAEWA Little Green Steps program
- Plastic Free July
- Charity organisations (Good Samaritan Industries, Spine & Limb Foundation, St Vincent's, Salvation Army, etc.)
- Sea Shepherd

5 Aims & Objectives

5.1 Aim

Increase community awareness regarding waste management & environmental sustainability through the communication of the 'Reduce, Reuse, Recycle' waste education message.

5.2 Objectives

We want our residents to:

- be more responsible for and mindful about their waste
- understand the Waste Hierarchy
- use City delivered waste services correctly
- know what happens to their waste after it has been collected
- help reduce dumping and littering around the City

The above goals will be achieved through four community engagement and education objectives:

1. Increase community awareness of waste, and support and encourage waste avoidance
2. Improve resource recovery and reduce contamination through better source separation practices
3. Foster partnerships with all stakeholders to deliver effective waste education programs
4. Develop and support waste education programmes in local schools

6 Target Audience

The following groups have been identified as the target audiences for the community waste education programme.

6.1 Residents

The actions and beliefs of residents directly affect the quality and quantity of waste and recycling collected and consequently disposed of by the City of Wanneroo. If residents do not have appropriate knowledge, skills and attitude towards waste and recycling, they cannot be expected to make informed decisions. As the *Strategic Waste Management Plan 2016-2022* focuses on the waste services provided to residents by the City, this is the key target audience.

The desired outcome is improved source separation of different waste streams by the local community, a reduction in the volume of waste generated and the promotion of thinking of waste as a resource.

6.2 Schools

The City is approached regularly by schools and community groups, to engage in educational activities surrounding reuse and recycling within the area. These partnerships assist in the promotion and distribution of waste and recycling information and also allow for a more holistic approach to education about waste and sustainability in the region.

With 35% of households consisting of families with at least one child under the age of 15 (ABS, 2016), waste education and awareness campaigns delivered through schools can have the potential to reach a large portion of the City's population. It is proposed that engagement with schools will complement and support the Mindarie Regional Council's waste education program, allowing more schools the opportunity to engage with waste messages and behaviour change activities.

6.1 Commercial

Currently, the City does not provide commercial waste services to businesses and industry. A primary aim of the Education Plan is to educate residents on how to correctly sort their waste at home. Where practical, engagement with local businesses will be utilised to achieve these outcomes.

As an example, collaboration with real estate agents within the City to ensure new residents and tenants in the City receive information pertaining to waste will be investigated and commenced if deemed practical.

6.2 Tourism

The City of Wanneroo receives around 730,000 visitors to the region annually (Tourism Research Australia, 2016). These tourists range from local visitors, regional visitors, interstate visitors and international visitors, all of whom will have a range of understanding about the correct disposal of waste when visiting the City. Where practical, partnerships with local tourism providers will be utilised to achieve outcomes of the Plan.

6.3 Internal groups

The waste behaviours and attitudes of City of Wanneroo staff and elected members have the ability to influence and support the waste behaviours and attitudes of the wider community. There is also the opportunity to reduce the amount of waste produced through internal operations, which makes a direct contribution to waste reduction in the region.

Many employees are also residents of the City, and along with Elected Members, have the potential to communicate the City's waste messages to the wider community. It is therefore important that internal communications are clear, informative and motivating.

The major aim of the Plan, for internal groups, is to introduce opportunities to increase recycling and reduce waste generated by the City's facilities and activities. This is achievable through collaboration and opportunities to integrate the objectives of various service units. Additionally, raising awareness and developing an understanding of key waste issues and how waste is processed or managed in the City of Wanneroo across all departments is a key activity.

7 Education and Communication Methods

The Waste Authority *Communications Guidelines* (2015) provides guidance and suggestions to assist local government in the rollout of waste related community engagement. One of the recommended studies, undertaken by WRAP UK (*Barriers to recycling at home*, 2008) reported that there are a variety of factors which influence people's waste and recycling behaviours and attitudes, with these attitudes contributing to their 'recycling competence' (Figure 4). In order to educate residents, different messages and communications methods are required to meet the needs of a diverse population. Some households may not consider waste as a priority, whilst others may seek validation for their efforts, or may be looking for ways to improve their waste reduction. A holistic waste education program should aim to provide support for residents at all stages of engagement, and ideally move more residents from disengaged recycling competencies to more competent levels. Beyond the act of recycling, these competencies are closely linked to other waste behaviours, such as waste minimisation and reuse.

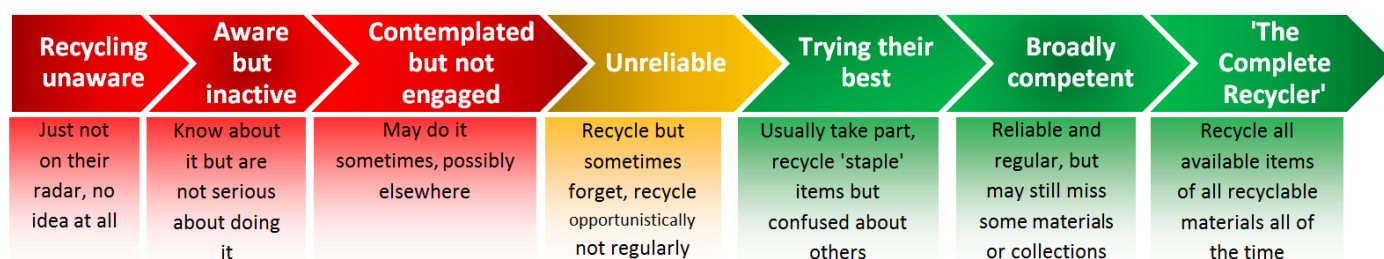


Figure 5: Seven Stages of Recycling Competence (WRAP UK, 2008)

Education methods to be utilised in the delivery of this plan will incorporate a mixture of broad brush and targeted strategies, as shown below.

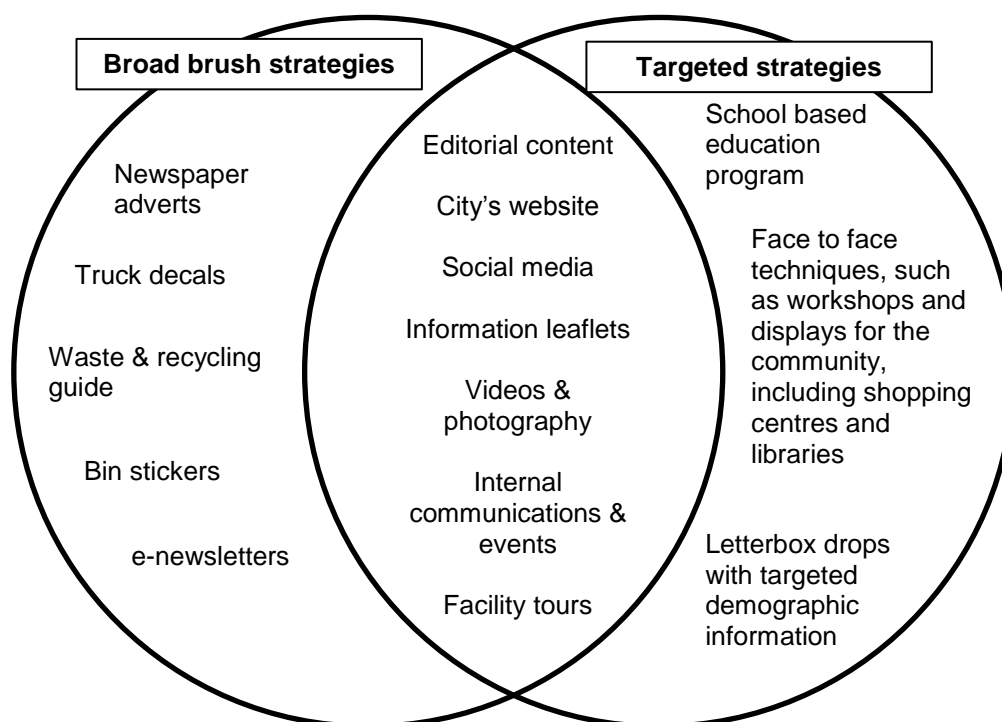


Figure 6: Communication methods for waste education

For further information about the effectiveness of different communication tools, see Appendix 3.

WRAP UK's 2008 study of recycling barriers revealed that waste and recycling messages fall into a series of categories, which have more relevance to some competency stages than others.

Recycling Competence Level Messages	Recycling unaware	Aware but inactive	Contemplated but not engaged	Unreliable	Trying their best	Broadly competent	'The Complete Recycler'
Instructions (Basic how-to information)	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★	★ ★ ★
Explanations (What is recycling? Why am I being asked to do this?)		★ ★ ★	★ ★	★			
Dispelling the myths	★	★ ★	★ ★	★ ★ ★	★ ★	★ ★	★
How it works (The recycling process)		★	★ ★	★ ★	★ ★ ★	★ ★ ★	★ ★ ★
Feedback and thanks (How does our community compare to others?)			★	★ ★	★ ★ ★	★ ★ ★	★ ★ ★
Cost effectiveness (What is the cost of recycling? The cost of waste disposal?)	★	★	★ ★	★ ★	★ ★ ★	★ ★ ★	★ ★ ★

Blank = not effective ★ = slightly effective ★ ★ = moderately effective ★ ★ ★ = highly effective

Figure 7: Effectiveness of messaging on behaviour change (adapted from WRAP UK, 2008)

In early 2017, the Waste Authority commissioned research to assist with the creation of suitable communications resources to be used by local governments. After conducting a literature review, the study acknowledged that communications have different roles to play at different stages of during changes to the provision of waste services (Figure 8). Facilitating residents' competent use of new waste services requires them to be aware of and engaged with the changes while they are supported on how to use the systems correctly and understand why these changes are occurring. Ongoing maintenance of these new understandings and behaviour is required.

In order to effectively communicate with our community about any changes to the waste services delivered by the City, specific community engagement and communications plans will be developed. These plans will be supported by the Action Plan and provide more specific detail related to individual projects.

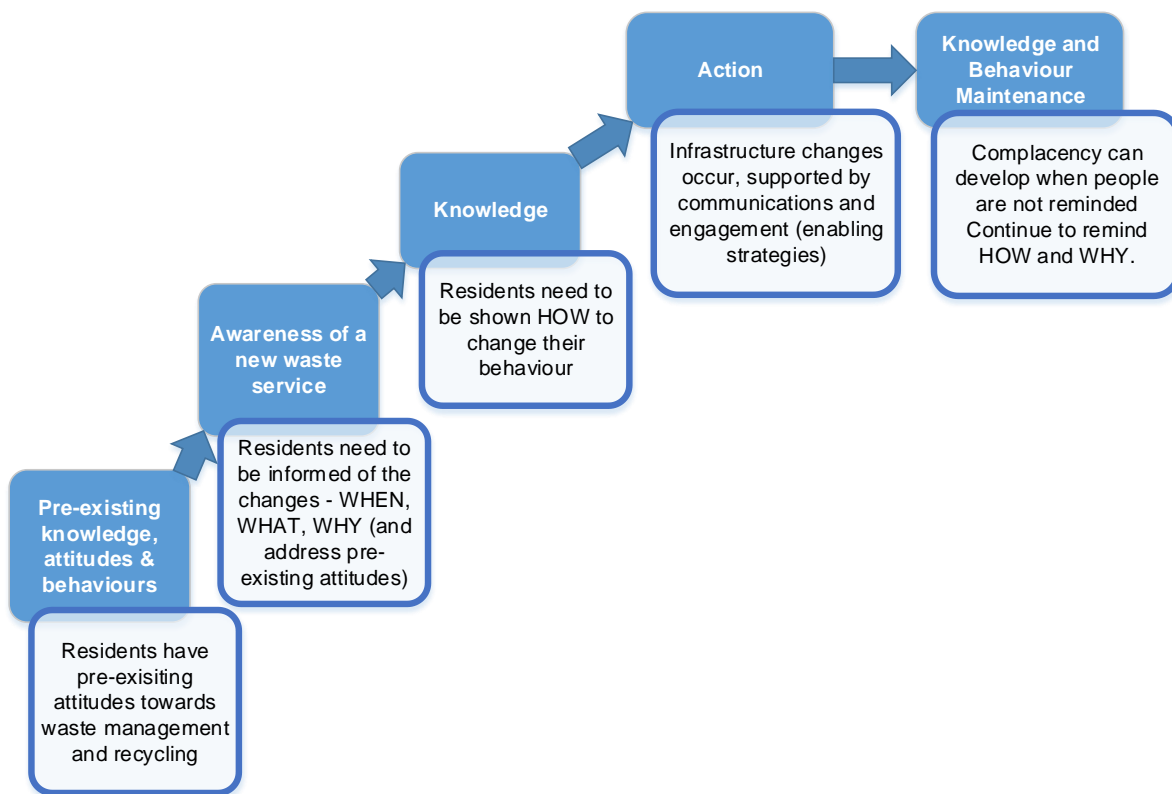


Figure 8: The stages of behaviour change that occur during the rollout of a new waste service (adapted from Metrix, 2017)

Similar to the effectiveness of messaging types on the different recycling competence levels, the methods and messages contained in communication surrounding the changes or launch of a new waste service needs to be varied. It is clear that no one communication method or message will be effective in changing the behaviours and attitudes of our community. It will be necessary for the Plan to be dynamic and able to respond effectively to changes within the waste industry. Further to this, the City must be mindful of the specific barriers and challenges faced by different demographics of our community, and respond effectively to ensure messages reach audiences as intended.

The following Action Plan outlines strategies that strive to generally improve the recycling and waste related behaviours across all parts of the City of Wanneroo. The budget required to deliver this action plan will be developed on an annual basis through the ordinary budgetary process. Specialist projects that require an educational component, such as the Better Bins program, will be budgeted through the specialist projects budget process.

Where opportunities arise, additional funding from external providers will be sought through grant applications to support the actions of the Waste Education Plan.

8 Action Plan

Where ✓ appears, this indicates activity will take place during that financial year. Associated costs (not including employee costs) have been identified where actions will require funding to carry out. These costs may be subject to CPI increases.

Action	Responsibility	2018/19	2019/20	2020/21	2021/22	2022/23
Objective 1. Increase community awareness of waste and support and encourage waste avoidance						
1.1 Design and implement Community Engagement Plans to raise awareness of waste and support changes to waste service delivery, including Better Bins program	Waste Services, in collaboration with Community Engagement Advisor	✓	✓	✓	✓	✓
1.2 Produce a suite of waste education communications materials (such as graphics, leaflets, videos, website, waste guide, banners, stickers & truck decals) and distribute to the community (including new residents) via multiple communications channels such as direct mail, newspaper adverts, social media and at City events including citizenship ceremonies and movie screenings. See Appendix 3 for potential media mix.	Communications, Marketing and Events, with advice from Waste Services and when required, Community Development to ensure alignment with the City of Wanneroo Access and Inclusion Plan (Outcome 8)	✓	✓	✓	✓	✓
1.3 Promote awareness of the issues of littering and illegal dumping, including reporting mechanisms such as the 'Litter Reporter Scheme' and reporting to City Rangers.	Waste Services, in collaboration with Communications, Marketing and Events, Rangers, and DWER	✓	✓	✓	✓	✓
1.4 Increase the number of participants in tours of waste processing facilities utilised by the City	Mindarie Regional Council (MRC), in collaboration with Waste Services and Community & Place	✓	✓	✓	✓	✓
Objective 1 Total Funding Requirements		\$82,000	\$82,000	\$82,000	\$82,000	\$82,000
Objective 2. Improve resource recovery and reduce contamination through better source separation practices						
2.1 Use data from waste audits and community surveys to target waste education initiatives in the community	MRC to conduct waste audits, Waste Services & Communications, Marketing and Events to share data	✓	✓	✓	✓	✓
2.2 Deliver, support and promote waste behaviour change workshops and programs with our community	Waste Services in collaboration with Service Units from the Community & Place Directorate & MRC	✓	✓	✓	✓	✓
2.3 Promote community drop off opportunities for items such as e-waste, clothing and whitegoods	Communications, Marketing and Events, with advice from Waste Services	✓	✓	✓	✓	✓
2.4 Raise the profile of community recycling stations for hard to dispose of items, such as batteries and light bulbs	Waste Services, in collaboration with Communications, Marketing and Events & MRC	✓	✓	✓	✓	✓
2.5 Investigate methods of reward and recognition for residents using their kerbside bin system correctly or pledging to reduce their waste	Waste Services			✓		
Objective 2 Total Funding Requirements		\$8,500	\$11,000	\$8,500	\$8,500	\$8,500

Action	Responsibility	2018/19	2019/20	2020/21	2021/22	2022/23
Objective 3. Foster partnerships with all stakeholders to deliver effective waste education programs						
3.1 Partner with other service units in the City to review internal procedures to align with the Waste Hierarchy	Waste Services, in partnership and consultation will all City service units	✓	✓	✓	✓	✓
3.2 Partner with local community groups to help promote and engage community with waste reduction and resource recovery messages	Waste Services, in collaboration with Community Development, Cultural Development, Community Services, Communications, Marketing and Events & MRC	✓	✓	✓	✓	✓
3.3 Partner with Keep Australia Beautiful WA (KAB) in delivering programs, such as Adopt-A-Spot, to schools and community	Waste Services, with support from Community Development, Cultural Development & Parks & Conservation	✓	✓	✓	✓	✓
3.4 Collaborate with Mandurah Regional Council (MRC), MRC member councils, other councils and State Government on delivery of local and regional waste management education	Waste Services, with support from Communications, Marketing and Events	✓	✓	✓	✓	✓
3.5 Develop and deliver an online internal staff training package that is relevant to all service units	People and Culture, with support from Waste Services		✓	✓	✓	✓
3.6 Investigate and develop "Event and Public Place Recycling and Community Group programs and policies"	Waste Services, with support from Communications, Marketing and Events				✓	
Objective 3 Total Funding Requirements		\$15,000	\$45,000	\$15,000	\$15,000	\$15,000
Objective 4. Develop and support waste education programmes in local schools						
4.1 Create and deliver an incursion program that aligns with the Western Australian Curriculum to encourage and increase participation in Waste Education programs in City of Wanneroo schools	Waste Services, in partnership with MRC	✓	✓	✓	✓	✓
4.2 Partner with educators in schools and early learning centres to create a new point of contact to deliver key waste and recycling messages to children, parents and staff	Waste Services and MRC	✓	✓	✓	✓	✓
Objective 4 Total Funding Requirements		\$9,000	\$4,000	\$4,000	\$3,000	\$3,000

9 Monitoring and Evaluation

Objectives	How it will be measured	Current	Target
1. Increase community awareness of waste and support and encourage waste avoidance	Reduction in waste per capita	415.39 kg of waste per capita (2017/18); includes Recycling, Domestic waste, Bulk Junk and Bulk Green waste, Illegal Dumping and waste collected from Council Assets	Reduction in the amount of waste per capita
	Community Waste Management Survey	2016 Survey Results 5% of respondents knew Domestic waste was processed at MRC RRF. 17% of respondents knew Recycling waste was processed at MRF. 31% of respondents knew Bulk Junk waste was disposed of at Tamala Park. 36% of respondents knew Bulk Greens are recycled .	Increased percentage of correct residents' responses in the next Community Waste Management Survey Increased number of survey respondents who can identify correctly where all City of Wanneroo wastes are processed
	Number of media communications (internal & external)	45 social media posts (2017/18) 17 media releases published (2017/18) 9 waste education articles written for My City (2017/18)	Maintain number of communications per year
	Reduction in litter and illegal dumping	501.66 tonnes of illegally dumped material (2017/18)	Reduced tonnage of litter and illegal dumping
2. Improve resource recovery and reduce contamination better source separation practices	Lowered contamination rates in both bins, measured through audits	Domestic Waste Bin Winter/Summer 2017/18 Audit results 26.1% recyclable content 52.0% organic content 1% hazardous waste * 18% other * * Nappies & sanitary/hygiene items have been included in 'other' waste, as they do not pose a hazard through the domestic waste treatment and disposal process Recycling Bin Audit results Currently not available. 89% diversion from landfill 11% to landfill	Reduction of contamination in household kerbside bins. That is: <ul style="list-style-type: none"> Reduction in the level of recyclable and hazardous waste in household Domestic waste bins. Reduction in the level of non-recyclable waste in household Recycling bins
	Increased participation in annual community drop off weekend & use of community recycling stations	774 vehicles attended the 2018 community drop off weekend 1382 kg of batteries, light globes & ink cartridges collected via community recycling stations 2017/18	Increased participation in community waste drop off events Increased tonnage collected via recycling hubs and reduced tonnage of problematic items in household bins

Objectives	How it will be measured	Current	Target
3. Foster partnerships with all stakeholders to deliver effective waste education programs	Number of CoW residents participating in KAB Adopt a Spot Program	Average of 6 Adopt-a-Spot registrations per year (2014 to 2017)	Increased number of people involved in proactive, positive community programs, such as Adopt a Spot
	Number of participants in waste education programs, such as community workshops and tours	5 tours of the RRF in 2017/18 14 community waste workshops or waste education information stall presence at events in 2017/18	Increased number of visitors to the RRF Maintain presence in the community through workshops and information stalls
4. Develop and support waste education programmes in local schools	Number of participants in school waste education programs, such as school incursions	31 of 60 schools participated in the MRC waste education program, at least once, between 2015 and 2017	Increased number of schools participating in waste education programs
	Number of teacher development workshops	2 workshops in 2017/18	Maintain at least one teacher development workshop every two years

10 Appendices

Appendix 1: Annual Waste related events

<p><u>March</u></p> <ul style="list-style-type: none">▪ Clean Up Australia Day ↳ <i>First Sunday in March</i> <p><u>May</u></p> <ul style="list-style-type: none">▪ International Composting Awareness Week (ICAW) ↳ <i>From 1st Sunday in May</i> <p><u>June</u></p> <ul style="list-style-type: none">▪ World Environment Day ↳ <i>June 5</i>▪ Global Garbage Man Day ↳ <i>June 17</i> <p><u>July</u></p> <ul style="list-style-type: none">▪ Plastic Free July ↳ <i>Full month</i> <p><u>August</u></p> <ul style="list-style-type: none">▪ Keep Australia Beautiful Week ↳ <i>Last full week in August</i>▪ National Op Shop Week ↳ <i>Last week of August</i>	<p><u>October</u></p> <ul style="list-style-type: none">▪ National Buy Nothing New Month▪ Nude Food Day ↳ <i>TBD by individual schools</i> <p><u>November</u></p> <ul style="list-style-type: none">▪ National Recycling Week ↳ <i>Second week of November</i> <p><u>December</u></p> <ul style="list-style-type: none">▪ World Soils Day ↳ <i>December 5</i>▪ National Leftovers Day ↳ <i>December 26 (Boxing Day)</i>
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Appendix 2: Waste Services Service Delivery Review 2018 – Transition Plan

Waste Services Service Delivery Review 2018 – Transition Plan



Appendix 3: Selecting a communications mix

(Source: *Waste Authority communications guidelines: communicating effectively for improved recycling and waste minimisation, 2015*)

Definitions

Impact - the degree to which the communication will be noticed by the person receiving it

Influence - the extent to which the technique will influence the recycling behaviour of the people receiving it

Targeting - the precision with which the technique can be used to reach a very specific audience or group

The table also gives an indication of the cost effectiveness of each method as well as assigning a priority level.

Communication Method	Impact	Influence	Targeting	Cost effectiveness	Priority
				High/ Med/ Low	High/ Med/ Low
TV Advertising	High	Mid	Low	Low	Low
Local newspaper advertising	High	Mid	Mid	Medium	Medium
Billboard advertising	Mid	Low	Mid	Medium	Medium
Radio advertising	Mid	Mid	Mid	Medium	Medium
Public Relations (PR) - editorial coverage (e.g. in local newspaper)	High	High	Mid	High	High
Leaflet drops through letterboxes	Mid	Mid	High	High	High
Doorknocking	High	High	High	High	Medium
Shopping centre displays	High	High	Mid	Medium	High
Displays at community events	High	High	Mid	Medium	Medium
Community engagement	High	High	High	High	Medium
Schools visits	High	Mid	High	Medium	Medium
Internet – LGA website	High	Mid	Low	High	High
Social Media	Mid	Mid	High	Mid	Low
Internal communications	Mid	Mid	High	High	High
Operational signage and vehicle livery	Mid	Mid	High	Medium	High

** Note that while 'high', 'medium' and 'low' are used as relative terms, not absolute definitions, they are useful in assessing which method, or combination of methods disciplines, may be most appropriate for your communications.

11 Glossary

AAEEWA	Australian Association of Environmental Education (Western Australia)
Community	Residents/rate payer of the City of Wanneroo
CME	City of Wanneroo Communications, Marketing and Events Team
DWER	Department of Water and Environmental Regulation
E-Waste	Electronic waste, typically waste consisting of circuitry such as televisions, computers and associated technology
ICAW	International Composting Awareness Week
Kerbside collection	Containerised, regular, frequent collection of waste and or/recyclables from the front of residential premises
Landfill	An engineered facility for the disposal of waste material by burial
MRC	Mindarie Regional Council
Reduce	Minimisation or prevention the production of waste
Reuse	The practice of using an item more than once without processing the material
Recycle	Processing materials new materials or new products
RRF	Resource Recovery Facility
Source separation	The separation of waste into common material streams or categories for separate collection at home, in the office, on building sites and in public places
SMRC	Southern Metropolitan Regional Council
The City	City of Wanneroo
Vergeside collection	intermittent, typically non-containerised collection of bulky wastes, such as green wastes (for example, grass or flower cuttings and hedge trimmings) and hard wastes (for example, furniture, mattresses and white goods)
WALGA	Western Australian Local Government Authority
WMAA	Waste Management Association of Australia

12 References

- Cairns Regional Council. (2011). *Waste Management Strategy 2010 – 2015: communication and education action plan*. Retrieved from: https://www.cairns.qld.gov.au/data/assets/pdf_file/0003/60618/Waste_Communication_and_Education_Action_Plan.pdf
- City of Wanneroo (2016). *Strategic Waste Management Plan*. Retrieved from: http://www.wanneroo.wa.gov.au/downloads/file/2439/strategic_waste_management_plan_2016-2022
- Department of the Environment and Energy & Blue Environment Pty Ltd. (2017). *Australian National Waste Report 2016*. Retrieved from: <http://www.environment.gov.au/protection/waste-resource-recovery/national-waste-reports/national-waste-report-2016>
- Metrix. (2017). *Developing a Better Bins communications toolkit*. Retrieved from Waste Authority website: <http://www.wasteauthority.wa.gov.au/publications/developing-a-better-bins-communications-toolkit>
- Metrix. (2018). *Optimising waste services in the City of Wanneroo*.
- Mindarie Regional Council (2017). *Winning back waste: strategic community plan 2018 – 2037*. Retrieved from: <http://mrc.wa.gov.au/About-MRC/Reports-Plans/Strategic-Community-Plan-2018/SCP-2017-MR-JULY-6.pdf>
- State of NSW, Environment Protection Authority. 2015. *Changing behaviour together: NSW Waste Less, Recycle More Education Strategy 2015-2017*. Retrieved from: <https://www.epa.nsw.gov.au/publications/recyclereuse/changing-behaviour-together-waste-less-education-strategy-170171>
- Sustainability Victoria. (2016). *Victorian Waste Education Strategy: August 2016*. Retrieved from <http://www.sustainability.vic.gov.au/About-Us/What-we-do/Strategy-and-planning/Victorian-waste-education-strategy>
- Waste Authority (2015). *Waste Authority communications guidelines: communicating effectively for improved recycling and waste minimisation*. Retrieved from: <http://www.wasteauthority.wa.gov.au/programs/communication-guidelines>
- Waste Avoidance and Resource Recovery Act 2007*. Retrieved from: https://www.slp.wa.gov.au/legislation/statutes.nsf/law_a146643.html
- WRAP UK. (2008). *Barriers to recycling at home*. Prepared by M.E.L. Research <http://www.wrap.org.uk/content/barriers-recycling-home>
- The data outlined in the regional characteristics of the Plan have been sourced from .id – the population experts *id.com.au*. Some of the .id sourced content is a derivative of ABS Data, which data can be accessed from the website of the Australian Bureau of Statistics at www.abs.gov.au, and licensed on terms published on the ABS website.
- The data outlined in the target audiences of the Plan, pertaining to tourist numbers, have been sourced from .id – the population experts *id.com.au*. This data is derivative of Tourism Research Australia annual surveys conducted for the purpose of promoting and understanding the Australian Tourism Market.



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