TRUSCOTT
RESEARCH

197 Payneham Road
St Peters SA 5069
Phone (08) 8363 9399
Mobile 0416 020 555
Fax (08) 8363 1076
maggie@
truscottresearch.com.au

# ZERO WASTE SA

# FOOD WASTE PILOT SURVEY

# FOLLOW UP WITH CONTINUING SYSTEM USERS 2010

# MARKET RESEARCH REPORT

**AUGUST 2010**

N&M T Pty Ltd
ACN 082 514 967 atf
N&M Truscott Trust t/a
**TRUSCOTT RESEARCH**

# CONTENTS

# INTRODUCTION

Truscott Research was commissioned by Zero Waste SA to undertake a study of residents in areas which had been included in a pilot of two food waste systems - the **Bio Basket** and the **Kitchen Caddy** – which are designed to reduce the amount of waste going to landfill.

The trial involves householders separating food scraps out of the residual waste stream so that they are composted rather than contributing to landfill. The Cities of **Whyalla** and **Charles Sturt** opted to trial both systems.

All other councils trialled the Bio Basket system. These were:

- **Adelaide** (Adelaide CBD, North Adelaide)
- **Campbelltown** (Athelstone and Hectorville)
- **Light** (Roseworthy, Hewett)
- **Mallala** (Mallala, Two Wells, Dublin)
- **Mitcham** (Pasadena, Belair, Glenalta)
- **Norwood, Payneham & St Peters** (St Peters and Kensington)
- **Wattle Range** (Penola, Millicent etc.)
- **West Torrens** (Marleston, Mile End, Netley, Richmond, Thebarton).

In the **Bio Basket System**, food scraps are put into compostable bags fitted into the Bio Basket, which is designed to sit on a kitchen bench. When full, or every 2 – 3 days, the bags are placed in the green organics bin.

The **Kitchen Caddy** is a simple lidded bin with no bags or ventilation. The Caddy is emptied directly into the green organics bin.

Some areas included in the trial (both NPSP areas, Hectorville, Mallala and one of the Wattle Range areas) had fortnightly residual waste collection. In all areas, green organics bins were collected fortnightly.

The original survey was carried out 4 to 6 months after the commencement of the pilot (individual councils introduced the systems from December 2008 to February 2009), with 4260 interviews taking place between May and July 2009.

This document reports on **a follow up survey** which was conducted in July 2010 – approximately 18 months after the systems were introduced.

This survey targeted individuals who had been interviewed in 2009 and who, at the time of interview, were still using the food waste system they had been issued.

A questionnaire was developed which was designed to:

- measure continuing use of the food waste system;
- determine patterns of use with particular reference to types of waste and disposal methods;
- identify triggers for initial and continued use.

In addition to this survey, a number of other methods are being used to evaluate the trial.

# EXECUTIVE SUMMARY

## THE SAMPLE

- 758 residents of the 15 trial areas were interviewed approximately 18 months after the commencement of the pilot. The 13 Bio Basket areas (652 interviews) and the two Kitchen Caddy areas (106) were all represented in line with their respective sizes

- It should be noted that the people targeted for interview second time around were NOT a simple cross section of the population of the survey areas. They were selected on the basis of being continuing users of the food waste system at the time of interview in 2009.

- Apart from tending to be a little older, the demographic profile of this year's sample was similar to the original sample.

## CONTINUED USE

- 80% of respondents were still using the food waste system a year after the original survey.

- Assuming the people interviewed in this follow up survey are typical of continuing users interviewed last time, we can calculate that **58% of the general population in the trial areas would be still using the system**

- Extrapolated rates of continuing use were markedly higher in Bio Basket areas – 61% compared with 43% in the Kitchen Caddy areas.

- As already reported there was one fifth of households (20%) with no current users. However in 68% of cases, it was reported that all household members use the food waste system.

## MOTIVATIONS TO USE FOOD WASTE SYSTEMS

- Original triggers to use the system and ongoing motivations were similar:

| INITIAL TRIGGERS | | ONGOING MOTIVATIONS | |
|---|---|---|---|
| Because Council provided the container | 48% | Ease of use | 38% |
| Good environmental initiative | 42% | Just wanted to help environment | 52% |
| Clean, efficient way to dispose of food waste | 18% | Just formed a habit | 21% |

## REASONS FOR DISCONTINUING USE

- 40% had odour concerns or problems with insects/vermin etc. This was a concern for 33% of those in Bio Basket areas and 68% of former Kitchen Caddy users.

- A total of 27% reported that it was simply inconvenient or they were too busy/too lazy.

- There were also 21% who prefer to divert waste to compost/feed chooks etc.

- 21% of former Bio Basket users reported that they stopped using the system when they ran out of bags.

- 11% reported that the container had broken and this was largely confined to former Bio Basket users [13%].

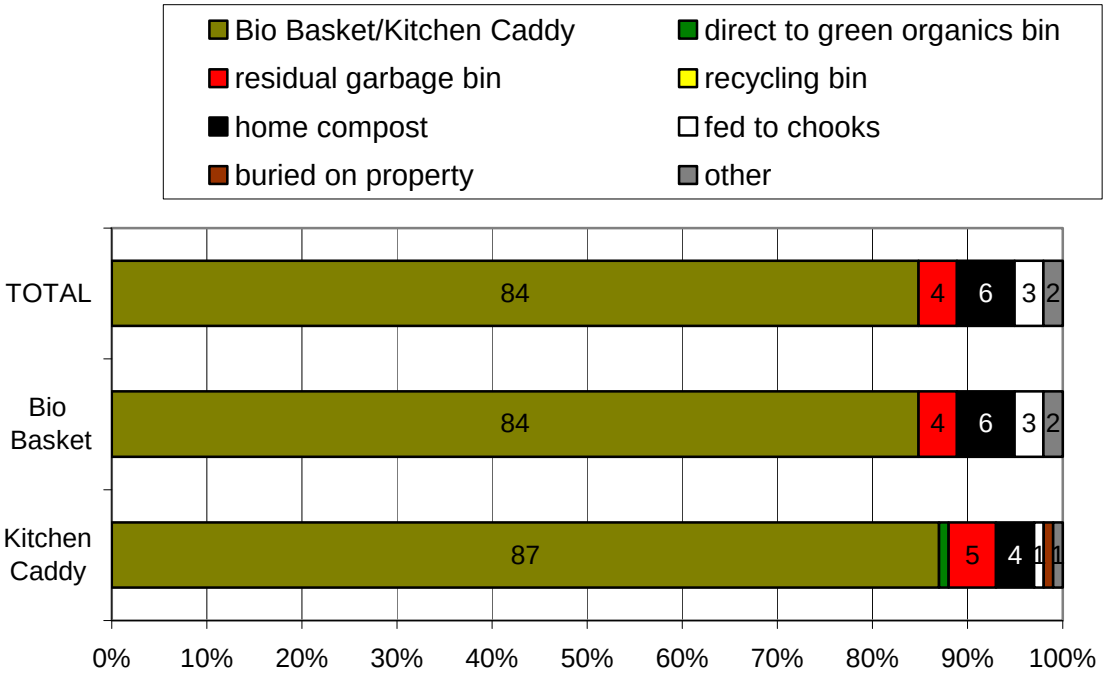
- 55% of respondents felt it likely they would resume using the system if these problems were solved, including 28% who considered it very likely.

## PATTERNS OF USE

- People still using the food waste system at the time of this second survey were asked about their usage patterns.

- They claimed that 84% of their food waste was going into the system.

**PLACEMENT OF FOOD WASTE**
**- average proportions**




- In the vast majority of cases, all waste from the container was said to go into the green organics bin [88%].

- Three quarters [75%] of respondents using the food waste system at time of interview indicated that the volume of food waste that they were putting in the Bio Basket / Kitchen Caddy was the same as 12 months previously. 16% believed that the volume had increased over this period, while 9% indicated it had decreased.

## WASTE TYPES

- Awareness of what can go in the food waste systems was very high for most waste categories except hair. This was also the only waste category that fewer than half put in the system. Awareness and use was almost universal for fruit and veg scraps.

- Fish meat and bones were the only items that significant proportions of respondents were reluctant to put in the system.

| | Aware | Put in system | Reluctant to put in |
|---|---|---|---|
| Fruit, vegetable scraps | <100% | 92% | 2% |
| Bread, cereals | 95% | 72% | 2% |
| Eggshells | 95% | 80% | 1% |
| Leftovers – mixed food scraps, processed food etc | 95% | 81% | 4% |
| Tea bags, coffee grounds | 93% | 79% | 2% |
| Meat scraps | 92% | 74% | 12% |
| Bones | 87% | 70% | 9% |
| Dairy - yoghurt, cheese | 84% | 59% | 7% |
| Tissues, paper towels | 84% | 68% | 5% |
| Fish/seafood | 83% | 58% | 18% |
| Hair | 61% | 34% | 4% |

- 15% indicated that they had expanded the repertoire of food waste they were putting in the Bio Basket / Kitchen Caddy:

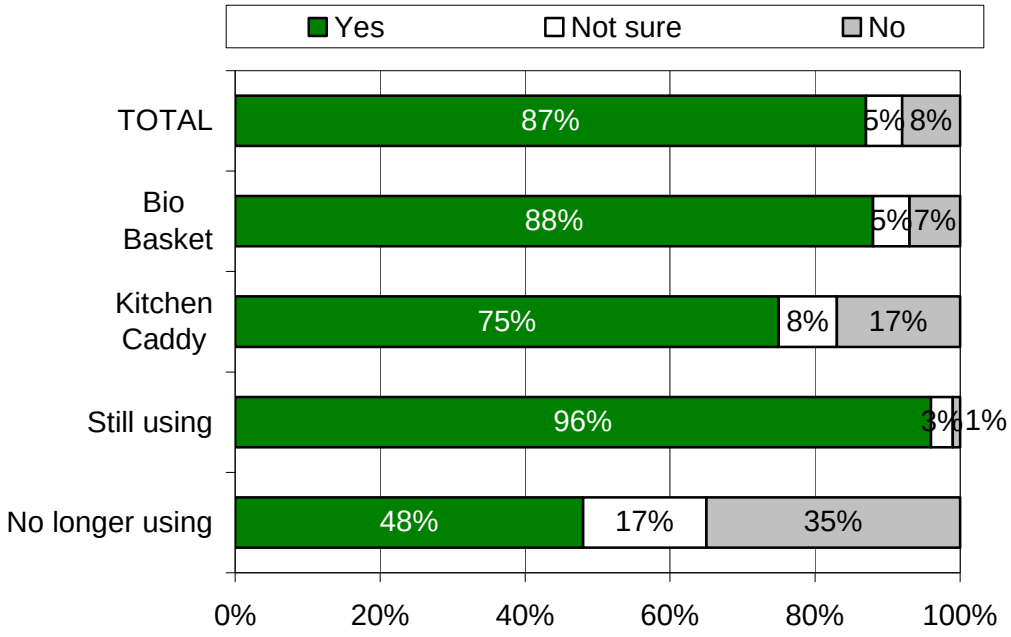
- 23% nominated one or more type of waste [mainly hair, tissues] that they stated they will start putting in the system in future.

## FUTURE USE

- 87% of all respondents indicated they would use their respective food waste system on an on-going basis if it was introduced as part of Council's suite of waste services.

- The response from the Bio Basket segment was significantly more favourable than the Kitchen Caddy segment [88% and 75% respectively saying yes].

**WOULD YOU USE FOOD WASTE SYSTEM IF PART OF SUITE OF WASTE SERVICES?**




- When asked to indicate if they would recommend the system to others, replies were very similar to the previous question, with 88% responding in the affirmative.

# SAMPLE CHARACTERISTICS (Qs 1, 21- 29)

A total of 758 residents were interviewed across the 15 trial areas. The survey was carried out approximately 18 months after the commencement of the pilot (individual councils introduced the systems from December 2008 to February 2009), with all 758 interviews taking place in July 2010.

In the original survey [conducted in 2009, approximately 12 months previously], households had been selected to be a random representation of the trial areas.

In the 2010 survey, sampling targeted only households that had participated in the 2009 survey and that were, at the time of the original interview, using the food waste system they had been issued with. Individual sample sizes are listed in the accompanying table.

| Area | Sample size achieved |
|---|---|
| Light | 51 |
| Mallala ** | 52 |
| Wattle Range – fortnightly * | 51 |
| Wattle Range - weekly | 55 |
| Whyalla - Bio Basket | 49 |
| Whyalla - Kitchen Caddy | 53 |
| C Sturt - Kitchen Caddy | 53 |
| C Sturt - Bio Basket | 52 |
| Adelaide | 54 |
| Campbelltown – Hectorville * | 42 |
| Campbelltown - Athelstone | 42 |
| Mitcham | 50 |
| NPSP – Kensington * | 49 |
| NPSP - St Peters * | 51 |
| West Torrens | 54 |
| TOTAL | 758 |

Areas marked (*) in the preceding table were characterised by fortnightly residual waste collection. In Mallala (**), the size of the bin was effectively halved at the start of the trial.

In all areas, green organics bins were collected fortnightly.

652 respondents were in the **Bio Basket** trial area, with 106 in the **Kitchen Caddy** trial area.

Campbelltown terminated the trial towards the end of the initial interviewing period (19 May 2009) which may have affected responses to questions about future use of the Bio Basket system.

In the 2010 survey, all 758 interviews were conducted by phone.

The questionnaire included a number of questions about the dwelling and its occupants. These are discussed in the following pages.

**A total of 613 respondents [81% of the entire sample] indicated that they would be willing to participate in future research on this topic. This included at least 33 people from each of the 15 trial areas.**

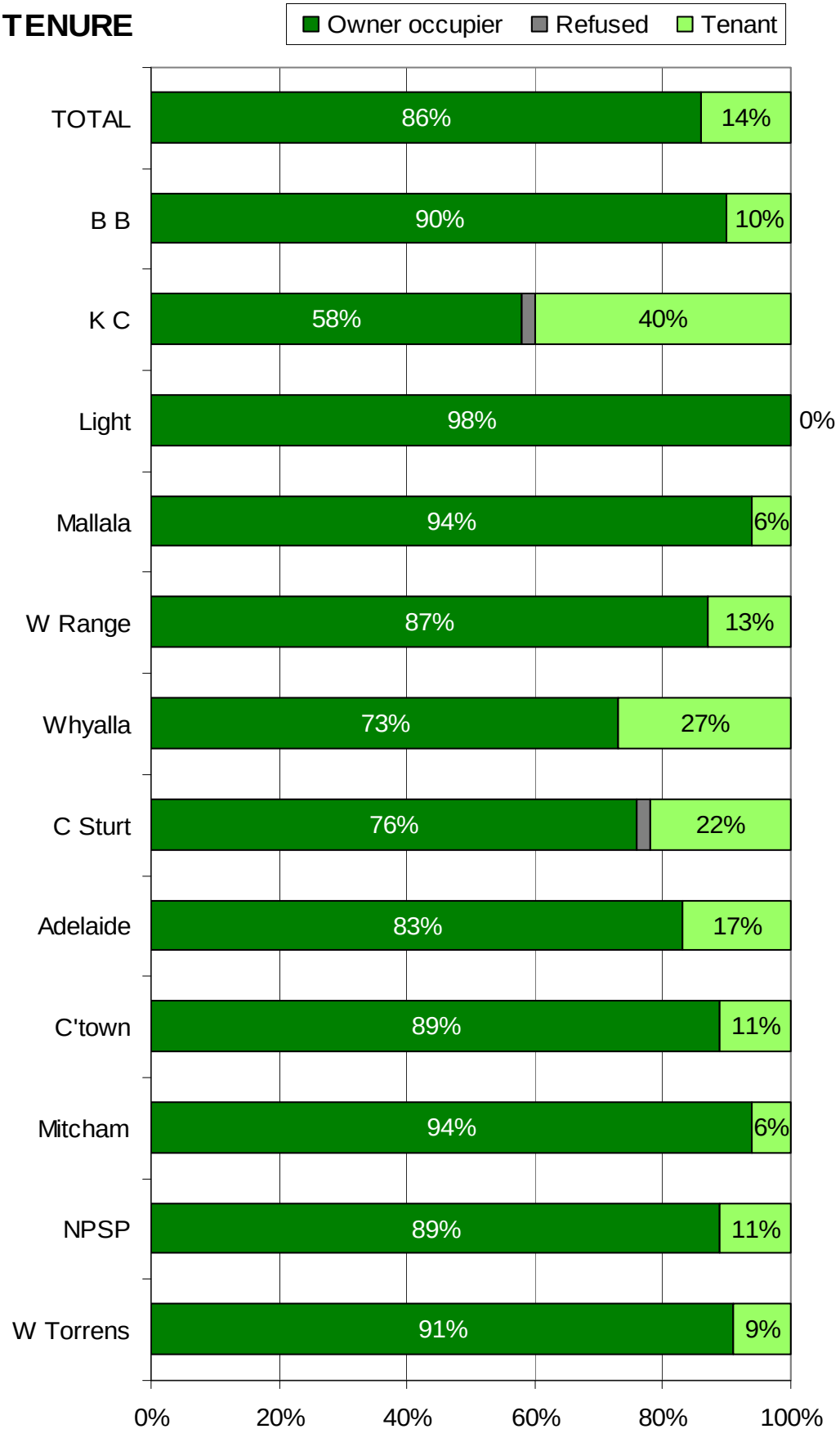
Overall, 86% of respondents owned their home, while 14% were renting. However, as shown in the chart on the next page, this varied considerably by area.

Light and Mitcham were characterised by very high owner occupancy (98% and 94% respectively).

In contrast, 27% of those interviewed in the Whyalla sample were tenants. A high concentration of tenants was also recorded in Charles Sturt (22%)

**Kitchen Caddy** areas collectively had 40% who were renting their homes, while the corresponding proportion in **Bio Basket** areas was 10%.

## TENURE


Owner occupier
Refused
Tenant
TOTAL
86%
14%
B B
90%
10%
K C
58%
40%
Light
98%
0%
Mallala
94%
6%
W Range
87%
13%
Whyalla
73%
27%
C Sturt
76%
22%
Adelaide
83%
17%
C'town
89%
11%
Mitcham
94%
6%
NPSP
89%
11%
W Torrens
91%
9%
0%
20%
40%
60%
80%
100%

Overall, 79% of respondents live in a traditional detached house, while 8% live in an older style maisonette (such as those typically constructed by the SA Housing Trust) – that is, a home with a reasonably large block. Together, these comprise 87% of the sample.

The remainder were in homes with small blocks - units, flats or courtyard homes. There were also some rural living allotments in the country areas.

In the **Bio Basket** areas, traditional detached housing was pre-eminent – accounting for 84% of this sample.

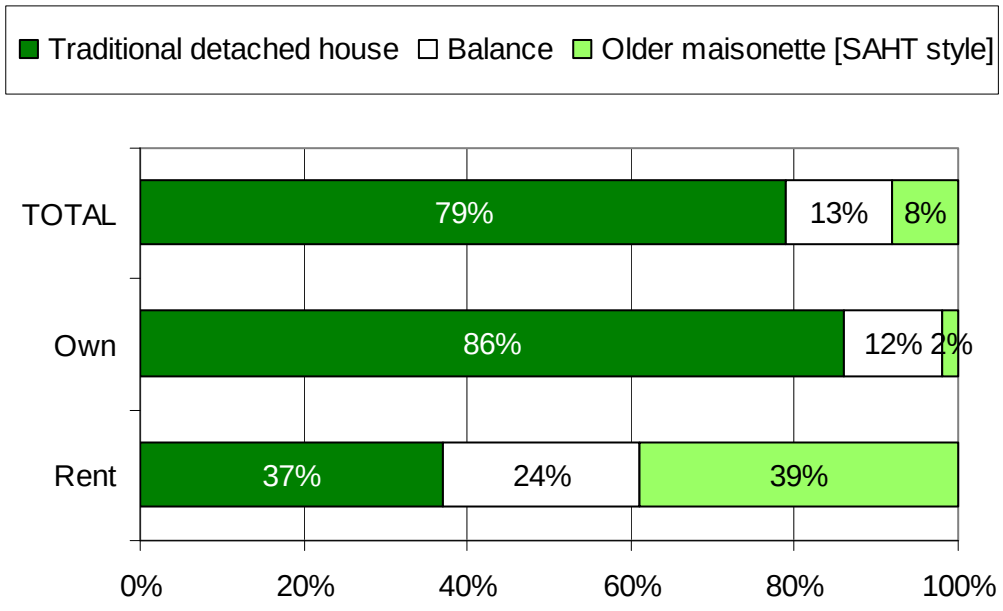
However, in the **Kitchen Caddy** areas, there was more diversity, with SAHT style housing making up 39% of the total.

In all areas except Kensington (where courtyard homes, units, flats and townhouses constituted 38% of the sample), large blocks were the norm.

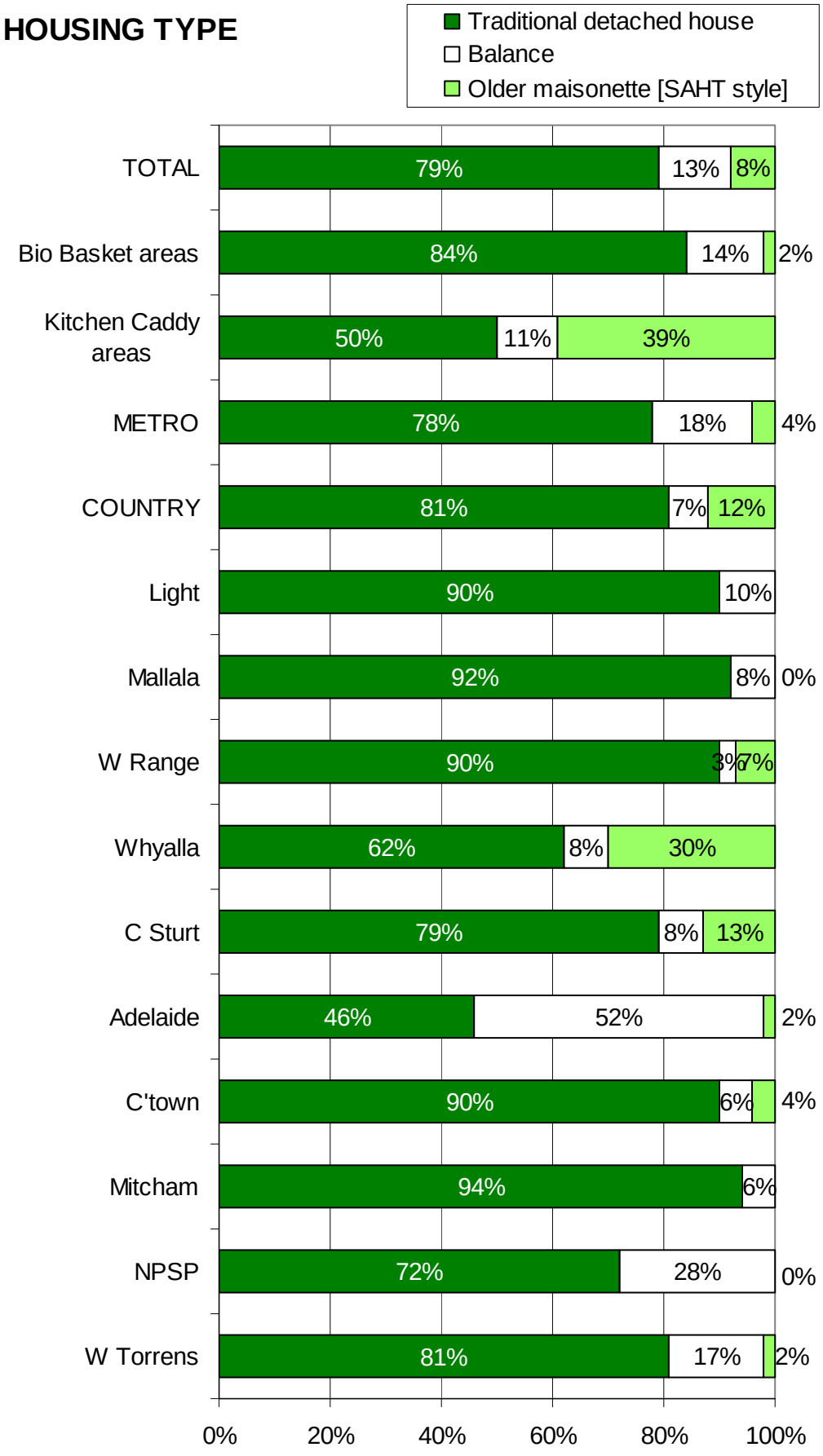
The chart on the following page gives the area breakdown.

It is also worth noting that owner occupiers were predominantly in traditional detached dwellings with tenants in a more diverse mix of housing types. This is illustrated below.

## HOUSING TYPE



## HOUSING TYPE



In each of the households in the sample, the person selected for interview was the person identified as the one who is most involved with dealing with the household's waste and recycling.

It should be noted that because of this, the sample is not intended to be representative of the entire population of the trial area.

The following table details the gender and age profile of respondents. Overall, 71% were female. The male/female balance was similar across most council areas, with the male component lowest in Wattle Range (21%).

67% of respondents were at least 50 years of age. The age profile of this sample was older than in the original survey (58% aged 50+).

**Gender and age profile**: (n=758)

| | |
|---|---|
| **GENDER** | |
| Males | 29% |
| Females | 71% |
| **AGE GROUP** | |
| Up to 29 | 3% |
| 30 to 39 | 11% |
| 40 to 49 | 19% |
| 50 to 59 | 21% |
| 60 to 69 | 21% |
| 70 and over | 25% |

Survey participants were also asked to indicate their household type. Families (38%) and couples (34%) were more numerous than singles (28%).

**Household type**

| | |
|---|---|
| **Families** | **38%** |
| Couple with children | 35% |
| Single parent with children | 3% |
| **Couples** | **34%** |
| Young couple, no children | 2% |
| Older couple, no children at home | 32% |
| **Singles** | **28%** |
| Lone person household | 22% |
| Group household of un/related adults | 6% |

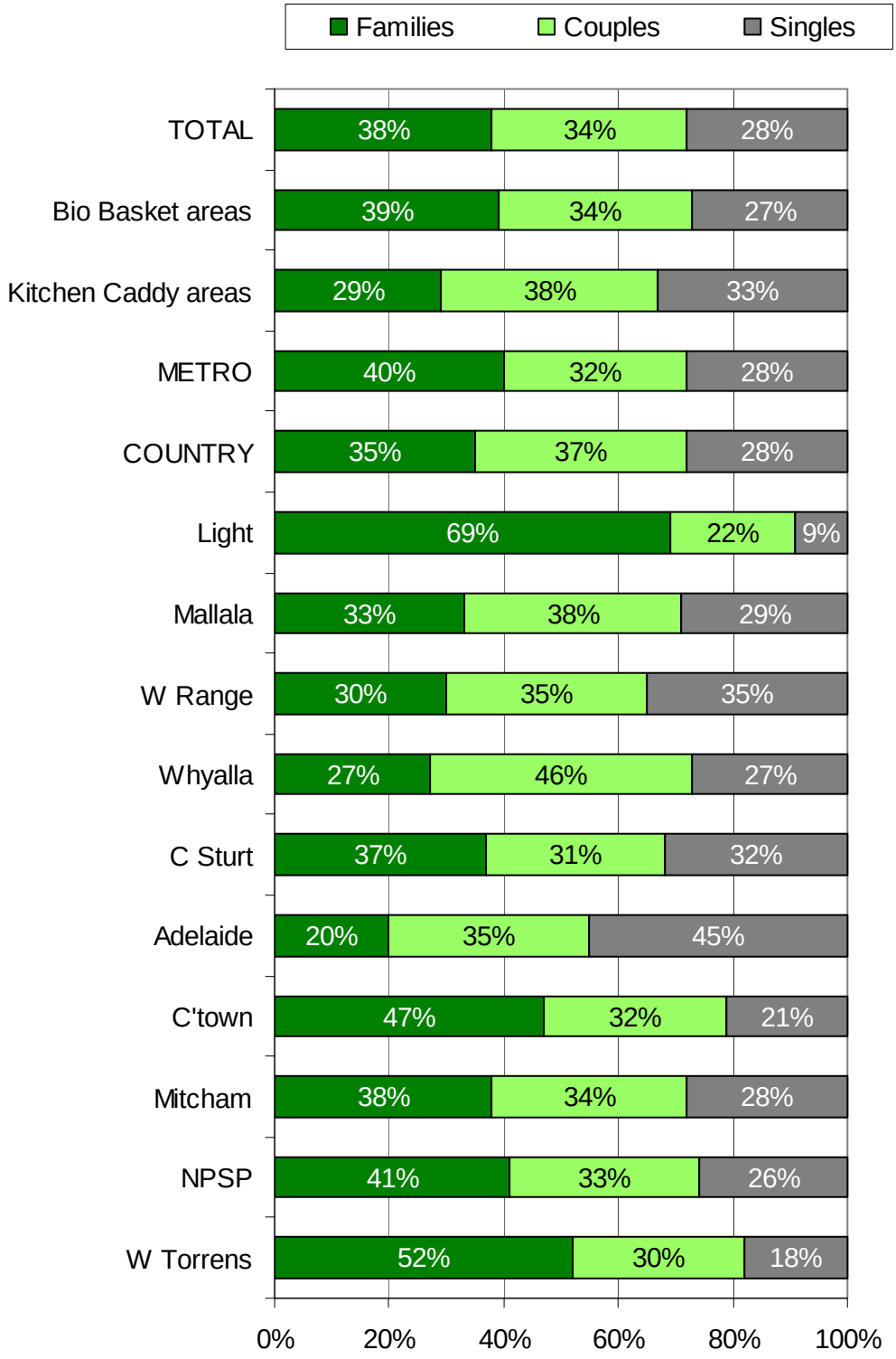
As shown in the chart overleaf, Light stood out as having the highest proportion of families (69%).

Families were the predominant family type in most council areas and for the **Bio Basket** areas collectively.

Exceptions were Whyalla [46% couples] and Adelaide [45% singles].

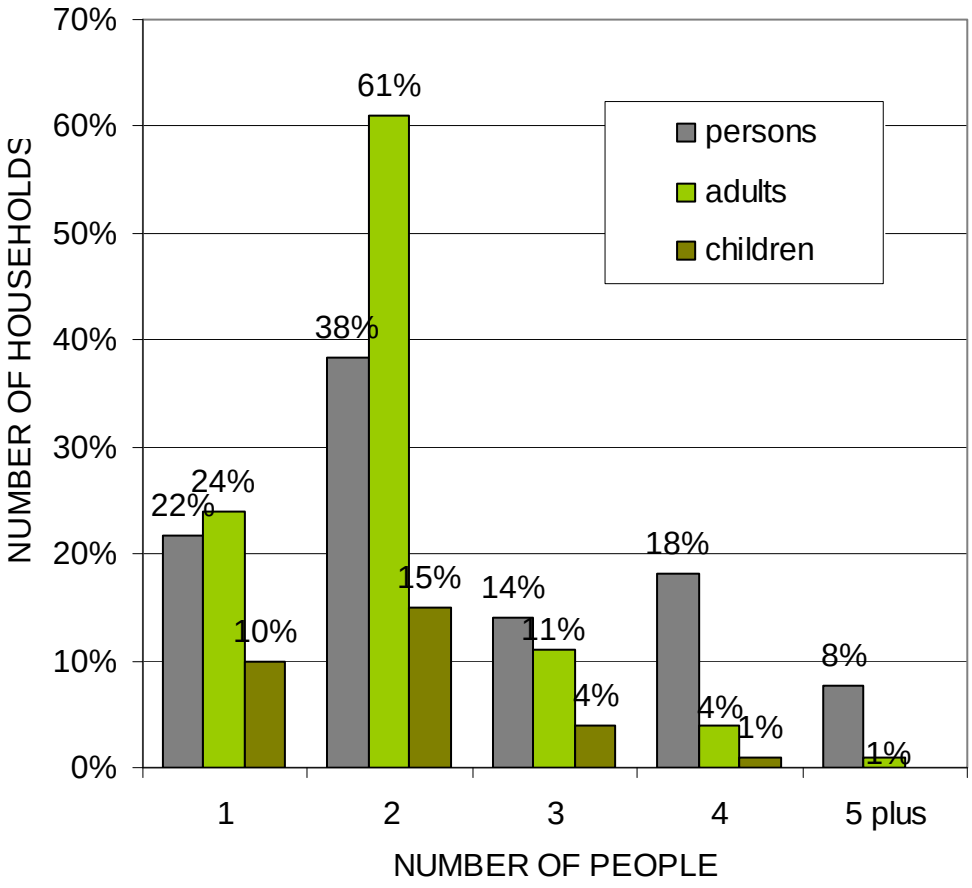
In the **Kitchen Caddy** areas, families (29%) wee outnumbered by couples (38%) and singles (33%).

## HOUSEHOLD TYPE - SUMMARY

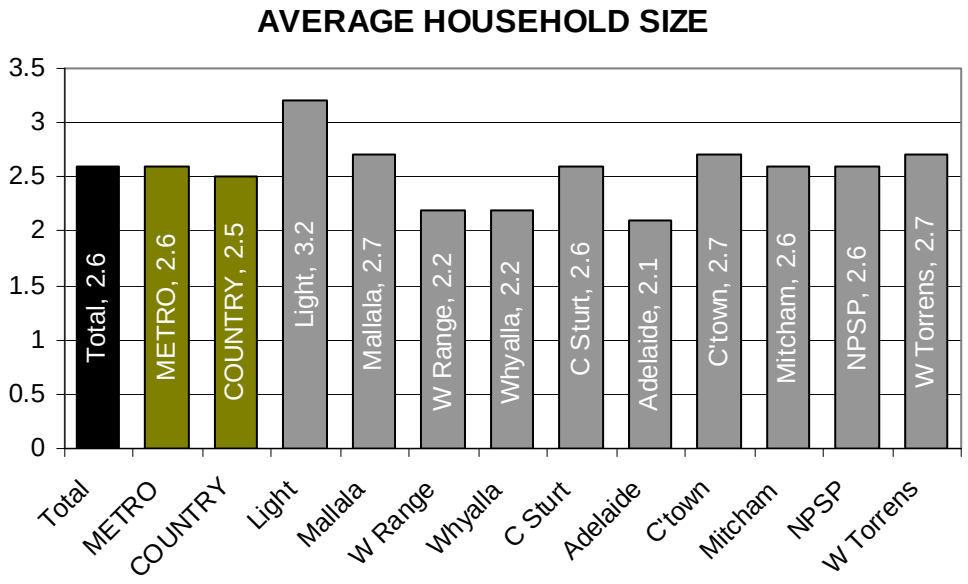


The number of people living in each household ranged from 1 to 7, with a mean of 2.6. The vast majority of households (92%) contained fewer than five people. As would be expected, older people and those living in smaller types of dwelling tended to have fewer people in the household.

## NUMBER OF PEOPLE IN HOUSEHOLD



The following chart compares average household sizes across the ten council areas. This ranged from 3.2 in Light to 2.1 in Adelaide and tends to reflect household type.



# COMMENTARY

## Continued use of food waste system (Q 3)

All respondents were asked if they were still using the food waste system. The vast majority of these - 80% - answered in the affirmative – in other words, they were **still using** it a year after the original survey.

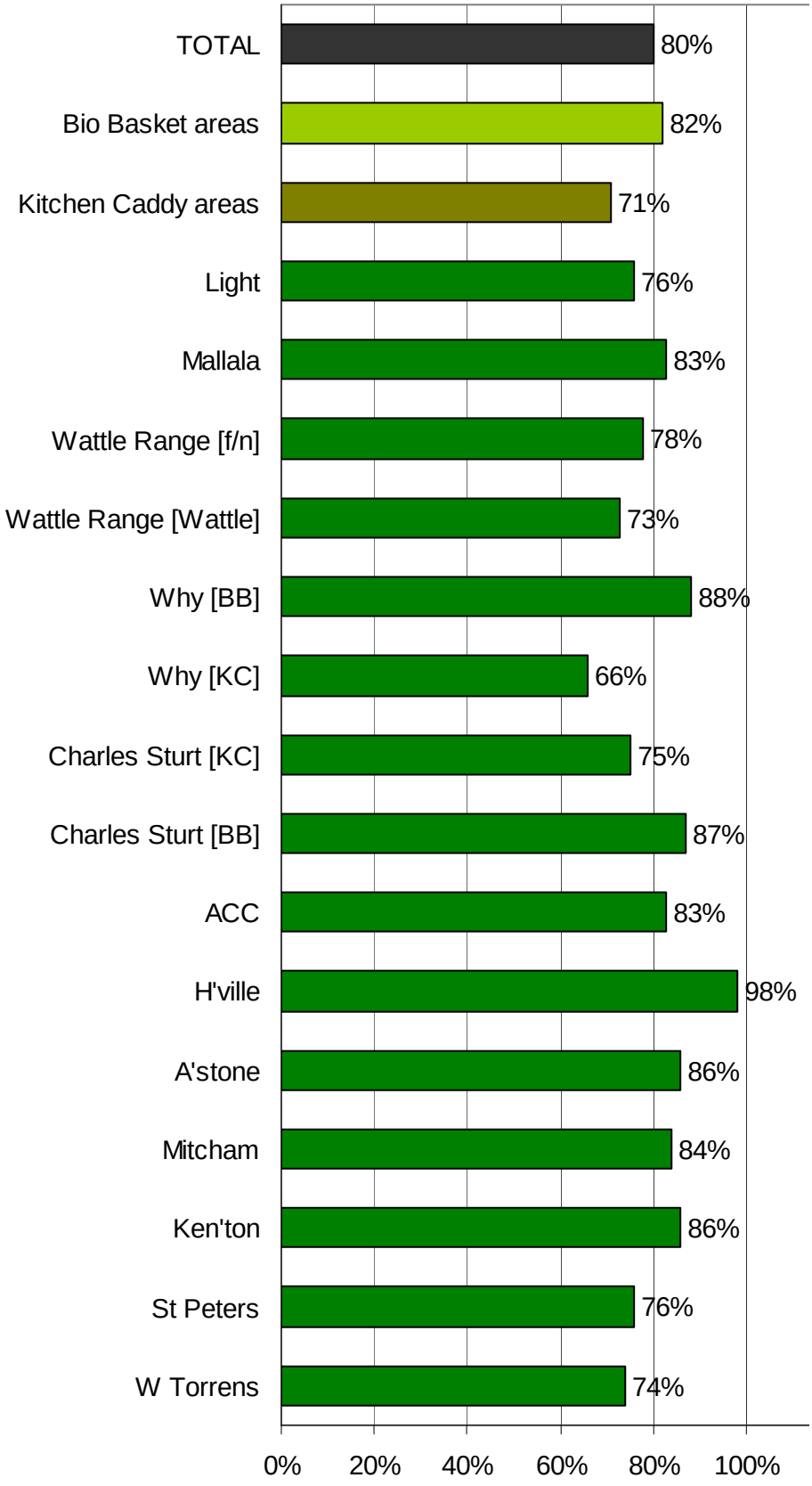
This was approximately 18 months after the systems were introduced.

However, when the two systems are examined individually, it can be seen that the **Bio Basket** has significantly higher incidence of **continued** use – 82% compared with 71% for the **Kitchen Caddy**.

The accompanying chart (overleaf) also highlights differences by area, with an above average rate of continuing use in Hectorville (98%). At the opposite end of the spectrum was the area of Whyalla where the kitchen caddy had been trialled (66%).

High rates of continued use were also noted for people aged 60 and over [85% compared with 76% of younger respondents] and home owners [82% compared with 72% of tenants].

STILL USING FOOD WASTE SYSTEM
Base: 758 follow up survey respondents



In the initial [2009] survey, 72% of the random sample were using the food waste system at the time of that survey.

Assuming the people interviewed in this follow up survey are typical of continuing users interviewed last time, we can calculate that **58% of the general population in the trial areas would be still using the system** [i.e. 80% of 72%].

We have performed this calculation for all subgroups in the sample and results are graphed in the following three pages.

Extrapolated rates of continuing use were markedly higher in **Bio Basket areas** – 61% compared with 43% in the **Kitchen Caddy** areas.

Interestingly, areas with fortnightly residual waste collection contained a higher concentration of continuing users than did those with weekly collection (66% and 55% respectively).

Those aged 60 plus were more likely to be continuing users than was the case with younger respondents (63% and 54% respectively).

Continued participation was slightly more common among owner occupiers [59% compared with 51% among tenants].

Differences by gender and by property size were not significant.

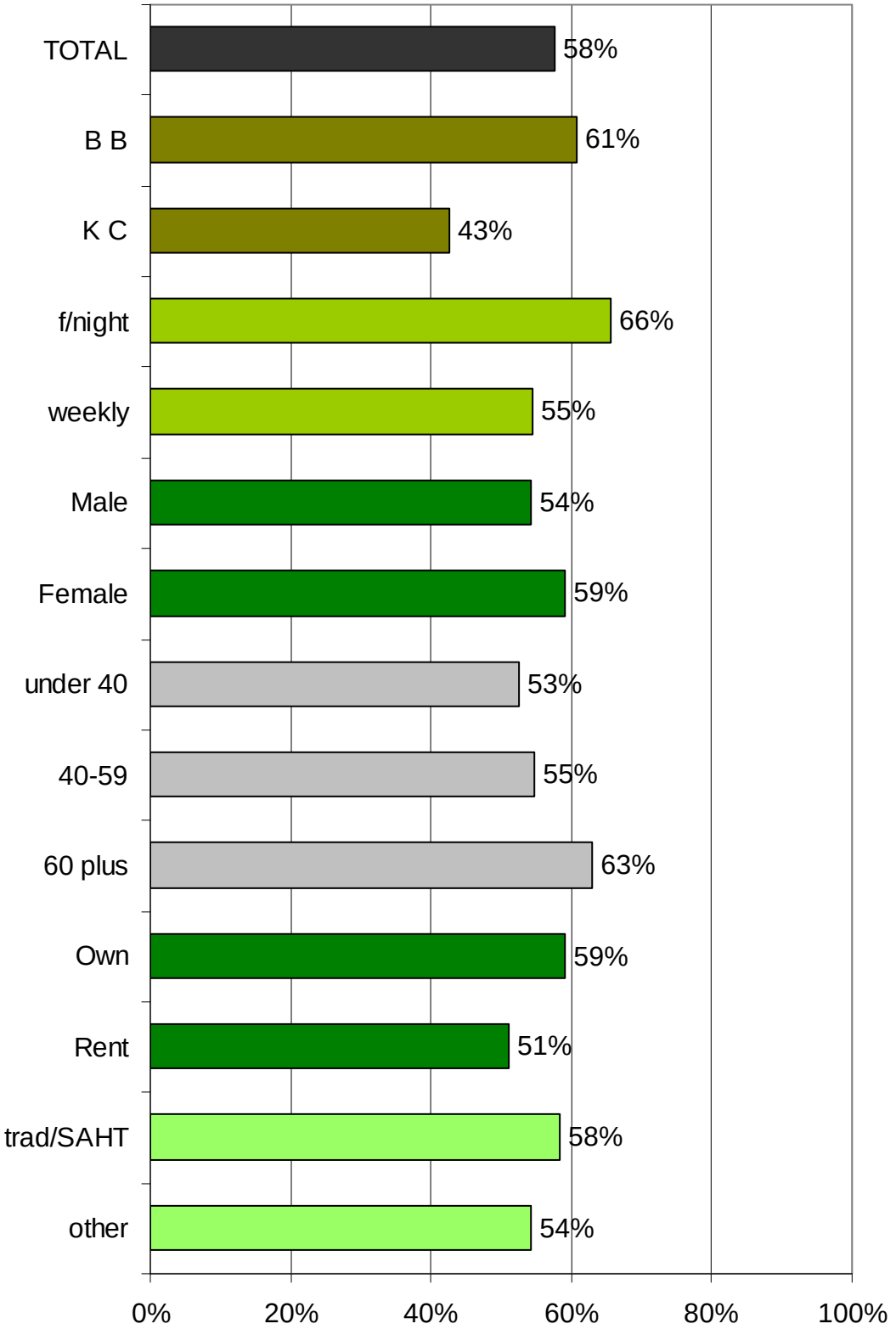
Overall, metro and country participation rates were similar (59% and 56% respectively).

However, there was variation by council area. Mallalla [66%], Norwood Payneham & St Peters [65%] and Campbelltown [65%] all registered rates of participation that were above the aggregate.

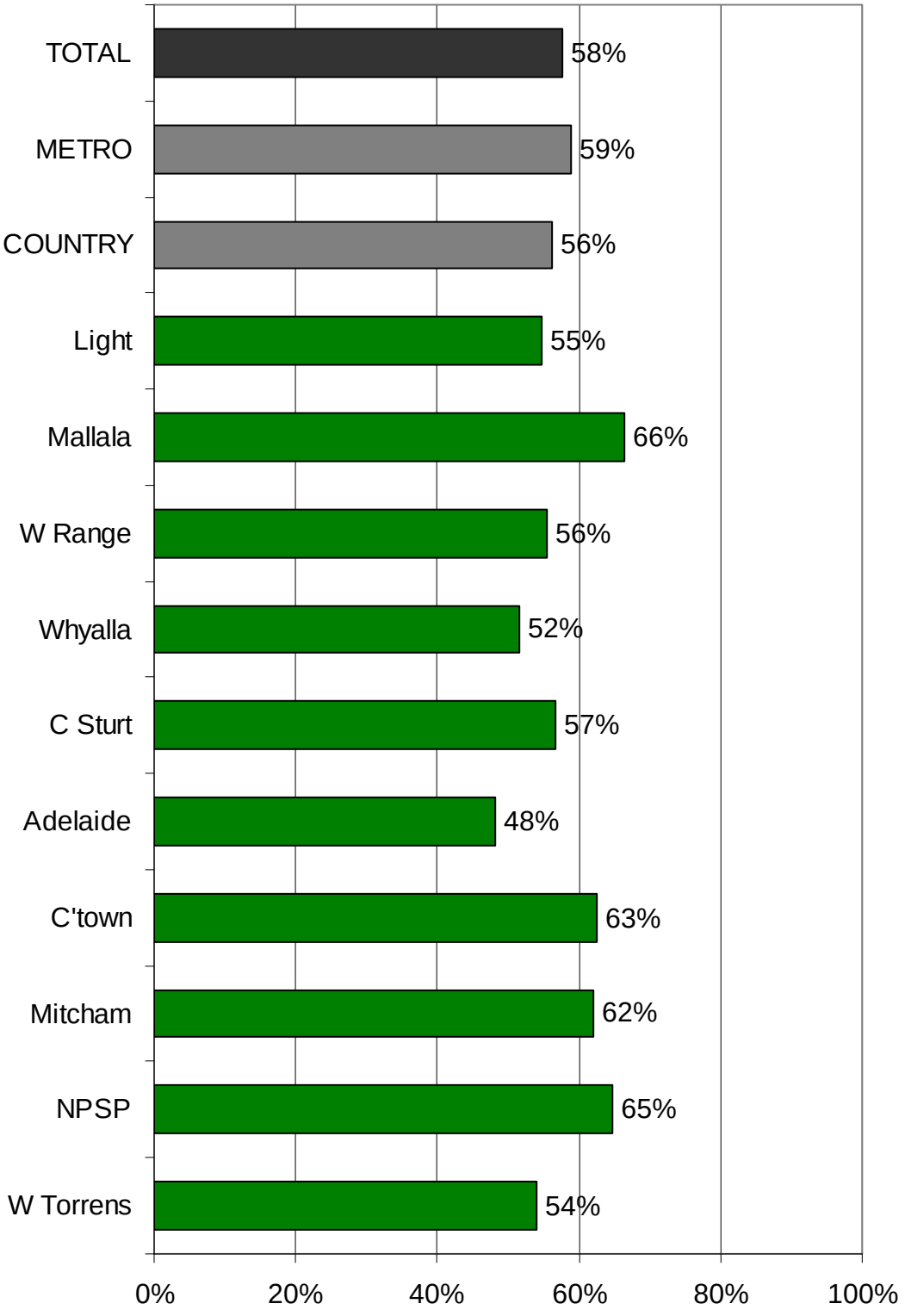
At the other end of the scale were ACC [48%] and Whyalla [52%].

Councils in line with the aggregate were Mitcham [62%], Charles Sturt [57%], Wattle Range [56%], Light [55%] and West Torrens [54%].

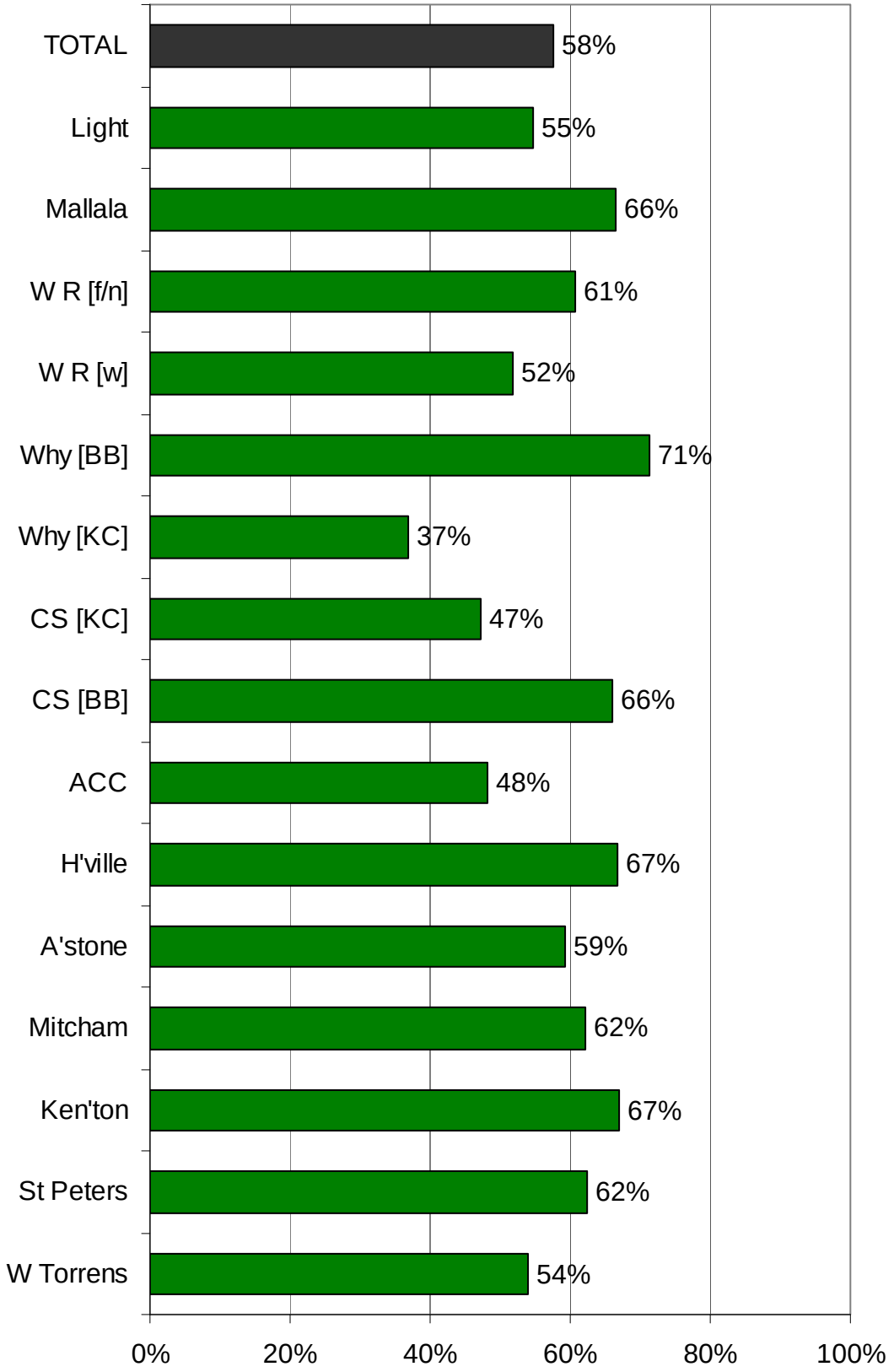
STILL USING FOOD WASTE SYSTEM
Extrapolated to general population - part 1



STILL USING FOOD WASTE SYSTEM
Extrapolated to general population - part 2



STILL USING FOOD WASTE SYSTEM
Extrapolated to general population - part 3



## People in household using the food waste system (Q 25)

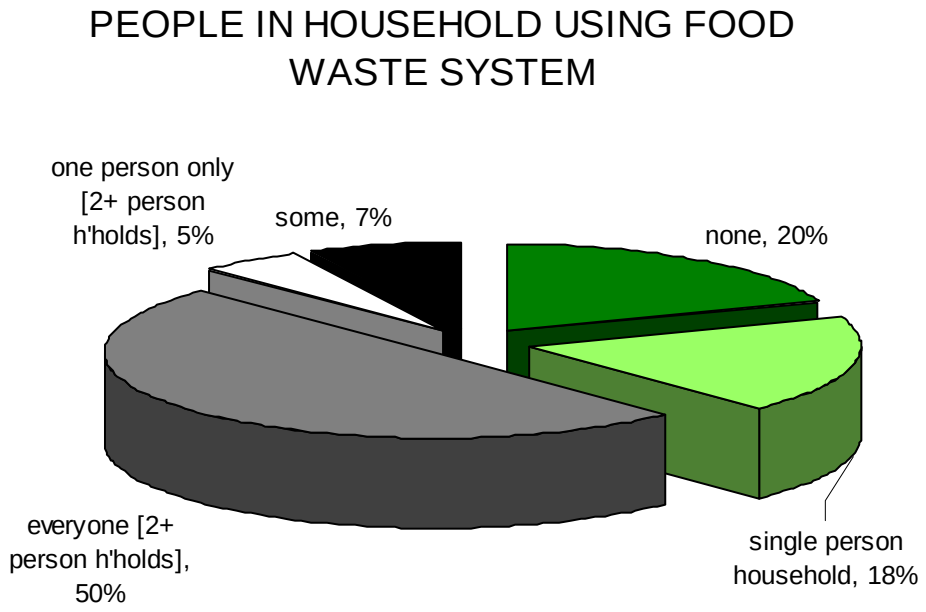
Respondents were asked to indicate the number of people in the household who use or have used the system.

As already reported there was one fifth of households (20%) with no current users.

18% of the sample were single person households where that person was a food waste system user.

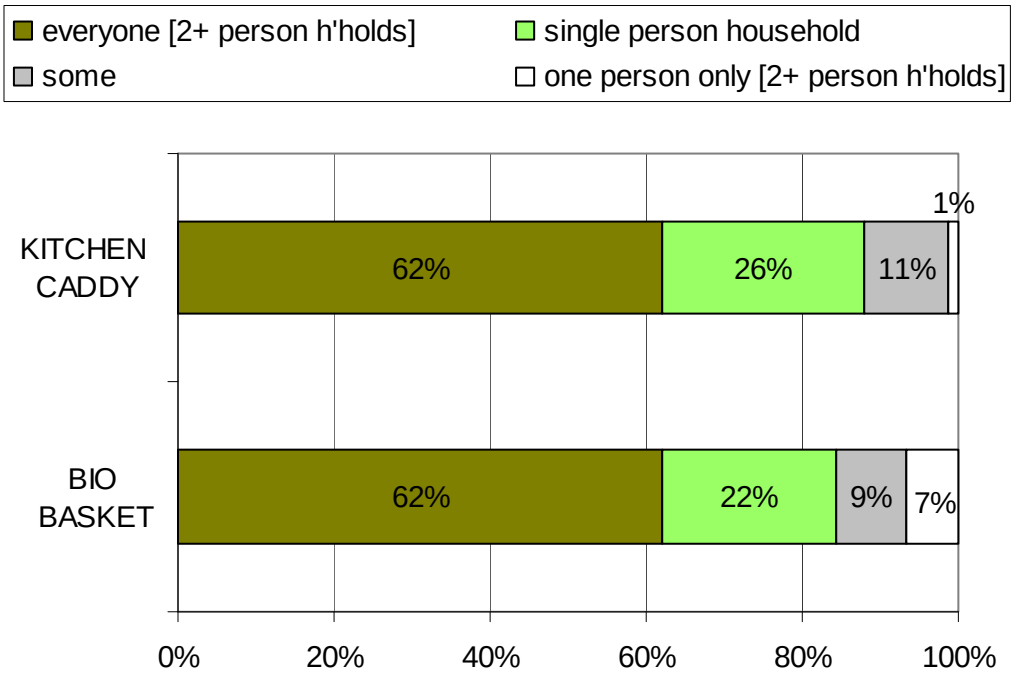
There were another 5% of households with a single user.

However in 68% of cases, it was reported that all household members use the food waste system. (This includes single person households – 18% - and multiple person households – 50%).



When non users are taken out of the equation, the distribution of use is seen to be similar for both systems:

**PEOPLE IN HOUSEHOLD USING FOOD WASTE SYSTEM - BASE: HOUSEHOLDS USING SYSTEM**



## Initial triggers to use food waste system (Q 2)

To open the interview, respondents were asked to think back to when they first started using the food waste system and to say what prompted them to use it.

The most popular answer was **because Council provided the container**. This was given by half [48%] of the overall sample and was particularly frequently given by those in Kitchen Caddy areas [61%].

The other major response was good **environmental initiative** and this was selected by 42% of all respondents.

Other responses to reach double figures were:

- **Clean, efficient way to dispose of food waste** 18%
- **Wanted to support Council in its pilot of the system** 12%
- **Already a composter, easy to adapt to purpose-built container** 10%

A full list of responses appears in the table overleaf. This table highlights differences between Bio Basket areas and Kitchen Caddy areas.

**Thinking back to when you first started using it, what prompted you to use the system?** (Inc. multiple responses)

| BASE: never used food waste system | **ALL** (N=758) | **Bio Basket** (N=652) | **Kitchen Caddy** (N=106) |
|---|---|---|---|
| Because Council provided the container | 48% | 46% | **61%** |
| Good environmental initiative | 42% | 42% | 42% |
| Clean, efficient way to dispose of food waste | 18% | **20%** | 10% |
| Wanted to support Council in its pilot of the system | 12% | **13%** | 6% |
| Already a composter, easy to adapt to purpose-built container | 10% | 9% | 11% |
| System looked simple enough to use | 7% | 7% | 5% |
| Other | 6% | 6% | 8% |
| Don't recall | 1% | 1% | 0% |

Further analysis showed that continuing users were more likely to have been motivated by the idea that the system is a good **environmental initiative** [45% - compared with 28% of those who have discontinued use].

In contrast, former users were more likely to have participated **because Council provided the container**. [57%, compared with 46% of ongoing users].

## Reasons for discontinuing use of the food waste system (Qs 4, 5)

Those respondents (148 individuals) who were no longer using the food waste system were asked why they had stopped.

Initially, they were asked to give the main reason for discontinuing use.

29% of these people stated that they had **odour concerns or problems with insects/vermin etc**. This had affected 22% of those in **Bio Basket** areas and 55% of former **Kitchen Caddy** users [NB small sample size – 31].

There were also 18% who **prefer to divert waste to compost/feed chooks etc.**

An identical proportion [18%] reported that it was simply **inconvenient** or they were **too busy/too lazy**.

18% of former **Bio Basket** users reported that they stopped using the system when they **ran out of bags**. Some of these were now aware of how to obtain more bags; others were deterred by the cost.

A full list of reasons is given in the table overleaf.

**It would be useful for Zero Waste and your council to know why people are no longer using the system. Can you tell me why this happened in your case? A] What was the main reason?**

| BASE: no longer using system | **ALL** (N=148) | **Bio Basket** (N=117) | **Kitchen Caddy** (N=31) |
|---|---|---|---|
| Odour concerns/problems with insects/vermin etc | 29% | 22% | **55%** |
| Inconvenient/too busy/too lazy | 18% | 18% | 19% |
| Prefer to divert waste to compost/ feed chooks etc | 18% | 19% | 16% |
| Ran out of bags | 14% | **18%** | 0% |
| Lid / container broke | 7% | 8% | 3% |
| Trial finished | 4% | 5% | 0% |
| Unsightly/took up bench space | 3% | 3% | 0% |
| Bad media coverage | 1% | 0% | 3% |
| Other | 6% | 7% | 3% |

Half of people who had discontinued use were able to offer further reasons for doing so. When these responses are added to the main reason, it transpired that overall 40% had **odour concerns or problems with insects/vermin etc**. This was a concern for 33% of those in Bio Basket areas and 68% of former **Kitchen Caddy** users [NB small sample size – 31].

A total of 27% reported that it was simply **inconvenient** or they were **too busy/too lazy**.

There were also 21% who **prefer to divert waste to compost/feed chooks etc.**

21% of former **Bio Basket** users reported that they stopped using the system when they **ran out of bags**.

11% reported that the **container had broken** and this was largely confined to former **Bio Basket** users [13%].

Results appear in tabular form overleaf.

**It would be useful for Zero Waste and your council to know why people are no longer using the system. Can you tell me why this happened in your case? A] What was the main reason?**

**B] Were there any other factors that contributed to your decision to stop using the Bio Basket / Kitchen Caddy**
**COMBINED RESPONSE [A] + [B]**

| BASE: no longer using system | **ALL** (N=148) | **Bio Basket** (N=117) | **Kitchen Caddy** (N=31) |
|---|---|---|---|
| Odour concerns/problems with insects/vermin etc | 40% | 33% | 68% |
| Inconvenient/too busy/too lazy | 27% | 22% | 45% |
| Prefer to divert waste to compost/feed chooks etc | 21% | 22% | 19% |
| Ran out of bags | 16% | 21% | 0% |
| Lid / basket broke | 11% | 13% | 3% |
| Unsightly/took up bench space | 10% | 8% | 13% |
| Trial finished | 6% | 7% | 3% |
| Bad media coverage | 1% | 0% | 3% |
| Other household members didn't use it [much] | 1% | 1% | 0% |
| Other | 17% | 16% | 22% |

* 'Other' reasons – each given by fewer than 4 r– each given by fewer than 4 respondents - included *live alone/not enough food waste to make it worthwhile, bags too small/split, fortnightly collection not good enough*.

## Likelihood of using the system again if problems were solved (Q 6)

The 148 respondents who had ceased using the food waste system were also asked to indicate their likelihood of using their respective food waste system if the main problem that stopped them using it was solved.

Responses were recorded using the following scale:

| | | | |
|---|---|---|---|
| *very likely* | *quite likely* | *quite unlikely* | *very unlikely* |

A 'don't know' response was also used.

55% of respondents felt it **likely** they would resume using the system under these circumstances, including 28% who considered it **very likely**.

37% of respondents stated they would be **unlikely** to resume using the system, including 17% who considered it **very unlikely**.

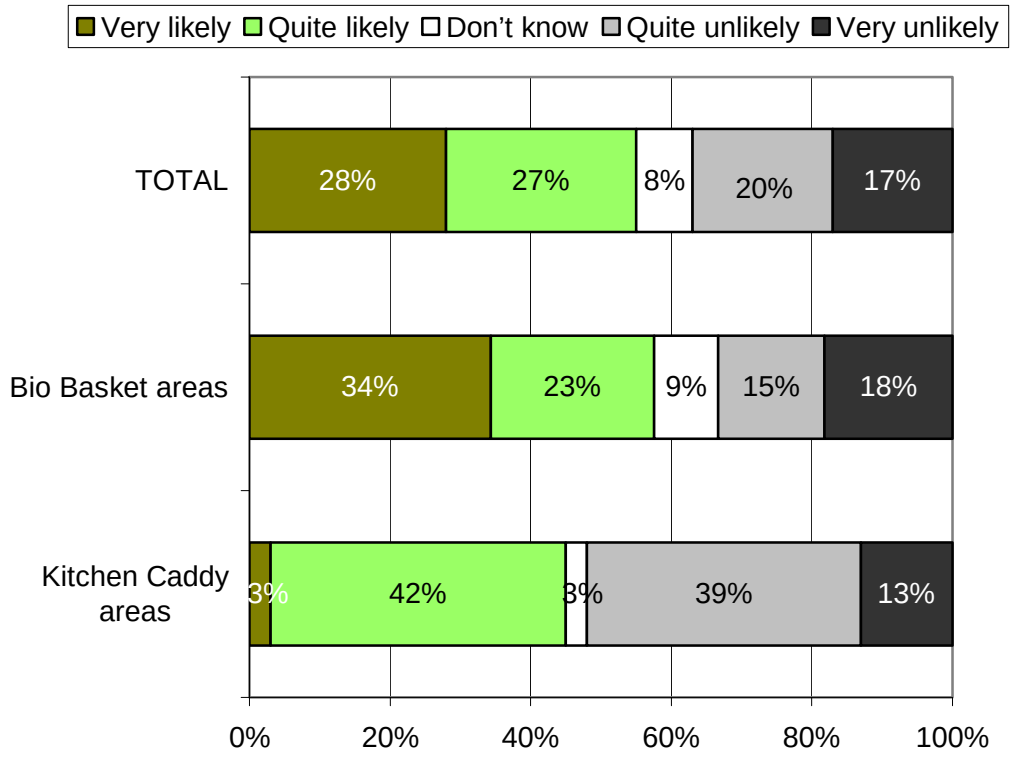
8% were uncertain.

The response from the **Bio Basket** areas was generally favourable, with 57% stating they would be likely to resume using the system, including 34% who considered it **very likely**. 33% were **unlikely** to do so.

The corresponding figures for the **Kitchen Caddy** areas were not quite as positive. 45% said they were **likely** to resume using the system, including 3% who considered it **very likely**. 52% were **unlikely** to continue.

These results are given in graph form overleaf.

## LIKELIHOOD OF RESUMING USE OF FOOD WASTE SYSTEM IF MAIN PROBLEM SOLVED
### - BASE: HOUSEHOLDS NO LONGER USING SYSTEM



## Awareness of types of waste the system is designed for (Q 7)

All respondents were asked to indicate the types of waste the system was designed for. They were prompted with eleven types of waste. Most people claimed to be aware that 9-10 of these could be put in the food waste system they had been issued with.

The top response was **fruit and vegetable scraps** at just under 100%. [All except 3 respondents were aware of this].

Awareness levels of 95% were recorded for …

- **Bread, cereals**
- **Eggshells**
- **Leftovers – mixed food scraps, processed food etc**

These were very closely followed by another three categories with awareness levels around 90%:

- **Tea bags, coffee grounds**
- **Meat scraps**
- **Bones**

A further three food types achieved responses of 83% to 84%:

- **Dairy - yoghurt, cheese**
- **Tissues, paper towels**
- **Fish/seafood**

61% of the sample indicated that they were aware that **hair** can be put in the container.

A full list of responses is given in the table overleaf.

To a small but significant extent, individual awareness levels were sometimes higher amongst continuing users of the food waste systems [shown in bold below].

However, people in the **Bio Basket** areas had awareness levels similar to their counterparts in the **Kitchen Caddy** areas.

**The food waste system is designed to take all sorts of food waste. Could you tell me if you knew you could use it for …** (Inc. multiple responses)

| | **ALL** (N=758) | **BB AREA** (N=652) | **KC AREA** (N=106) | **CURRENT USERS** (N=610) | **FORMER USERS** (N=148) |
|---|---|---|---|---|---|
| Fruit, vegetable scraps | <100% | <100% | 100% | 100% | 98% |
| Bread, cereals | 95% | 95% | 92% | 95% | 95% |
| Eggshells | 95% | 94% | 98% | **96%** | 91% |
| Leftovers – mixed food scraps, processed food etc | 95% | 95% | 92% | 96% | 92% |
| Tea bags, coffee grounds | 93% | 94% | 92% | **95%** | 89% |
| Meat scraps | 92% | 92% | 88% | **94%** | 82% |
| Bones | 87% | 88% | 80% | **90%** | 76% |
| Dairy - yoghurt, cheese | 84% | 85% | 84% | 85% | 84% |
| Tissues, paper towels | 84% | 84% | 86% | **86%** | 78% |
| Fish/seafood * | 83% | 84% | 76% | **84%** | 77% |
| Hair | 61% | 60% | 66% | 62% | 57% |
| None / don't know | <1% | <1% | 2% | 0% | 2% |

* This category was added to this and subsequent questions on the second evening of interviewing and so may be understated to a small extent.

## Types of waste put in the food waste system (Q 8)

All respondents were asked to indicate the extent of their use of the system in terms of the types of waste they had used it for.

On average, respondents each nominated 7 – 8 of the 11 categories.

92% of respondents indicated that they had put **fruit and vegetable scraps** in their food waste container.

Around 80% nominated **leftovers – mixed food scraps, processed food**, **eggshells** and **tea bags/coffee grounds**.

**Meat scraps**, **bread/cereals**, **bones** and **tissues/paper towels** were all at the 80% level.

There were two categories cited by just under 60% - **dairy** and **fish/seafood**.

One in three [34%] indicated that they had put **hair** in their Bio Basket or Kitchen Caddy.

The accompanying table shows that continuing users tended to nominate more types of waste than did those who have discontinued use [on average 8 versus 6]. 16% of former users declined to give information on the types of waste they had put into their container.

The **Kitchen Caddy** user segment was less likely than the **Bio Basket** segment to have put **meat, fish** or **bones** in their container.

## Which types of food waste have you put in the Bio Basket / Kitchen Caddy?

(Inc. multiple responses)

| | ALL (N=758) | BB AREA (N=652) | KC AREA (N=106) | CURRENT USERS (N=610) | FORMER USERS (N=148) |
|---|---|---|---|---|---|
| Fruit, vegetable scraps | 92% | 92% | 91% | **94%** | 81% |
| Leftovers – mixed food scraps, processed food etc | 81% | 81% | 79% | **85%** | 64% |
| Eggshells | 80% | 80% | 77% | **83%** | 66% |
| Tea bags, coffee grounds | 79% | 79% | 77% | **83%** | 64% |
| Meat scraps | 74% | **76%** | 58% | **78%** | 57% |
| Bread, cereals | 72% | 72% | 67% | **75%** | 59% |
| Bones | 70% | **72%** | 58% | **75%** | 51% |
| Tissues, paper towels | 68% | 69% | 64% | **73%** | 49% |
| Dairy - yoghurt, cheese | 59% | 60% | 54% | **62%** | 50% |
| Fish/seafood | 58% | **59%** | 49% | **61%** | 43% |
| Hair | 34% | 33% | 41% | **36%** | 25% |
| None / don't know / refused | 4% | 3% | **8%** | 1% | **16%** |

## Types of food participants were reluctant to put in the food waste system (Qs 9, 10)

One third of respondents [35%] indicated that there were types of food they had been reluctant to put in their food waste system.

The types of food commonly nominated in this regard were:

- **Fish/seafood** 18%
- **Meat scraps** 12%
- **Bones** 9%
- **Dairy - yoghurt, cheese** 7%

As shown in the accompanying table on the next page, differences across the subgroups were minor. However, it is interesting to note that the **fish** response was high among former users while **meat** and **bones** were relatively frequently cited by the **Kitchen Caddy** segment.

## Are there any types of food waste you have been reluctant to put in the Bio Basket / Kitchen Caddy?

(Inc. multiple responses)

| | ALL (N=758) | BB AREA (N=652) | KC AREA (N=106) | CURRENT USERS (N=610) | FORMER USERS (N=148) |
|---|---|---|---|---|---|
| Fish/seafood | 18% | 17% | 24% | 16% | **27%** |
| Meat scraps | 12% | 10% | **22%** | 11% | 16% |
| Bones | 9% | 8% | **19%** | 9% | 14% |
| Dairy - yoghurt, cheese | 7% | 7% | 8% | 7% | 8% |
| Tissues, paper towels | 5% | 5% | 5% | 5% | 3% |
| Hair | 4% | 4% | 3% | 4% | 5% |
| Leftovers – mixed food scraps, processed food etc | 4% | 4% | 4% | 3% | 5% |
| Fruit, vegetable scraps | 2% | 2% | 1% | 2% | 3% |
| Bread, cereals | 2% | 2% | 1% | 1% | 3% |
| Tea bags, coffee grounds | 2% | 2% | 2% | 2% | 2% |
| Eggshells | 1% | 2% | 1% | 1% | 2% |
| ANY | 35% | 35% | 40% | 35% | 37% |
| None / don't know | 65% | 65% | 60% | 65% | 63% |

As a follow up question, respondents nominating particular foods were asked to elaborate on the reasons for their reluctance to put this particular type of waste in the system.

Concerns about odours, attracting flies and going off were voiced for all food types.

This was particularly the case for **meat, fish** and **bones**. Respondents were also reluctant to put these in the Bio Basket or Kitchen Caddy too early in the fortnightly cycle. Some respondents mentioned freezing waste [especially fish and prawn waste] and adding to the green organics bin just before it was put out for collection.

There were also concerns about attracting maggots or vermin – rats, mice and the local cats.

A few respondents feed such waste to family pets or even magpies.

The few respondents mentioning **fruit and veg** peelings were specifically reluctant to put onions and citrus in the system as these items are excluded from home composting. Some respondents compost all of their fruit and veg waste, reserving the food waste system for type of waste they do not want to retain for composting.

Similarly, a couple of respondents believed **eggshells** do not compost well.

A few respondents queried putting **yogurt** in the system as it was felt it would lead to leaks.

This might also be a problem with some **leftovers**.

**Hair** and **tissues** were sometimes seen as different from food waste. This waste does not originate in the kitchen and therefore does not enter the food waste stream. A few people were horrified by the idea of having used tissues sitting around in their kitchen.

## Disposal of food waste (Q 11)

The 610 respondents who were still using the food waste system were asked to indicate the proportion of their food waste that they were putting into the Bio Basket or Kitchen Caddy at the time of interview.

Where this was less than 100%, a breakdown of other disposal methods was also sought.

By definition, all of these respondents were putting some waste into their Bio Basket or Kitchen Caddy.

33% claimed to be putting 100% of their food waste into the system.

A further 23% claimed to use the system for at least 95% of their food waste.

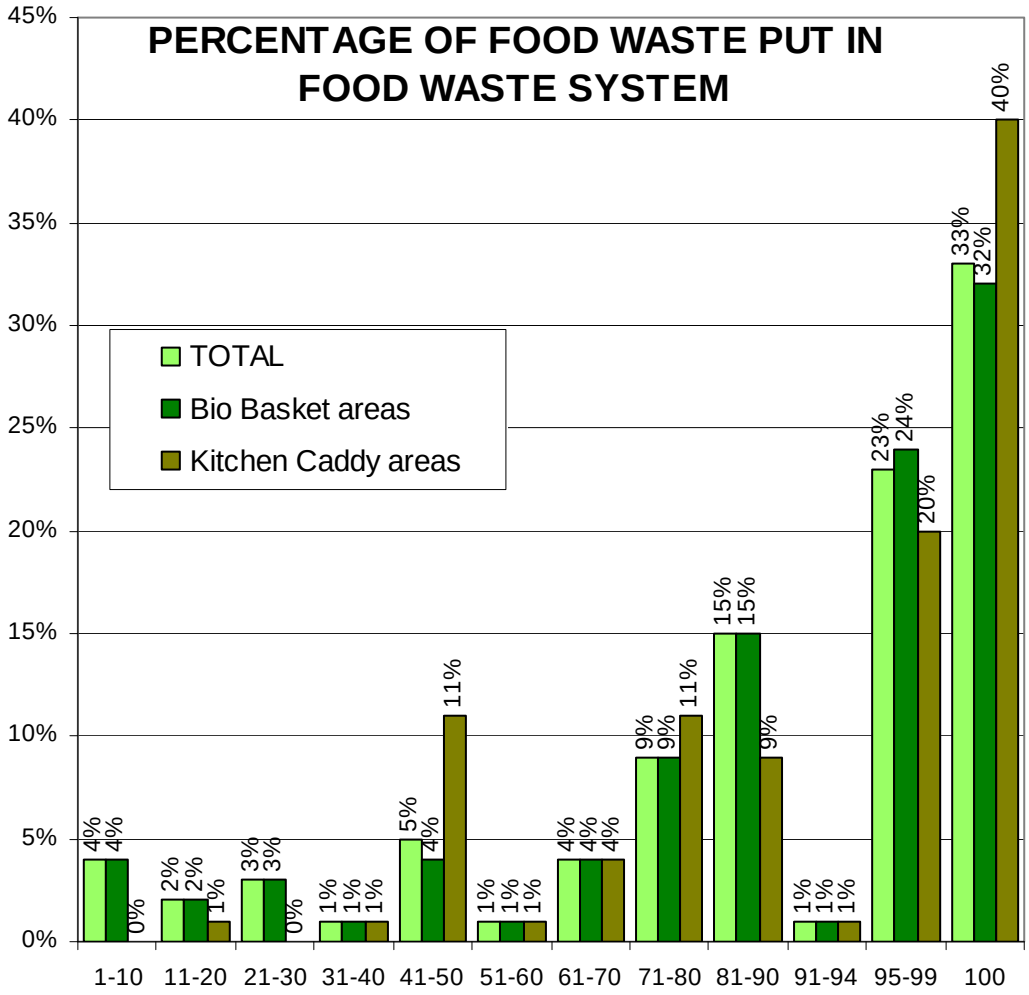
Another 29% said they were putting more than half and up to 90% of their food waste in the system

14% stated they were using the system for up to 50% of their food waste.

As illustrated in the accompanying table [overleaf] the pattern of responses was similar for the two food waste systems. However, 40% of Kitchen Caddy users claimed to use it for all of their waste with the proportion of Bio Basket users exclusively using that system was significantly lower at 32%.

**On average, ongoing users claimed to be putting 84% of their food waste in the Bio Basket or Kitchen Caddy.**

A small number of people in the Bio Basket areas were using the cornstarch bags with a different container. This was either because the Bio Basket had broken or they preferred an unventilated container or one matching their décor. We included these people as users of the Bio Basket system.


PERCENTAGE OF FOOD WASTE PUT IN FOOD WASTE SYSTEM
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
TOTAL
Bio Basket areas
Kitchen Caddy areas
4% 4% 0%
2% 2% 1%
3% 3% 0%
1% 1% 1%
5% 4% 11%
1% 1% 1%
4% 4% 4%
9% 9% 11%
15% 15% 9%
1% 1% 1%
23% 24% 20%
33% 32% 40%
1-10
11-20
21-30
31-40
41-50
51-60
61-70
71-80
81-90
91-94
95-99
100

The table on the page following summarises where food waste is placed.

As already stated, all the respondents asked this question were users of the **Bio Basket or Kitchen Caddy** system and on average, 84% of their waste was placed there.

34% of respondents indicated that some of their food waste went into their **residual garbage bin**. However, this only amounted to an estimated 4% of food waste for all Bio Basket/Kitchen Caddy users.

13% of respondents placed some of their food waste directly into their **home compost system** and this accounted for 6% of food waste.

Similarly, 13% of respondents said that some of their food waste was **fed to chooks etc** and this accounted for 3% of food waste.

5% indicated that there is some food waste that they put directly into their **green organics bin** – for example bulky items like watermelon peel. This accounted for less than 1% of food waste.

2% stated that there is some food waste that they **bury on their property.** This also accounted for less than 1% of food waste.

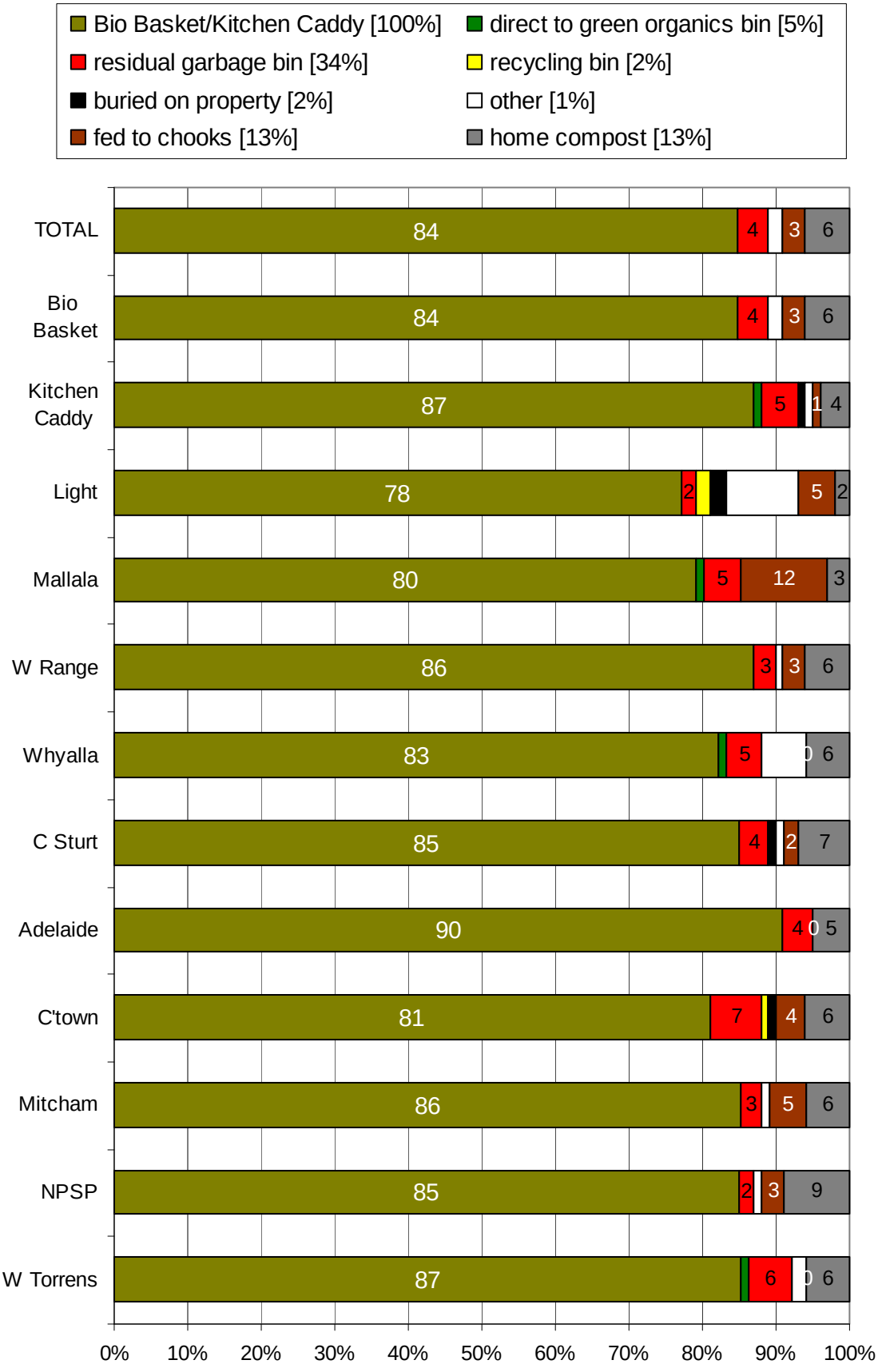
Another 2% admitted to putting food waste into their **recycling bin**. This accounted for less than 1% of food waste. Interviewers queried this answer and suggested they redirect this waste.

There was a residual other category which accounted for 2% of waste and related to 15 of food system users.

This information is summarised in the graph on the next page.

A supporting table follows on the page after that.

## PLACEMENT OF FOOD WASTE
## - average proportions



| PLACEMENT OF FOOD WASTE Mean percentage BASE: BB/KC USERS [N=610] | Bio Basket/ Kitchen Caddy [100%] | direct to green organics bin [5%] | residual garbage bin [34%] | recycling bin [2%] | home compost [13%] | fed to chooks [13%] | buried on property [2%] | other [1%] |
|---|---|---|---|---|---|---|---|---|
| **TOTAL** | **84** | **<1** | **4** | **0** | **6** | **3** | **<1** | **2** |
| **Bio Basket** | **84** | **<1** | **4** | **<1** | **6** | **3** | **<1** | **2** |
| **Kitchen Caddy** | **87** | **1** | **5** | **<1** | **4** | **1** | **1** | **1** |
| **Light** | 78 | 0 | 2 | 2 | 2 | 5 | 2 | 10 |
| **Mallala** | 80 | 1 | 5 | 0 | 3 | 12 | 0 | 0 |
| **Wattle Range** | 86 | <1 | 3 | <1 | 6 | 3 | <1 | 1 |
| **Whyalla** | 83 | 1 | 5 | 0 | 6 | <1 | <1 | 6 |
| **Charles Sturt** | 85 | <1 | 4 | <1 | 7 | 2 | 1 | 1 |
| **Adelaide** | 90 | 0 | 4 | <1 | 5 | <1 | 0 | 0 |
| **Campbelltown** | 81 | <1 | 7 | 1 | 6 | 4 | 1 | <1 |
| **Mitcham** | 86 | <1 | 3 | 0 | 6 | 5 | 0 | 1 |
| **NPSP** | 85 | <1 | 2 | <1 | 9 | 3 | 0 | 1 |
| **West Torrens** | 87 | 1 | 6 | 0 | 6 | 0 | <1 | 2 |

## Disposal of food waste from food waste system (Qs 12, 13)

The 610 respondents who still using their Bio Basket / Kitchen Caddy were asked to indicate where their container is emptied.

In the vast majority of cases, **all** waste from the container was said to go into the **green organics bin** [88%].

In a further 4% of cases, the green organics bin was used in conjunction with something else.

Other minor responses were:

- Backyard / home compost bin / buried 6%
- Garbage bin 4%
- Recycling bin (yellow lid) <1%
- Other 1%
- Don't know 1%

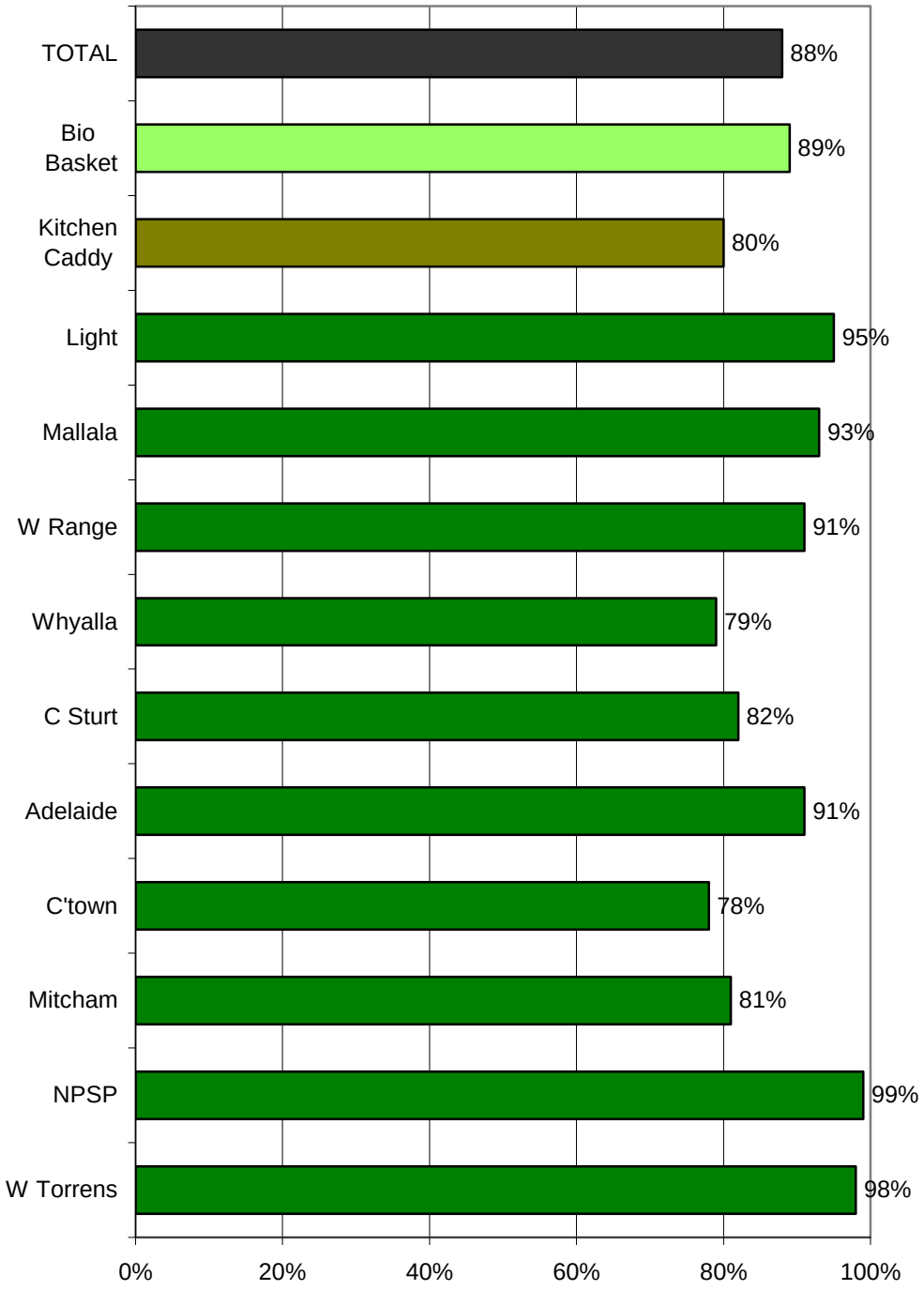
When the sub-groups are examined, it is seen that exclusive use of the green organics bin is the prevailing response across the sample.

However, it was particularly prevalent in the **Bio Basket** areas (89% compared with 80% among **Kitchen Caddy** users).

This is reflected in relatively low responses among those council areas with Kitchen Caddy areas, as shown in the graph overleaf.

The 27 people indicating that only part of the contents of their container go into their green organics bin were asked to stipulate what proportion this is. On average, a figure of 60% was given.

## ALL in green organics bin



## Trends in volume of waste put in the food waste system (Q 14)

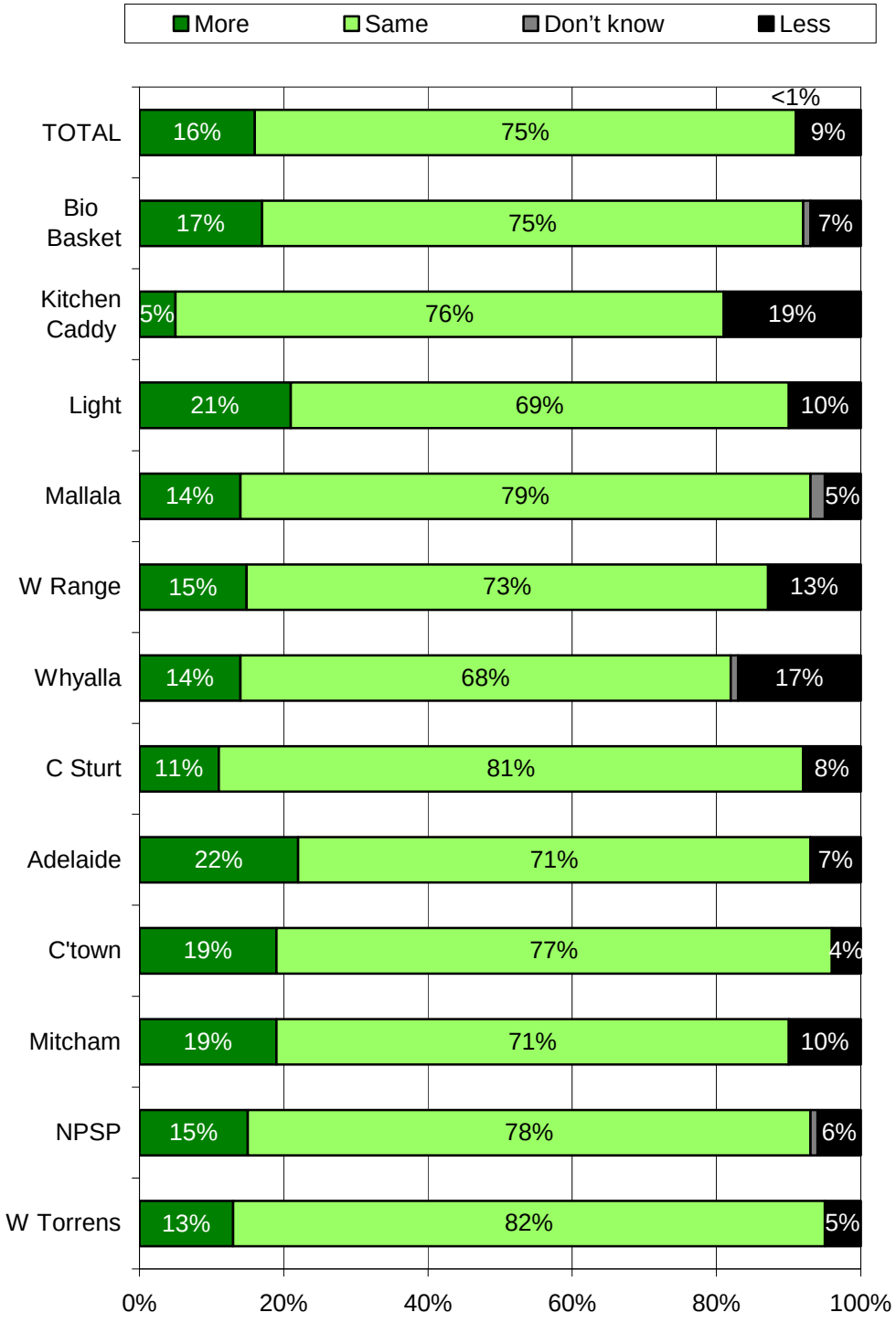
Three quarters [75%] of respondents using the food waste system at time of interview indicated that the volume of food waste that they were putting in the Bio Basket / Kitchen Caddy was **the same** as 12 months previously.

16% believed that the volume had **increased** over this period, while 9% indicated it had **decreased**.

When the two systems are examined separately, it emerges that **Bio Basket** users were more likely to report an **increase** [17%, compared with 7% reporting a decrease], while **Kitchen Caddy** users were more likely to report a **decrease** [19%, compared with 5% reporting an increase].

Results for these two groups and the ten council areas are graphed on the next page.

## VOLUME PUTTING IN FOOD WASTE SYSTEM NOW COMPARED WITH 12 MONTHS AGO



## Trends in types of waste put in food waste system (Qs 15, 16)

Continuing users of either system (610) were asked if there were any types of waste that they were putting in the system at that time that they weren't putting in there 12 months previously.

In most cases – 84% - the answer was **no**.

However, 15% indicated that they had expanded the repertoire of food waste they were putting in the Bio Basket / Kitchen Caddy:

- Tissues, paper towels 6%
- Bones 4%
- Eggshells 3%
- Meat scraps 2%
- Tea bags, coffee grounds 2%
- Fruit, vegetable scraps 1%
- Bread, cereals 1%
- Hair 1%
- Fish/seafood 1%
- Dairy - yoghurt, cheese <1%
- Leftovers – mixed food scraps, processed food etc <1%

There was also a 1% don't know response.

The 610 respondents still using the food waste system were asked whether there were any extra types of waste that they think they will put into the Bio Basket / Kitchen Caddy in future.

The majority response was **no** – from 68% of this subgroup.

A further 9% gave a **don't know** response.

This leaves 23% who nominated one or more type of waste that they stated they will start putting in the Bio Basket / Kitchen Caddy system.

The main responses were non – food waste:

- Hair 13%
- Tissues, paper towels 9%

Other responses were very small:

- Dairy - yoghurt, cheese 5%
- Bones 4%
- Meat scraps 2%
- Bread, cereals 2%
- Tea bags, coffee grounds 2%
- Eggshells 2%
- Leftovers – mixed food scraps, processed food etc 1%
- Fruit, vegetable scraps <1%

## Triggers for continuing use of food waste system (Q 17)

Next, continuing users were asked to say what if anything has encouraged them to keep using the Bio Basket /Kitchen Caddy system.

In 52% of cases, continued use was attributed to **wanting to help the environment.**

38% mentioned **ease of use**.

In 21% of cases it became a **habit**.

Minor responses are also listed in the table overleaf.

## Has there been anything that has specifically encouraged you to continue using the system?

| **BASE – continuing users [N=610]** | (Inc. multiple responses) |
|---|---|
| No; just wanted to help environment | 52% |
| Ease of use | 38% |
| No, just formed a habit; | 21% |
| Supply of bags by Council | 7% |
| Reduce waste going to landfill | 7% |
| Hygienic / no smell | 3% |
| Continued support from Council | 2% |
| Encourages composting | 2% |
| Raised awareness of unnecessary food waste in residual garbage bin | 1% |
| Thought it was compulsory | 1% |
| Great system | 1% |
| Other [residual – each <1%] | 3% |
| Don't know | 4% |

Ease of use was cited by 41% of people in weekly residual waste collection compared with 28% in fortnightly residual waste collection areas.

Otherwise, there was minimal variation across the subgroups.

## Predicted future use of food waste system (Q 18)

All respondents were asked to indicate their likelihood of using their respective food waste system on an on-going basis if it was introduced as part of Council's suite of waste services.

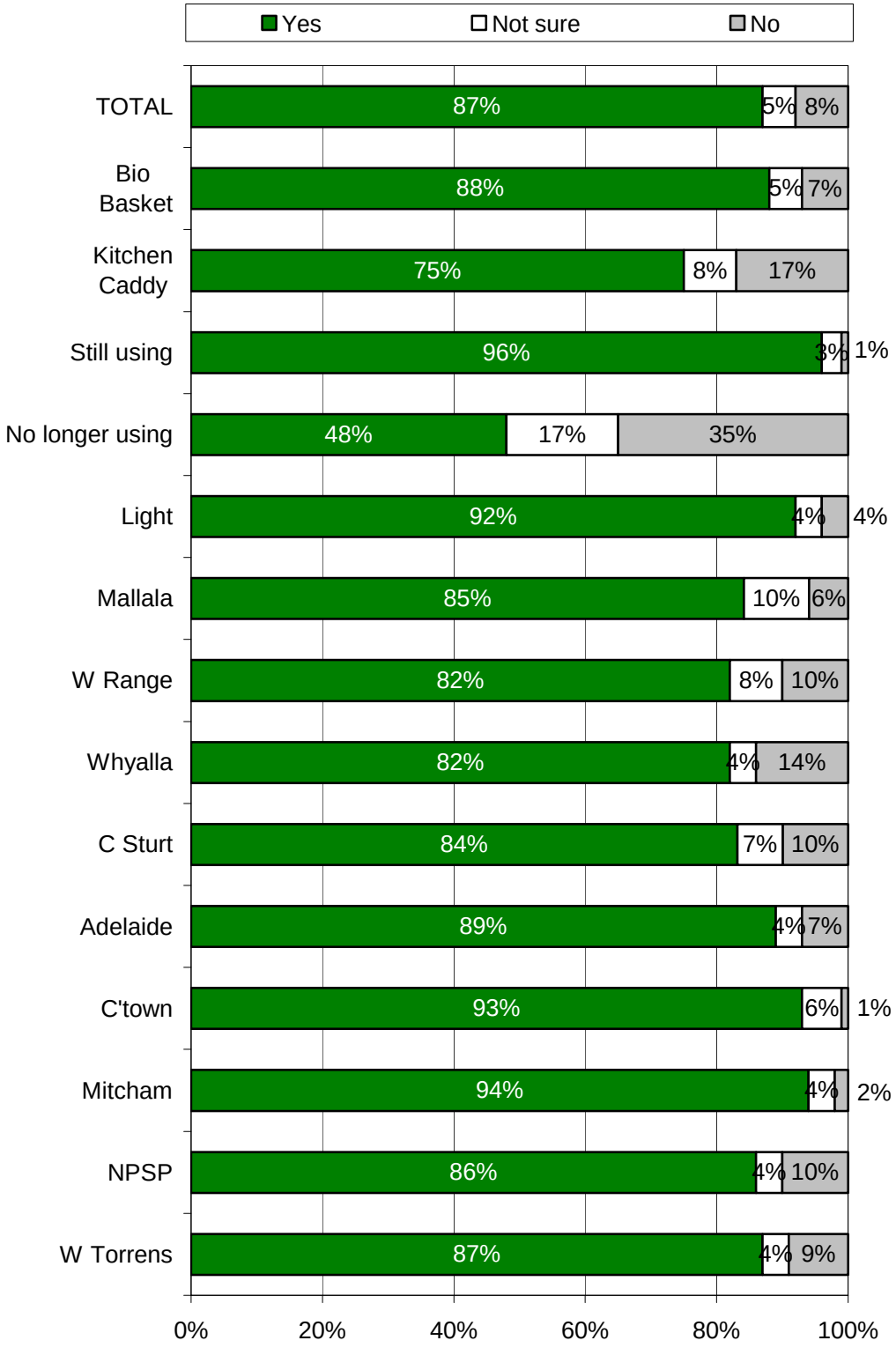
A resounding 87% replied in the **affirmative**.

As would be expected, those who are continuing to use the food waste system usually gave a **yes** response [96%] while those who have stopped using the system were less likely to do so – although 48% still said **yes**.

The response from the **Bio Basket** segment was significantly more favourable than the **Kitchen Caddy** segment [88% and 75% respectively saying yes].

There were no significant variations by council area. Responses from the ten council areas are also included in the graph on the next page.

## WOULD YOU USE FOOD WASTE SYSTEM IF PART OF SUITE OF WASTE SERVICES?



## Recommendation of food waste system (Q 19)

All respondents were asked to indicate if they would recommend the system to others.

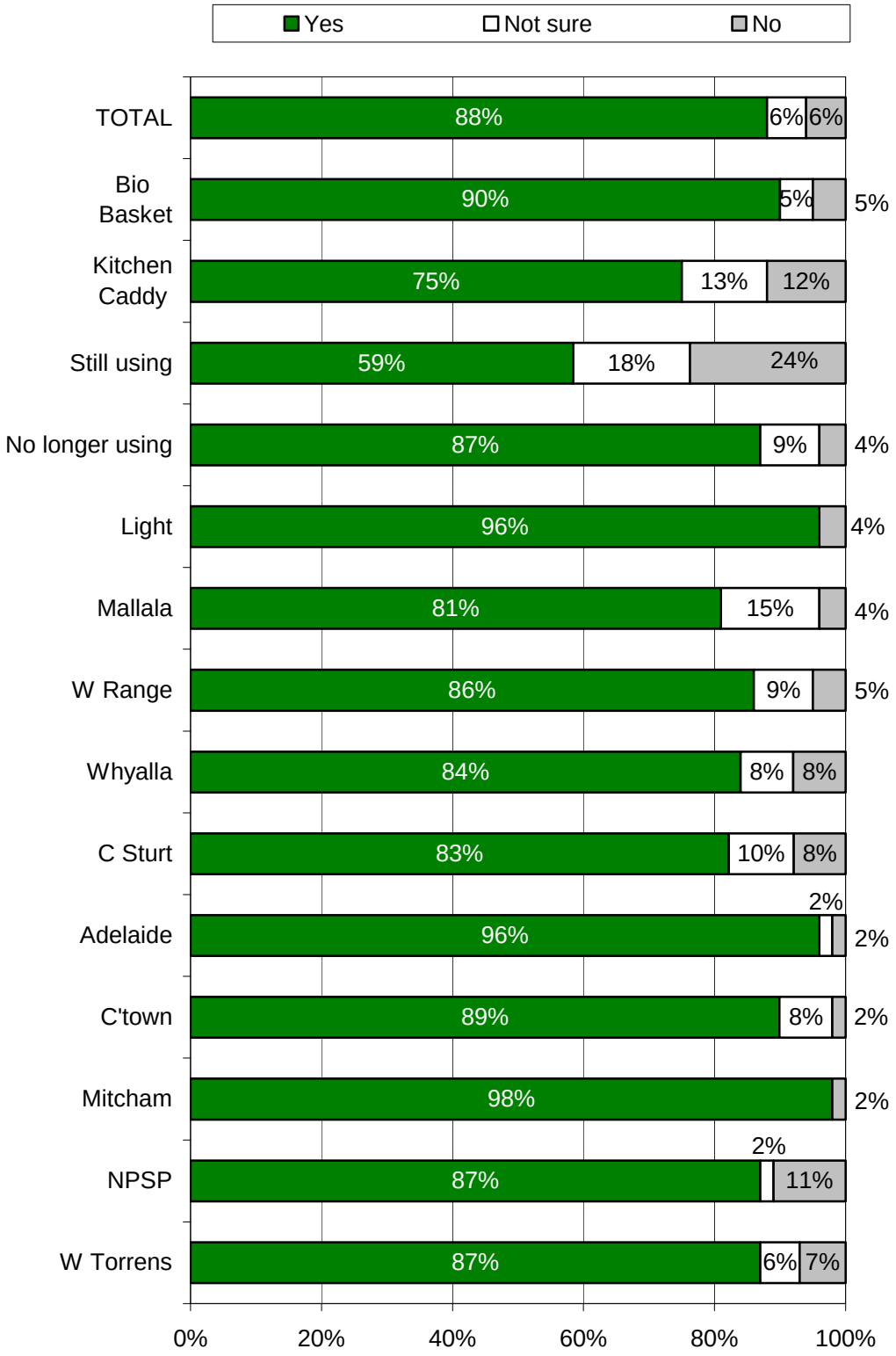
Replies were very similar to the previous question, with 88% responding in the **affirmative**.

As would be expected, those who are continuing to use the food waste system usually gave a **yes** response [95%] while those who have stopped using the system were less likely to do so – although the majority [59%] still said **yes**.

The response from the **Bio Basket** segment was significantly more favourable than the **Kitchen Caddy** segment [90% and 75% respectively saying yes].

There was little variation by council area. Responses from the ten council areas are also included in the graph on the next page.

## WOULD YOU RECOMMEND FOOD WASTE SYSTEM?



## Further comments (Q 20)

Before concluding the interview, respondents were asked if there were any changes they would suggest or if there were any other comments they would like to make.

Respondents made 443 comments. They are summarised below.

49 respondents made **general positive comments** praising the system, compared with 7 making **general negative comments**.

74 people had problems with their **Bio Basket** being **broken** or **flimsy**.

There were 71 calls for a **weekly green organics collection**, at least in summer.

50 people had issues with the cornstarch bags **tearing** or [less common] **leaking**. Another 6 complained that they **do not break down.**

29 respondents referred to the **availability of replacement bags**. Some of these did not know where to get bags; others found the need to visit council offices inconvenient.

26 people commented hat they **did not want to pay** for bags.

25 respondents would like a **bigger container**.

21 made negative comments about **hygiene, smell or vermin**.

13 residents of Kitchen Caddy areas said they would have **preferred a Bio Basket.**

10 individuals suggested a **solid** [unventilated] design for the Bio Basket.

7 people stressed the need to maintain **weekly residual garbage collection**, while 2 voiced the opinion that it could be reduced to **fortnightly**.

Another 7 would like **more information** on what goes in the system.

6 respondents would like to see **different coloured containers**.

A selection of the more detailed comments appears below.

- *Basket is getting bit worn out, the lid isn't working as easily but then I am using it at least a couple of times a day. It would be better if it was in better colours like white or black, something that we can colour coordinate with our kitchens.*

- *Because I have arthritis, I find the lid difficult to open so would suggest a design change-maybe a foot operated bin specifically for disabled people.*

- *I leave the bag in the container longer than the recommended four days (in order to save on bags). I use an ice-cream container, rather than the basket provided because the bag tends to sweat/ the solid container catches the moisture and I rinse it out with dirty dishwater.*

- *I am 95 years old and live alone so I don't have very much in the green bin. I have found it is best to share the bin with a neighbour as I only have about 3 bags a week and she does too. We only have to put the green bin out about every four weeks and we are careful what we put in the bags, eg I freeze the meat scraps until the bin is about to be collected.*

- *I am putting the bags in the red lidded bin because our green organic bin only gets picked up every two weeks-and the rubbish would smell.*

- *I didn't have space but if it had been able to be hung easily, say inside a cupboard, then I would have done this. The lid kept coming off and then eventually broke altogether. The lugs on the hinge didn't seem to be strong enough. The idea of the whole system is fantastic; it just needs a bit of fine tuning. It introduces the younger throw away generation to a better way of doing things.*

- *I didn't think it was hygienic to have it on my bench; it's not very attractive to have to look at all the time so we only use the bags. In the long run, it becomes a hassle. There's only two of us and sometimes the green bin would only contain the bags and it's not worth putting it out with so little in it, and we are not supposed to put the bags in the other bins so what are we supposed to do?*

- *I feel really disappointed as I want to continue using the system but when my green bin is just left there to get smelly in summer and I have to ring up Council each time to get it collected, it makes me pretty disillusioned about recycling food waste when Council can't do the right thing. I seem to be only one in the street to put out a green bin and I live alone so it's not every fortnight.*

- *I feel that we pay already for our waste collection services, the blue bin is still collected weekly but doesn't go out that often. Ultimately, through our effort, we're saving the council money, so bags should be supplied for free. If we had to pay for them we would probably take our scraps to the neighbour's chooks, like we used to do.*

- *I like initiatives that result in more recycling/ I would not be in favour of the proposed new system/ the one without the cornstarch bags/ because you'd have to wash the bin more often which would take time and waste water//*

- *I put food scraps in a breakdown bag in a big tin, while waiting for the 'green' bin collection, rather than let it sit in the bin for fortnight.*

- *I want some sort of bag in the kitchen caddy or the green bin outside because it's too messy and there is too much liquid. The bin smells.*

- *I would like to be able to put in dog hair, also larger bones in bin. I line the bin with grass clippings or prunings then put the food waste on top so there is no rotting problems. I presume we shouldn't use newspaper to line the organics bin. I am very pleased to be able to put my rubbish in the one place and know that it is being utilised again.*

- *it has become part of my daily routine, I feel guilty if I don't use my bio basket*

- *It is a good idea, but as one person household found it was easier to put straight into the bin.*

- *It is just as easy to put them into the garden, I just dig a hole. Give meat scraps to cat. I can't see much benefit to it.*

- *Just to remind Council that they do need to communicate clearly to everyone in the community about how to use it properly; fridge sticker is a good idea to remind people exactly what can go into it. We find the cornstarch bags very strong and good for the purpose. We loved getting another roll of bags delivered, this is a good idea and much easier than going to Council.*

- *Lack of space to put the basket. Also I am unsure if I can put vacuum cleaner paper bag and contents into the organic bin rather than the normal bin. I hardly need to get red bin emptied now, I only put it out every 3 weeks. The green bin could do with being emptied every week especially in spring and autumn when it gets very full with prunings etc.*

- *Liked getting new roll of bags delivered, they need to be free. As pensioners we can't afford to buy them. A lot of expense could be saved if people were made aware that they can put the food waste directly into the green bin without bags. Then we could just use the bags for the messier food waste.*

- *Making the bags easier to get, good if we could get them at local post offices rather than having to go to the Council. I heard a rumour that they may cut out the use of the bags and I definitely wouldn't use the system if we didn't have the bags. It means our bins would be filthy and we would always be cleaning them.*

- *My concern is the cost effectiveness of the program that is the big garbo truck stopping for minimal rubbish in a big green bin.*

- *Not sure about newspaper whether it could be included into the green bin. It would be good if there was some sort 'low cost' powder/sawdust to neutralize the odour. (It's seasonal, because the odour is OK now but won't be in the summer). I know there is something available somewhere.*

- *Sometimes when I tear the bag off the roll it tears the bag longways. The bag is also a very tight fit on the basket and sometimes it rips.*

- *The 'green' lidded waste bin gets very smelly. Could they aerate the bin so that the food composts down? When we put lawn clippings in it seems dissipate the odour.*

- *We don't need it, it is not necessary and I prefer to put straight into green organics bin, rather than have a smelly bin in my kitchen.*

- *When the basket is 3/4 full the bag is already full, that makes it hard to tie-off/ I'm reluctant to use the extra bags that are required if I was to empty it more often.*

- *Absolutely brilliant!/ over the summer we had to change the bag daily, it became smelly and attracted those tiny flies/ the council delivered more bags on request: thanks!/ now that trial has finished, I use a standard plastic bag lined with newspaper and empty the contents into the green bin, discarding the bag in the general waste.*