



# WASTE MANAGEMENT MARKET RESEARCH PROJECT

## WSROC outcomes summary

Report

March 2017



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## **Document**

Waste management market research project – WSROC outcomes summary report

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# 1. INTRODUCTION

## 1.1. Background

Straight Talk, in partnership with Jetty Research, was engaged by the Western Sydney Regional Organisation of Councils (WSROC) in April 2015 to undertake waste and recycling market research across six local councils in Western Sydney.

WSROC represents ten local councils in Western Sydney, and is focussed on finding solutions to regional issues. In April 2015, WSROC launched Western Sydney Regional Waste Avoidance and Resource Recovery Strategy. This strategy responds to the waste management challenges faced by its member councils. In order to achieve the strategy's targets, a number of themes were developed around waste avoidance and recycling, each with specific actions to improve regional cooperation and identify opportunities to improve the economic viability of recycling and resource recovery practices in the region.

The waste and recycling market research undertaken and detailed in this report, provides evidence of motivations and barriers towards waste and recycling in each of the Local Government Areas (LGA) that participated in the project. It also contains details of the key insights that the individual research projects identified that could be applied across these, and other, LGA.

## 1.2. Purpose

The purpose of this project was to design and undertake research about community attitudes and behaviours about waste management for six participating Councils, which were:

- 👉 Hawkesbury City Council
- 👉 Blue Mountains City Council
- 👉 The Hills Shire Council
- 👉 Holroyd City Council
- 👉 Liverpool City Council
- 👉 Penrith City Council.

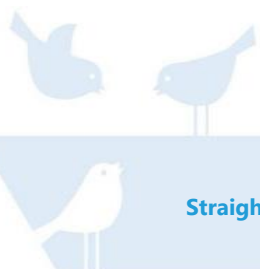
## 1.3. Objectives

The overarching objectives of the market research were to:

- 👉 Measure the level of satisfaction of residents using council waste and recycling services
- 👉 Understand the residents' attitudes, awareness and behaviours around waste reduction, waste avoidance and resource recovery
- 👉 Understand residents' reception and response to waste promotional activities
- 👉 Understand residents' general attitudes and motivations and barriers to participating in society in day to day life

- 👉 Improve waste education and community engagement, including identifying factors which encourage/deter residents from learning more about recycling/low waste practices as well as key themes which resonate with residents
- 👉 Identify where and how residents would be receptive to receiving information about low waste practices
- 👉 Cross reference the objectives above with demographic and geographic information for each Local Government Area.

Straight Talk partnered with each council to develop a research program specific to their needs. Individual research programs were designed in close consultation with each council to deliver meaningful data, both qualitative and quantitative, about the specific waste management issues evident in their LGA. As the community demographics and waste management issues in each LGA were unique, each research program was tailored to ensure it met the specific research objectives of each council.



## 2. METHODOLOGY

Straight Talk designed individualised research programs with activities tailored to each council's needs. Three levels of research programs were initially proposed to cater for the different needs and resources of the councils participating in the research project. The three levels included:

- 🔥 Sufficient research level
- 🔥 Substantial research level
- 🔥 Comprehensive research level.

Activities recommended for each research level are outlined in the table below.

	Sufficient research level	Substantial research level	Comprehensive research level
Scoping meeting	✓	✓	✓
Telephone survey	✓	✓	✓
Online survey		✓	✓
One residents focus group	✓	✓	✓
Two residents focus groups		✓	✓
Additional residents focus groups			✓
Community workshop			✓
Data analysis	✓	✓	✓
Council reporting	✓	✓	✓
Regional reporting	✓	✓	✓

### 2.1. Surveys

#### 2.1.1. Telephone survey

Straight Talk, in partnership with Jetty Research, designed and utilised random telephone surveys to obtain qualitative and quantitative inputs from a demographically representative sample of each LGA. Questions in each survey were carefully framed and structured to help achieve the research goals relevant to the circumstances and waste management issues of each council.

To minimise coding time and achieve cost effective data analysis, surveys had limited open-ended questions. The surveys were comprised mostly of closed questions, including a mix of multiple choice, rank order scale and rate scale questions. In order to achieve optimal response rates, the length of surveys was limited to approximately 10 to 12 minutes. Each survey included a number of demographic and geographic profiling questions to enable responses to be cross-tabulated against different demographic or geographic characteristics.



Once the questions were developed the survey was formatted appropriately using CATI (computer aided telephone interviewing) software and piloted within the project team. Questions and structure were refined in response to the pilots.

Residents living in each LGA (identified by postcode) were randomly contacted, through a research industry-specific database of random valid numbers, and invited to complete the survey.

Recruitment of focus group participants was also undertaken through the telephone survey. At the end of each survey, participants were asked if they would like to attend a focus group (which were between 1.5 and 2 hours in length) and be paid in recognition of their time.

### 2.1.2. Online survey

Online surveys were utilised to capture the involvement of a broader cross-section of the community and to extend the number of participants. These surveys were based on the telephone survey questions and residents were able to access the online survey via council websites.

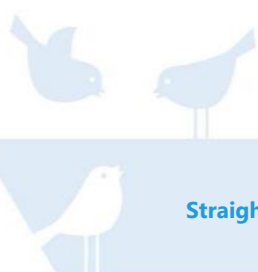
As participants of this survey 'self-selected' to complete the survey, it tended to attract community members who already had an interest in and commitment to waste management and recycling. This allowed for comparative analysis of the two survey outcomes so that a deeper, more nuanced understanding of community views was developed.

## 2.2. Focus groups

A representative sample of each LGA was invited to participate in a focus group, while completing the telephone survey. Focus groups provided the opportunity to delve more deeply into the views of the community, and their needs and preferences. When multiple focus group were undertaken, it was possible to obtain more detailed feedback from specific, relevant demographic segments of the community, which allowed for the comparison of their different needs and preferences. The number of focus groups held was dependent on the number of different demographic segments of the community each council was interested in understanding and the research needs of each council.

## 2.3. Desktop research

Although not included in the originally proposed methodology, a desktop research approach was applied in one LGA, in order to meet that council's objective of understanding how to affect waste behaviour changes with social housing tenants. This methodology was selected because our experience has demonstrated a strong difficulty in reaching social housing tenants and garnering their effective participation in consultation activities, such as telephone surveys and focus groups.



The desktop research was undertaken in two ways:

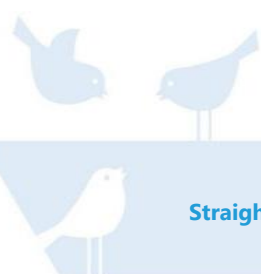
1. Online research of behaviour change projects and programs that had elements that could be applied to waste behaviour change for social housing tenants
2. Telephone interviews with waste management advocates on their experience of affecting behaviour change.

## 2.4. Research program undertaken

The following table details the methodologies that were utilised in each LGA and their reach:

	Hawkesbury City Council	Blue Mountains City Council	The Hills Shire Council	Holroyd City Council	Penrith City Council	Liverpool City Council
<b>Telephone survey</b>	305 participants	468 participants	306 participants	411 participants	300 participants	205 participants
<b>Online survey</b>	58 participants	-	42 participants	-	-	81 participants
<b>Focus groups</b>	23 participants across 3 groups: <ul style="list-style-type: none"> <li>• Rural residents</li> <li>• Urban residents</li> <li>• Bligh Park residents</li> </ul>	29 participants across 3 groups: <ul style="list-style-type: none"> <li>• Lower mountains</li> <li>• Mid-mountains</li> <li>• Upper mountains</li> </ul>	29 participants across 4 groups, one per Ward	32 participants across 4 groups: <ul style="list-style-type: none"> <li>• 3 X single unit dwellings</li> <li>• 1 X multi-unit dwellings</li> </ul>	21 participants across 3 groups: <ul style="list-style-type: none"> <li>• Single unit dwelling owners</li> <li>• Single unit dwelling renters</li> <li>• Multi-unit dwelling owners and renters</li> </ul>	54 participants across 6 groups: <ul style="list-style-type: none"> <li>• 2 X single unit dwelling owners and renters</li> <li>• 2 X CALD community members</li> <li>• 2 X multi-unit dwellers</li> </ul>
<b>Desktop research</b>	-	-	-	-	4 X online research 3 X telephone interviews	-

For a summary of each of these projects and their outcomes see the appendices.



# 3. REGIONAL KEY FINDINGS

The outcomes of all six research projects have been analysed to identify regional trends in relation to waste management values, attitudes and behaviour. These are provided below. Also provided are any findings from research undertaken in one or more LGAs which could provide insight into issues affecting, or with the potential to affect, others.

However, some caution must be exercised when reviewing some of these results due to participation bias and social desirability bias. That is, community members who agree to participate in these research projects would be expected to be more interested in the topic than those who did not agree to participate. Consequently, we would expect to hear less from those who do not value waste management and recycling. Further, participants may overstate their interest in and commitment to waste management and recycling as it would be uncomfortable to admit to not being concerned about the environment or doing what they have been taught they 'should'.

## 3.1. Demographics

Community demographics within the six LGAs were diverse and, although there were some similarities, no two LGA communities were strongly alike. Further, the focus of each Council's research interest was different which meant that the community cohorts the research data was being sought about were also different in each of the six research projects.

For Hawkesbury City Council, the focus of research was on understanding the waste management attitudes and behaviours of urban (those with three bins) and rural (those with two bins) residents, and those of residents of Bligh Park. Similarly, the Hills Shire Council also wished to understand research outcomes in terms of urban and rural residents.

For Blue Mountains City Council, a broader research approach was taken so that the general values, attitudes and lived experiences of their community could be understood. In this research project, the primary demographic focus was whether participants lived in the lower, middle or upper mountains

The demographic focus of the research the Holroyd City Council LGA was on single unit dwellers and multi-unit dwellers, while for Penrith City Council the research target was owners, renters and social housing tenants.

Finally, for Liverpool City Council research was focussed on collecting data from single-unit dwellers, multi-unit dwellers and residents from culturally and linguistically different backgrounds.

## 3.2. Demographic-specific findings

### 3.2.1. Social housing

One research project investigated the most effective ways to affect behaviour change of social housing tenants in relation to waste management. The desktop research undertaken identified the following:

- Well-researched and tailored engagement strategies, which respond to the priorities and interests of the specific community are necessary. Consistent messaging, across a range of communication



channels and in both narrative and visual forms, are needed and having communication validated by the community can assist in ensuring its effectiveness

- Behaviour change is only possible through long-term commitment and resources, with a focus on face-to-face personalised communication and regular, immediate positive reinforcement of correct behaviour
- Educating children about correct behaviour, through child care partners, can be effective way to start to changing behaviour
- Providing the right tools that make compliance easy, such as appropriate size bins to meet the needs of the household and graphics which explain their correct usage, are an important success factor.

### 3.2.2. Renters

A component of these waste research projects was to collect demographic data from participants, including housing status, although the demographic data collected was not identical across all projects. However, to a large extent we were able to identify participants who were single unit dwellers or multi-unit dwellers, and owners/buyers or renters. This demographic data allowed us to analyse survey outcomes to identify if there were any trends in relation to housing status.

In relation to renters, the most significant difference our analysis identified was the lack of information they had received from Council about waste management and, consequently, confusion about correct waste management behaviour and the waste services available to them. The outcomes of this research suggest that not being sent addressed mail from Council with information about waste management is a significant contributing factor to non-compliance by renters.

Lack of control over bin size and number, and not having access to all waste services, could also be considered contributing factors. Needing the owner's permission to be able to install a composting bin on the premises was identified by participants as one of the barriers to renters actively managing and reducing their waste.

### 3.2.3. Multi-unit dwellers

Contamination of recycling and waste non-compliance in multi-unit dwellings was an issue in a number of LGAs and research into multi-unit dwellers' attitudes towards, knowledge of and behaviour about waste management was undertaken. The purpose of this research was to identify the contributing factors to non-compliance.

The outcomes of those research projects that targetted multi-unit dwellers, identified the following:

- 👉 They were slightly less likely to use their recycling bins than single unit dwellers
- 👉 Although, most identified they had sufficient space in their homes to manage their waste and recycling, they recommended that future units be designed to allow for more than one household waste bin
- 👉 For those who did not regularly recycle the most commonly identified barriers were:
  - Recycling not being convenient
  - Uncertainty about what to do or not being able to understand waste management information
  - Not having a recycling bin or it being broken

- 👉 The vast majority identified that they were sure or very sure of knowing how to correctly dispose of items, although as detailed later in Section 3.4.1, there was a disparity between participants' confidence and their actual knowledge of correct waste disposal
- 👉 They were significantly less likely to comment on the incorrect waste management behaviour of other residents than single unit dwellers, because they were more concerned about 'keeping the peace' with their neighbours
- 👉 They were less aware of the available waste management services and consequently less likely to use them than single unit dwellers.

Qualitative data collected during our research also suggests that the non-compliance by others and lack of personal responsibility were also factors that affected multi-unit dwellers' motivation to actively and correctly manage their waste.

However, it is important to note that a significantly larger proportion of multi-unit dwellers rent than single unit dwellers and also identified that they did not get any information about council's waste management services, which suggests that the lack of information about correct waste management is a contributing factor to non-compliance.

### 3.2.4. Culturally and linguistically diverse residents

One research project particularly investigated whether culturally and linguistically diverse (CALD) residents had different attitudes towards, knowledge of and behaviour about waste management than those of non-CALD backgrounds. This research project also collected demographic data about participants' housing status, which allowed survey questions to be cross-tabulated to identify any significant trends.

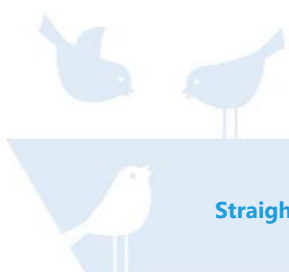
Clearly single unit dwellers (SUD) and multi-unit dwellers (MUD) can also be from a CALD background. In this LGA, slightly more MUD residents than SUD residents speak a language other than English at home, although the percentage of residents who were born outside of Australia was shown to be generally the same for SUD and MUD residents.

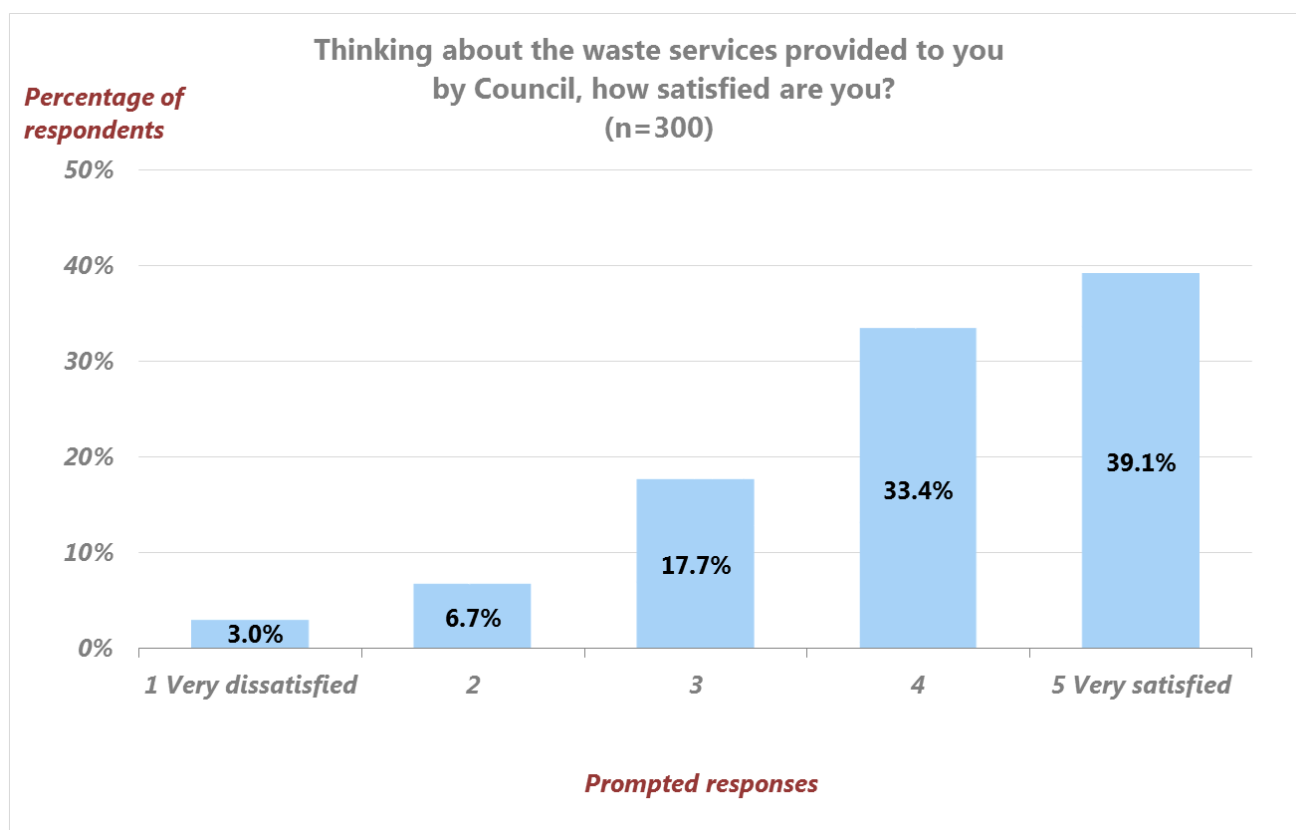
Analysing this demographic data demonstrated that more MUD residents were from CALD backgrounds than SUD residents. However, analysis against the outcomes of survey questions identify that being from a CALD background was not a contributing factor to non-compliance, renting was identified as the most significant contributing factor.

## 3.3. Service satisfaction levels

### 3.3.1. Regular waste collection services

Research participants in three LGAs were asked to rate their levels of satisfaction with their council's waste management services. In all three cases, satisfaction ratings for waste collection services were high or very high. These services were valued because of their efficiency, reliability and because they met householders' needs.





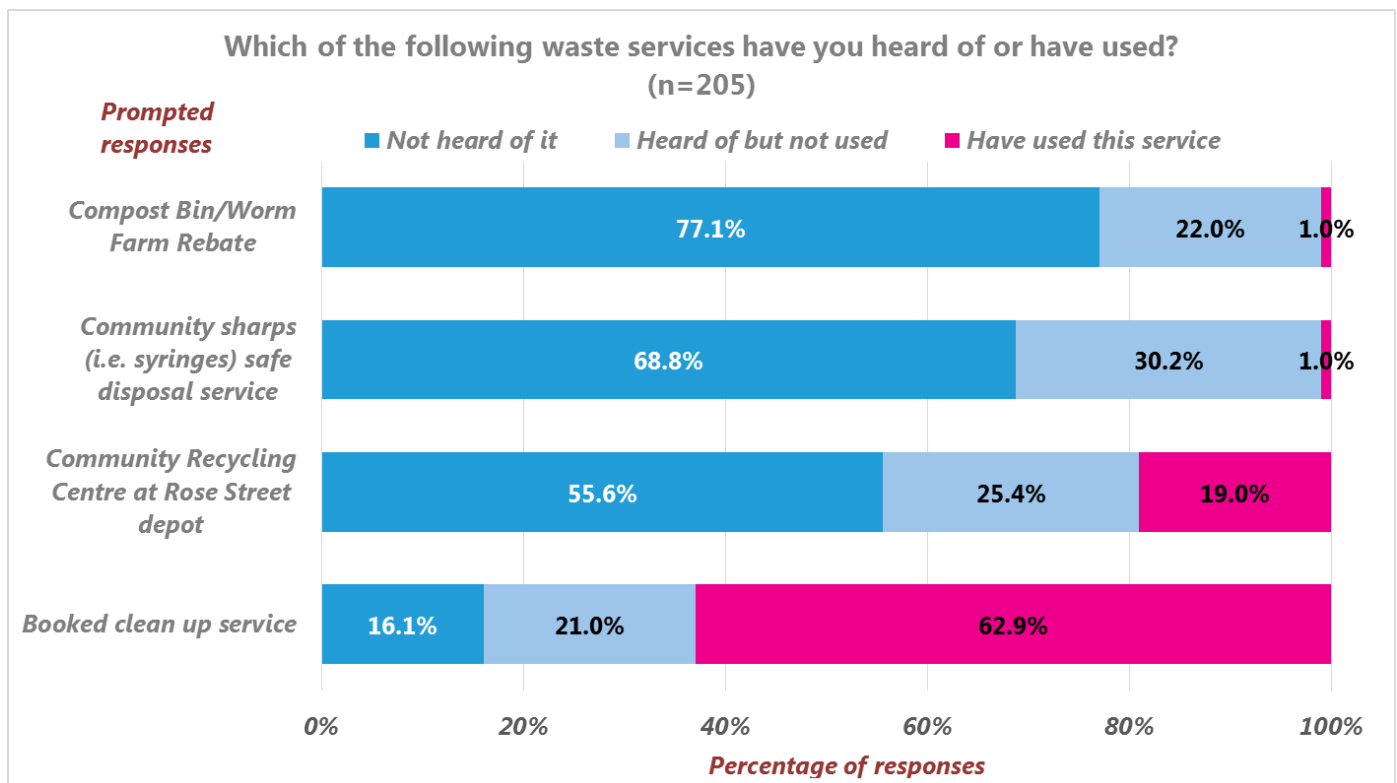
**Figure 1 - Sample results - respondent rating of satisfaction with waste services provided by Council**

The most common causes of dissatisfaction with waste collection services, and most commonly mentioned areas for improvement, were related to bin numbers and size, and to bin collection frequency. However, it is important to note that, when asked, a significant proportion of participants said no improvements to their services were necessary.

### 3.3.2. Periodic waste services

High to very high levels of satisfaction also applied to household clean up services. Household clean up services were generally well known by participants and had been regularly used by many, although not all, of them.

Satisfaction levels were also high for other clean-up services, such as e-waste and chemical clean ups. However, awareness about, and usage of, the additional waste services provided were not high as for household clean ups and a number of participants were unaware of the availability of these services and what they involve.



**Figure 2 - Sample results - respondent awareness and usage of waste services**

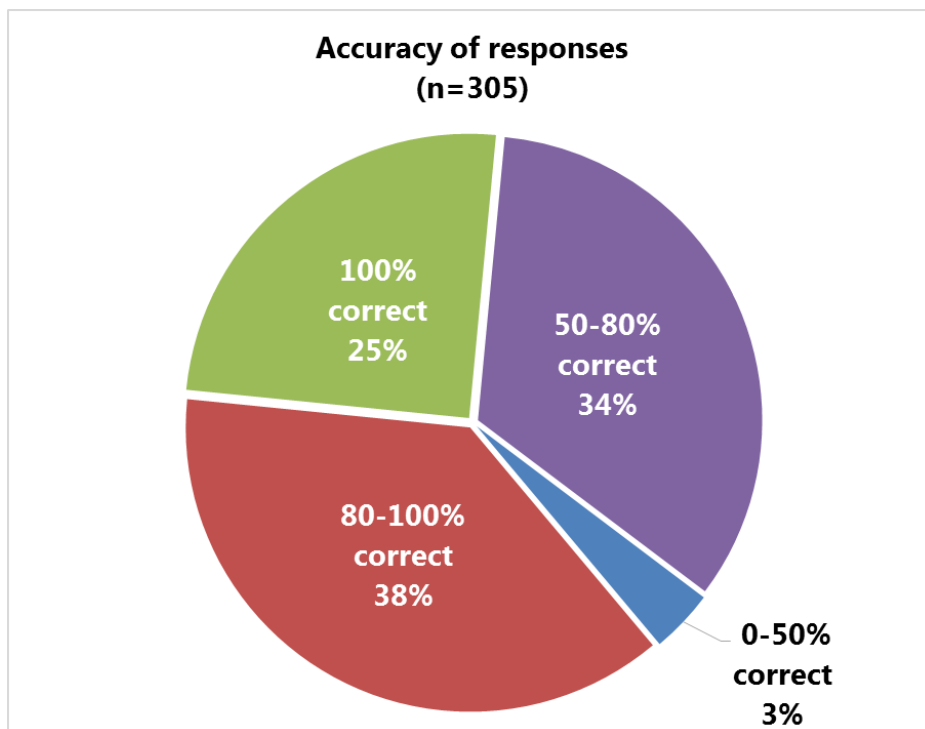
## 3.4. Waste and recycling knowledge and values

### 3.4.1. Knowledge

Of the participants who were asked to rate their knowledge of how to correctly dispose of waste and recycling, the vast majority identified themselves as being knowledgeable or very knowledgeable.

However, when asked to identify how they would dispose of specific items (which bin they would use), only a small percentage correctly disposed of all items. This indicates that participants' level of knowledge of correct waste behaviour was not as high as they believed. Items that caused most confusion were:

- 🗑 Meat trays
- 🗑 Aerosols
- 🗑 Plastic bags
- 🗑 Light bulbs
- 🗑 Household batteries
- 🗑 Paper towels and tissues
- 🗑 Products made of multiple components, such as pizza boxes, envelopes with windows.

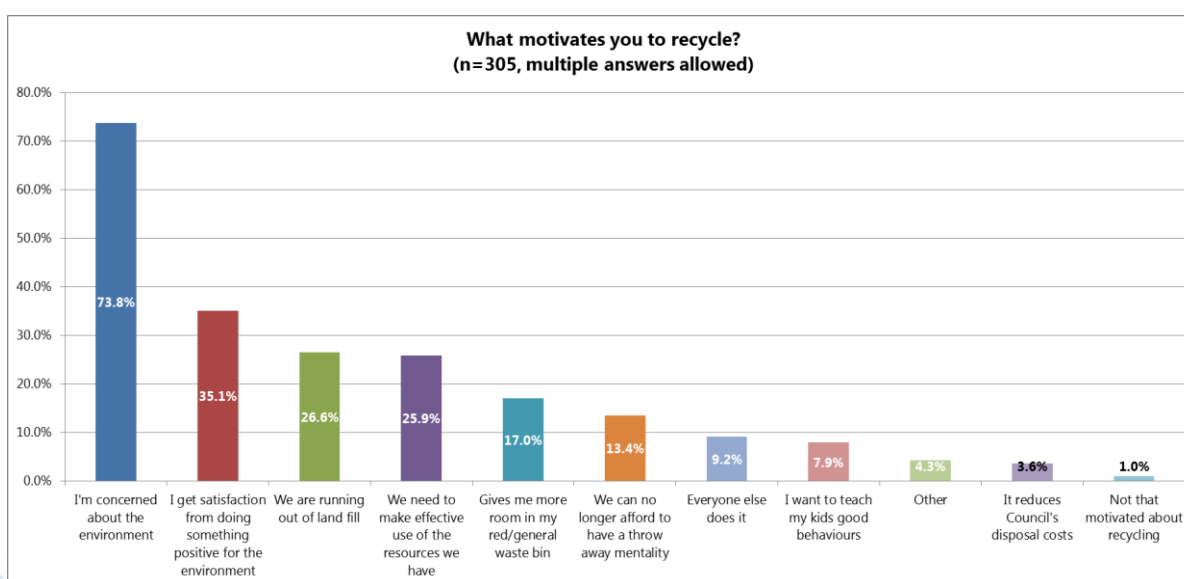


**Figure 3 - Sample results - accuracy of responses to waste disposal questions**

The outcomes of one research project suggests that this misalignment between perceived and actual knowledge is particularly the case with older residents who seem to rely on out-dated knowledge of what materials can and cannot be recycled. That is, they had not actively maintained the currency of their knowledge about recycling, even though these participants also indicated a strong commitment to correct waste disposal. This means that although committed to correctly managing their waste they were not recycling some recyclable.

### 3.4.2. Values

When asked, the vast majority of participants stated it was important to them to actively manage their waste and to recycle.



**Figure 4 - Sample results - respondents' motivation to recycle**

A concern for environment was the most commonly mentioned reason for being motivated to correctly dispose of waste; and social pressure/wanting to do the right thing was also commonly mentioned, as was a sense of pride.

However, although participants in the most part were committed to managing their waste correctly, only a very small proportion sought to actively reduce the amount of waste they generate. For the majority, the amount of waste they produce is perceived to be based on life stage and not something they are motivated to actively manage, particularly for parents with young children.

A small percentage of participants indicated that they did not recycle. A lack of time or a lack of interest were the most commonly mentioned barriers, although cynicism about whether items really were recycled and the effect it had on the environment were also raised.

## 3.5. Waste and recycling behaviours

### 3.5.1. Kerbside bins

#### Red bins

Generally speaking, participants who were asked, identified that they had sufficient space in their red waste bin to meet their needs. However, those with young children and with larger families identified their red bin capacity was insufficient. Bin sharing with neighbours and storing waste until next time were common ways to manage too much waste. However, for some participants having others use their bins was a concern.

#### Yellow bins

The vast majority of participants who were asked, stated that they used their recycling bins 'all the time' or 'regularly' to dispose of recyclable waste.

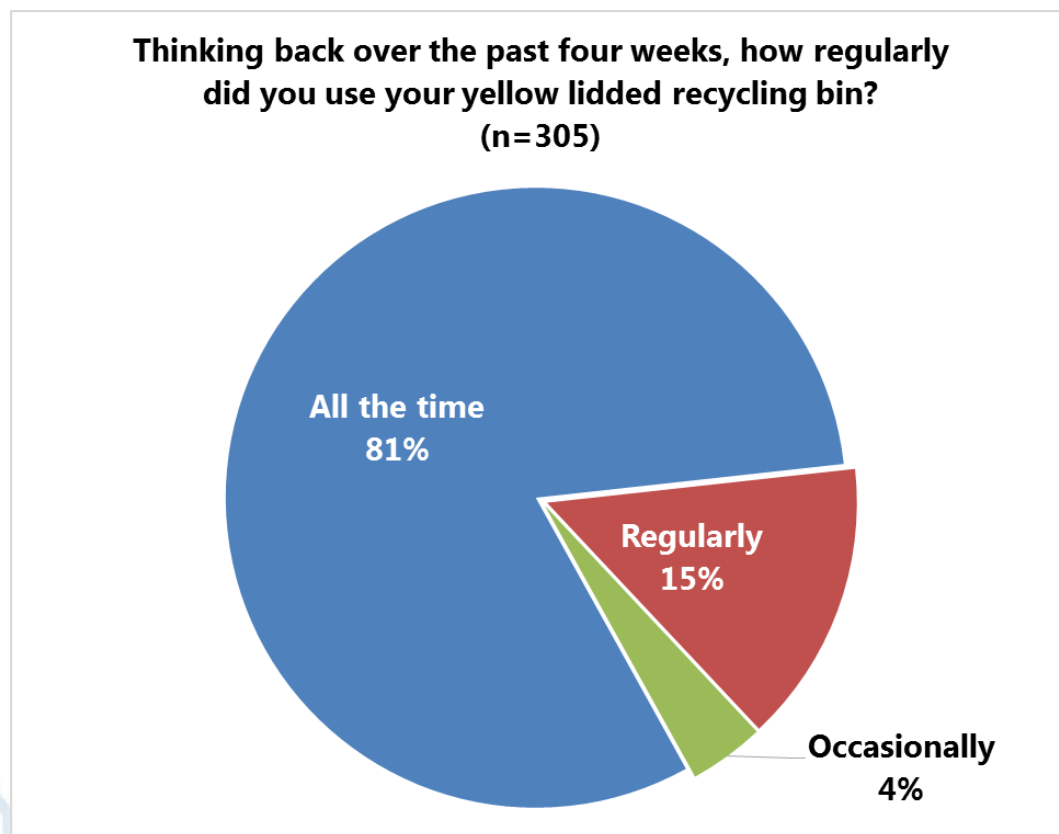


Figure 5 - Sample results - recent recycling frequency



Having a well-established arrangement in the home, which is understood by everyone, is an important part of ensuring recycling is just part of how the household works. In many case, residents had purchased smaller bins to use inside the home and to help make managing their waste and recycling as clean, neat and convenient as possible. This allowed them to separate waste from recyclables straight away, and to have somewhere to store recyclables in the home until they needed to be taken out to the larger recycling bin.

### Green bins

Those with green waste disposal bins also stated they used them regularly. For many, bin size was insufficient, especially in Spring and Summer, and bin sharing and storing of waste was needed to manage the excess.

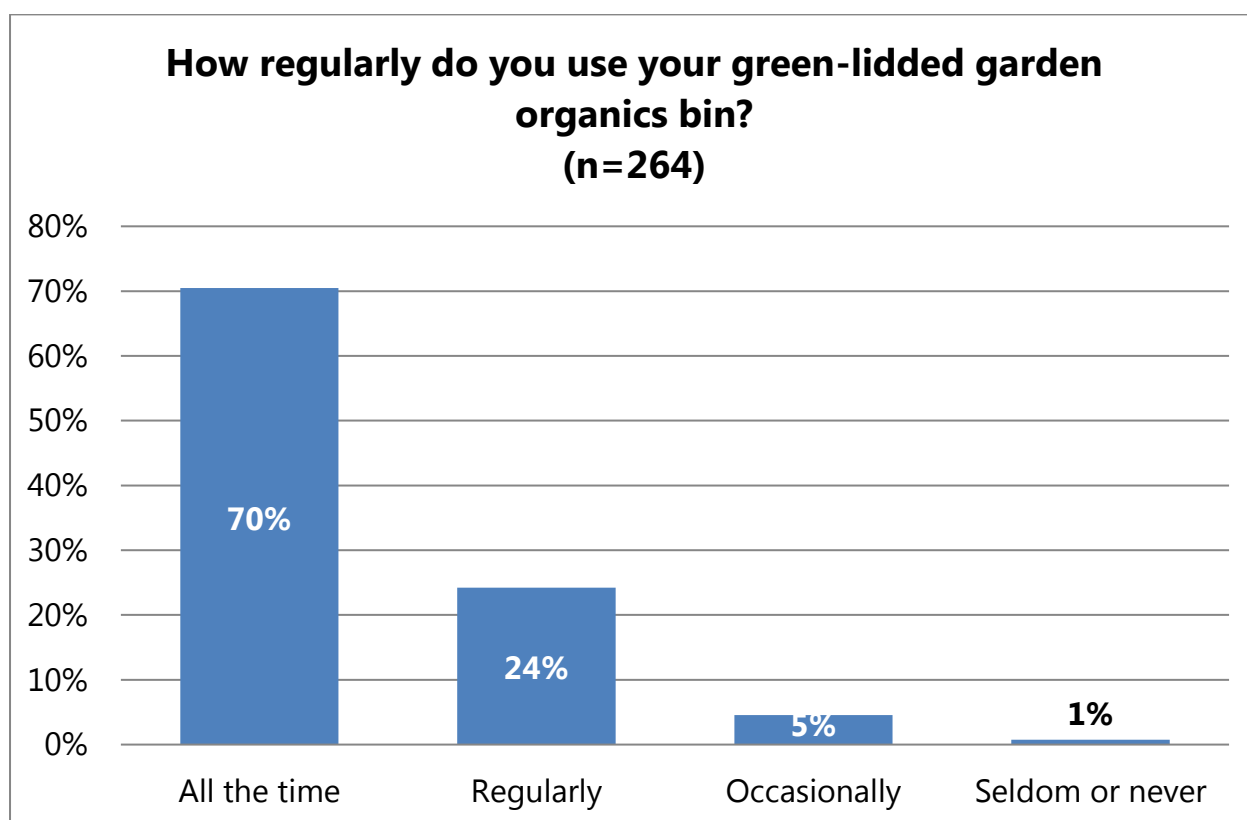


Figure 6 – Sample results - respondents' usage level of green-lidded garden organic bin

### 3.5.2. Home composting

A number of urban participants (identified as those with a green waste disposal bin) composted garden organic waste (although not kitchen waste), by using a compost heap or compost bin, although these were predominately older participants. The most common motivation for these participants was that it was good for the garden. For younger participants, a concern for the environment was the most commonly mentioned motivating factor.

For those who did not compost organic material, the most common barrier was that composting was too time consuming, although concerns about pests were also commonly mentioned. For almost all participants worm farming was considered too complicated and too time consuming.

For rural participants (identified as those without a green waste disposal bin), composting and mulching/spreading green waste across the property were the most common disposal methods, although

burning green waste was also mentioned, as was feeding it to the animals. A number of rural participants indicated they would like to have the choice of having a green waste disposal bin.

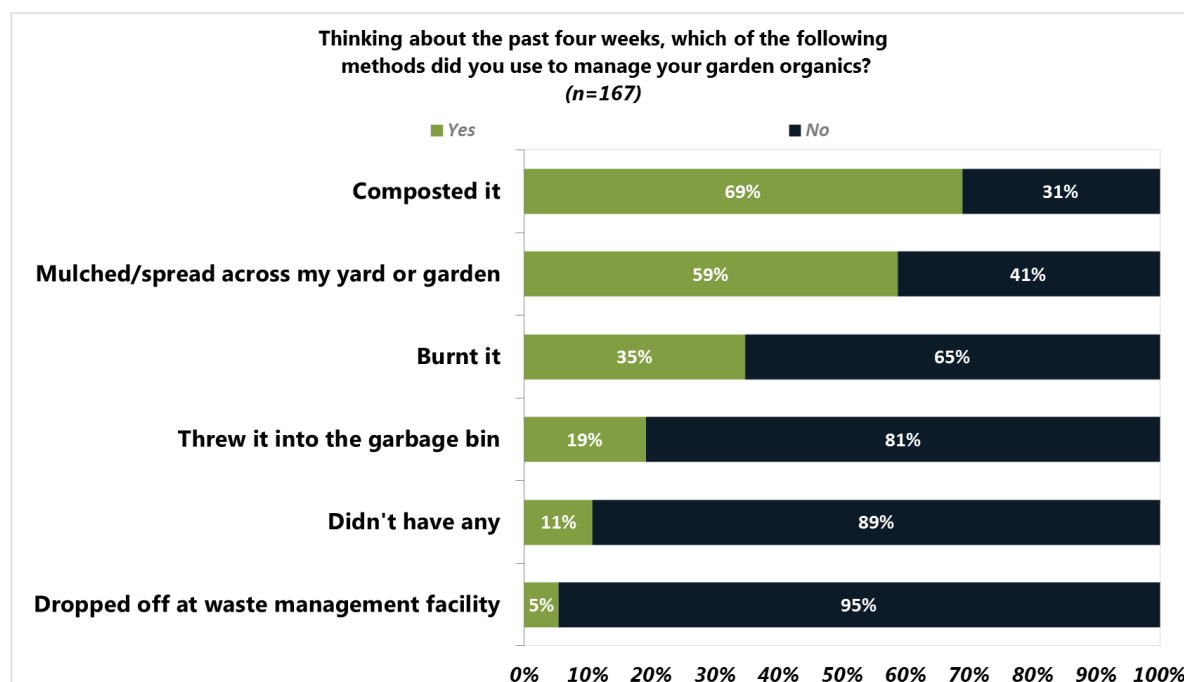


Figure 7 - Sample results - how respondents who do not have a green bin manage garden organics

### 3.5.3. Illegal dumping

Although feedback about illegal dumping was not actively sought in most of the research, it was independently identified by participants from a number of LGAs as an issue of concern to them. The most commonly identified driver for illegal dumping was tip fees which were considered to be too high and actively discouraging of correct waste disposal. Laziness and lack of community pride were also mentioned as potential drivers for this behaviour. However, it is important to note that no participant openly stated they had illegally dumped waste and so all participant comments should be considered to be speculative.

Reducing tip fees, or allowing residents a certain number of free visits to the tip, were identified as mechanisms to reduce illegal dumping. Allowing participants to choose to take waste to the trip for free, in lieu of a council clean-up service, was identified as a way to reduce not just illegal dumping, but wait times for clean-up services and council waste disposal costs.

## 3.6. Future waste services

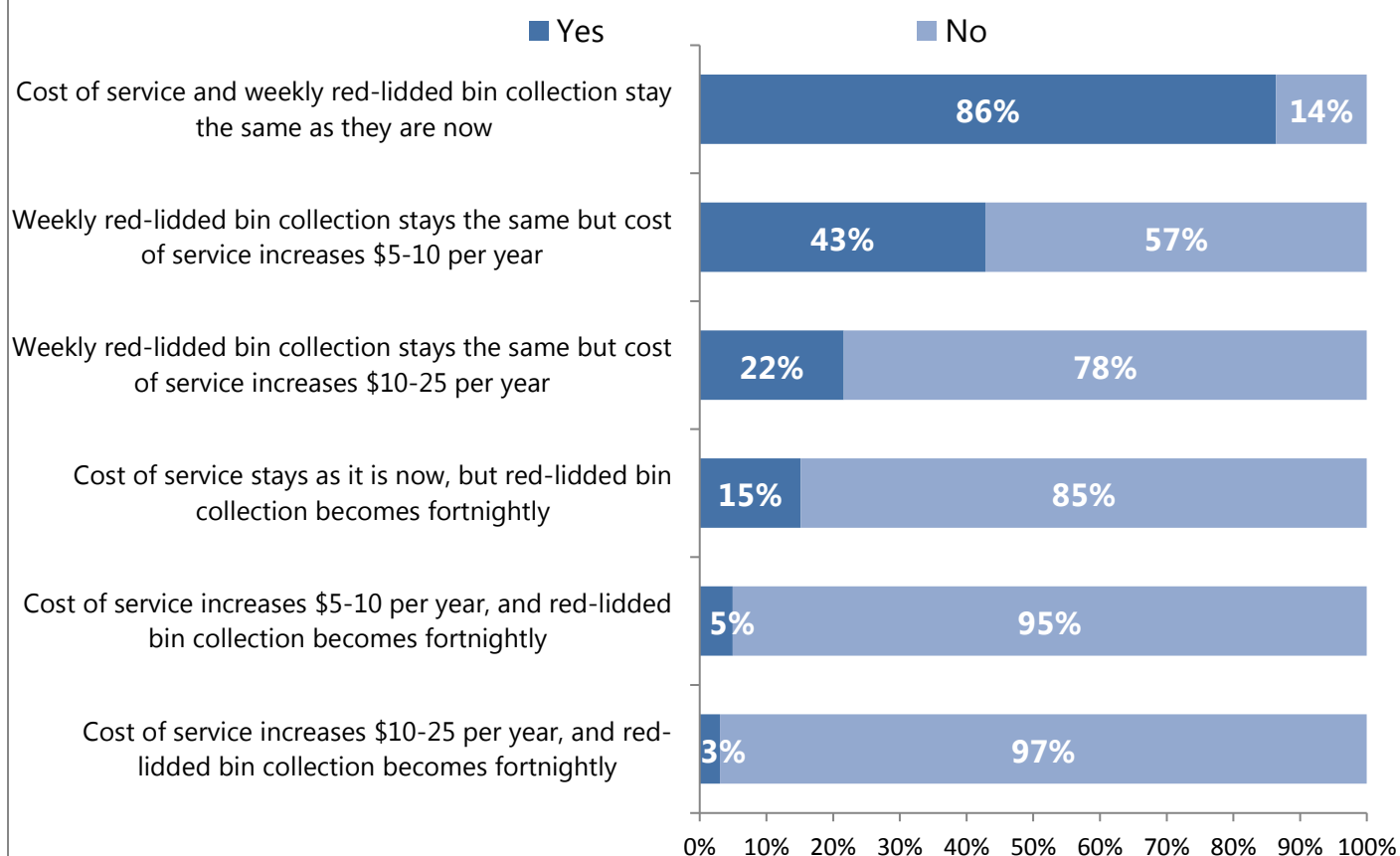
### 3.6.1. Kitchen organic waste collection

Feedback relating to the introduction of kitchen organic waste collection was gathered in two LGAs.

In one LGA the proposed scheme involved disposing of kitchen organics through the existing green waste disposal bin. In this LGA, the introduction was most strongly supported if there was no change to either red bin collection frequency or waste disposal charges.

A reduction in the collection of red bins from weekly to fortnightly significantly reduced the level of support for the proposal. Concerns about odour from waste, especially nappies and bathroom waste, and the amount of red bin waste generated over two weeks were the biggest factors in this significant reduction of support.

**Council is currently investigating a kitchen food waste composting service which would allow kitchen food waste to be disposed of in the green-lidded garden organics bin instead of the red-lidded bin. Would you support the introduction of this new service**



**Figure 8 – Sample results - the impact of cost and service on support of a kitchen food waste composting service**

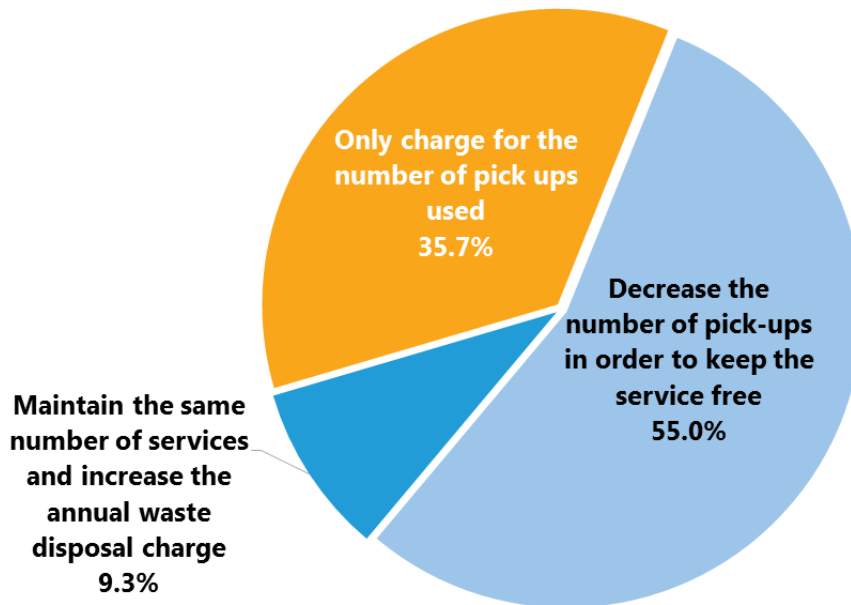
In the second LGA which did not currently have a green waste disposal bin, the proposal was for a new service that collected both garden and kitchen organics. For participants in this LGA an increase in costs and reduction in red bin capacity resulted in a lower level of support for this service than if there were no changes to either.

Consequently, it is possible to conclude that while there was support for the introduction of the service in both LGAs this support was conditional on existing waste collection services and service costs remaining unchanged.

### 3.6.2. Service vs. cost

When considering future waste management services, cost was by far the most important factor for participants. For example, the majority of participants in one LGA identified they would rather have a reduced number of council clean-ups in order to keep the service free than to have to pay to maintain current service levels.

**If Council needed to operate the clean up collection services on a user-pays basis to maintain the same number of collections per year, which of the following would be your preferred option?**  
(n=300)



**Figure 9 - Sample results - respondent attitudes to user pays options**

As indicated earlier, tip fees, which were considered too high, were identified as being a driver for illegal dumping, and having to pay for a new garden/kitchen organics waste bin reduced the level of support for the introduction of this service in one LGA.

## 3.7. Communication channels effectiveness and preferences

Although other communication channels were identified, by far the most preferred method of communication about waste services and waste management was written material in the mailbox, especially addressed mail. This result was consistent across all LGAs.

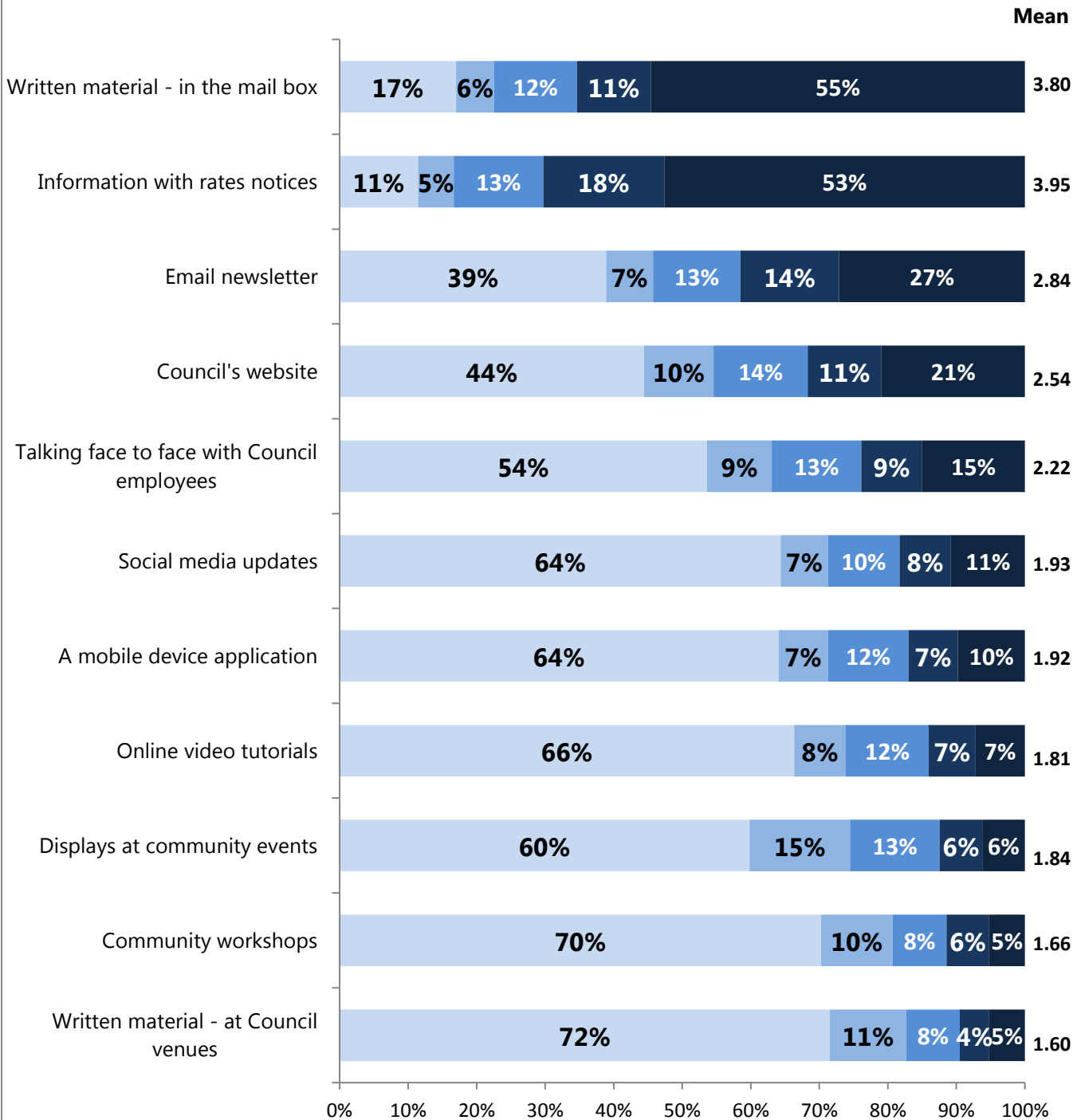
For younger participants, Council's websites were also identified as a preferred communication channel.

Providing information that is easy to use and understand about waste management is important, and resources like bin stickers showing what can and cannot be disposed of were identified as being effective. Periodically providing these resources is necessary to ensure resident knowledge of waste management remains current.

Similarly, clearly identifying when written material contains new rules about waste management, and recycling, is an important way to ensure residents read the material and their waste management knowledge remains current.

**Which of the following would be your preferred way to find out more about Council's waste management and waste reduction practices?  
(n=306)**

1 Never use this information source 2 3 4 5 Always use if available



**Figure 10 – Sample results - preference for Council communication on waste management**

## 4. CONCLUSION

The research undertaken during this suite of projects was tailored to meet the specific needs of each of the six participating councils. However, analysis of the research outcomes did identify a number of regional trends. These trends suggest that in some, if not all, cases a regional response to managing issues could be effective.

Although the specific demographic make-up of each LGA is different, the data collected through this suite of research projects has clearly demonstrated that the underlying motivating factors for, and barriers to, correct waste management behaviour are generally consistent across all demographic groups. When data did demonstrate systemic barriers to compliance, such as is the case for renters, the findings can be applied to all LGAs.

Similarly, although individual research projects sought feedback about specific issues which were relevant to one LGA, the outcomes of the research can also provide insights relevant to all LGAs. This is particularly the case in relation to services that are currently available in some LGAs but not others, such as the collect of kitchen organics.

