

THE BIG LITTLE WHEELIE BIN ROLL-OUT

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Introduction

As a result of the implementation of Auckland City's Waste Management Plan (Isthmus section), several changes were made to the refuse and recycling services provided to customers in this part of Auckland City from 1 July 2002.

The most significant change was the provision of a 120L mobile garbage bin (MGB) for weekly collection of household waste to all customers, who had previously had a choice of a 120L or a 240L MGB (with only 20% using a 120L MGB by choice). As a result of this change, there have been noticeable changes in both the amounts of waste and recycling collected, and the composition of the waste stream.

This paper discusses the implementation of the changes, focusing on the operational and communication aspects, and presents results from the first year of the new system.

Background

On 9 September 1999, the Isthmus section of the Waste Management Plan ('the Plan') for Auckland City was adopted by Council. Auckland City's Waste Management Plan focuses on solid waste, and is based on the waste hierarchy as per the Local Government Amendment Act (No. 4) 1996 ('the Act'). There are separate sections for the Central Area and Hauraki Gulf Islands.

The Isthmus section of the Waste Management Plan applies to the area shown below:

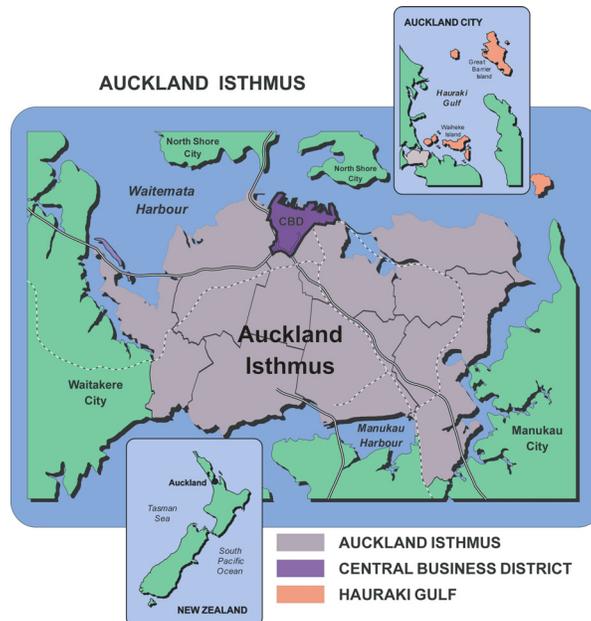


Figure 1: Map of the Auckland Region showing the Isthmus area of Auckland City.

The Plan contains a key target for the amount of household waste disposed of to landfill of a 50% reduction by 2003, and an 80% reduction by 2010. These targets are to be measured against a baseline of the amount of household waste disposed of to landfill during the 1996/97 financial year. Household waste is considered to be waste collected by Auckland City contractors through the weekly kerbside collections.

Surveys undertaken during the preparation of the Plan showed that Auckland City residents produced more waste per household than any other City in the Auckland region, and that the amount of waste taken to landfill was growing each year at a rate higher than Auckland City's population growth. Waste Analysis Protocol (WAP) surveys also showed that about half of the waste being put in the MGBs for weekly collection was organic, and a further 25-30% was potentially recyclable considering services already available.

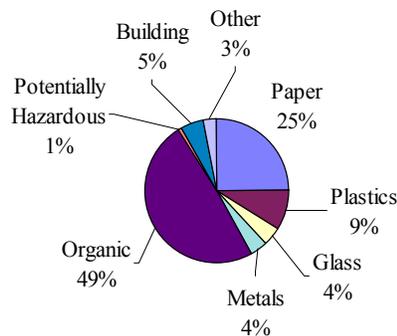


Figure 2 – composition of Household Waste in Auckland City (WAP audit results 1995-1996)

MGBs (both 240L and 120L) were progressively introduced to Auckland City from 1992. Prior to this time, a range of different collection services had been provided. In August 1995 a kerbside recycling collection using 45L crates was introduced, for the recycling of glass bottles and jars, some plastics, tin and aluminium. This was in addition to the paper and cardboard collection already available.

Despite the provision of these recycling services, and ongoing education and promotion of composting and recycling as alternatives to putting recyclable and compostable waste into MGBs, there was little motivation for customers to make the effort to sort their waste properly. An additional factor was that all services were funded by rates and so customers had little awareness of the actual cost of the services.

It was recognised that to achieve the targets set out in the Waste Management Plan, a significant change would need to be made to the way Auckland City provided refuse and recycling services to customers. While the draft Plan recommended introducing a form of user pays, submissions were strongly in opposition to this (probably due to the recent introduction of Metrowater and 'user pays' for water and waste water). Therefore the key action subsequently recommended in the Plan was to replace all MGBs used for refuse collection with a 120L MGB.

Developing an implementation strategy

Following the adoption of the Plan, a strategy was developed with specific actions to achieve the target. The actions of interest here are those that related to household waste, which included the following:

- replacement of all MGBs provided for weekly refuse collections with a 120L MGB,
- promoting the allowance of three recycling bins per eligible property, expanding the range of materials recycled, and making non-residential properties eligible for the service for the first time,
- promoting the continued provision of paper/cardboard recycling collection, and
- implementing a new system for managing organic waste called ‘green.cycle’.

The implementation of this strategy required the following:

- rewriting all refuse and recycling contracts, procuring new suppliers for these services, and delivering new 120L MGBs to all customers,
- communicating the changes to all affected customers and persuading them that this was a positive move by Council, and managing the associated PR and media,
- running a trial of the new system to back up the communication message, and
- developing and implementing green.cycle.

All but the first are covered in more detail below.

Communication and PR

Communicating to affected customers and management of the media and PR was recognised as being crucial to the success of the implementation. A total budget of \$500,000 was approved by Council, and this was allocated over two years.

The main risks identified were the reluctance of the general public to take responsibility for their waste, and the predicted negative reaction to the change from a 240L MGB to a 120L MGB – this would obviously be interpreted as a reduction in service from Council, without the expected decrease in rates.

Key Messages

The following key messages were reiterated as much as possible in all material:

- Auckland households create more rubbish than households in any other city in the region.
- Nearly 75% of the rubbish currently in an average MGB could be recycled or composted.
- Auckland has a mounting rubbish problem.
- Services are not decreasing – we are actually providing more, we just need you to sort your waste first.

Advertising

Due to the size of the budget and the importance of the campaign, a supplier was procured to design and coordinate the advertising campaign. The agency chosen came up with the slogan ‘Play Your Part – and get our rubbish sorted’ and a marketing plan was developed with the following components:

Phase 1 – Why? July – December 2000 (raising awareness of waste issues)

TV commercial featuring Beatrice Faumuina; a media campaign, including a launch in November 2000 attended by Beatrice Faumuina; and PR stunts.

Phase 2 – What? January – April 2001 (how to use the services already in place, and to advise of the forthcoming changes)

Direct mail to all customers; continued PR; bus, print and radio advertising

Phase 3 – Now! May and June 2001 (the changes are happening – here’s how it works)

Direct mail, continued PR stunts, media coverage encouraged – print, radio and TV

Waste Doctors

The Waste Doctor concept was adapted from similar programs run by Australian councils that had already gone through the transition from a 240L to a 120L MGB. The Waste Doctor team was comprised of staff trained in answering questions about the new system, and focused on face to face communication. During May and June the Waste Doctors proactively spoke to customers in high pedestrian areas, and during July were available on a reactive basis to visit customers who were having difficulty.

‘With Bin’ Flyer

A key gap identified early on was the customer who, for some reason, did not receive any of the direct mail, ignored the media, and was not exposed to any of the Waste Doctor displays. A brief flyer was produced and was on the top of the new MGB when it was delivered to the property, attached with tape printed with their new collection day.

Lessons Learned

A change of this magnitude to this many customers at once had not been managed before, and as expected there were many things we would have done differently in hindsight:

- 1. Information will be ignored unless customers have a reason for believing it important to them.** In retrospect the ‘phase 1’ awareness campaign, which used a large portion of the budget, was too subtle and ‘clever’ to be effective. A better use would have been promoting as widely as possible the fact that the changes were coming, and what affect they would have, earlier. Customer interest (and therefore media interest) only really came when they could no longer ignore what was happening – ie the new bin had arrived on their doorstep.
- 2. Key communication needs to be 100% clear and aimed at the absolutely lowest common denominator.** A good example of this was the sticky tape that was used to attach the ‘with-bin’ flyer to the top of the new MGBs, and held the lid closed. This tape advised the customer of their new collection day, and that the bin would be collected for the first time in the first week of July, but was slightly open to interpretation. This resulted in many customers using their old bin longer than intended, or continuing to put their bin out on the wrong collection day.
- 3. Some methods of communication are far better than others – but which ones?** One of the surprises was the success of the Waste Doctor team. Although the team were only able to speak to about 10% of the customers affected by the changes, this form of communication was nearly 100% effective with only very few customers asking for further assistance. Independent market research indicated that while respondents preferred to be advised by receiving a brochure or circular in the mailbox (72%) only 29% believed that they had been advised of the changes in this way (even though at least three pieces of direct mail were sent to most customers). The research also found that 15% more people thought recycling was important compared to the initial research in 2000. (Forsythe Research, Recycling Campaign Monitor Wave 2,

2001) Obviously the information did get through – but by which method? Focus group research may have been a more accurate way of getting this information, and of assessing the effectiveness of individual communication pieces.

4. **Language needs to be completely free of ‘jargon’ and technical terms.** This meant terms such as ‘waste’, ‘refuse’, ‘recyclables’ and ‘organic waste’ were replaced with ‘rubbish’, ‘recycling’ and ‘garden rubbish and food scraps’. This was crucial to ensure printed information was easily understood by customers.

The eventual spend on communications for this project was over budget by about 15%, and this doesn’t take into account costs such as temporary staff for the Auckland City Call Centre (who took over 80,000 calls in six weeks regarding the service changes). Most of these additional costs were for last minute advertising or communication material to fill unforeseen needs.

A trial of the new system

During the last few months of 2000, 320 households across Auckland took part in a trial of the new system for eight weeks. This trial had the joint purpose of addressing political concern that the new system would not suit some households, and of providing supporting evidence for communication material.

The 320 households were from six areas and were chosen such that a range of socio-economic levels were represented. Audits of refuse and recycling composition were carried out several times before and during the eight week trial. The proposed system was imitated by providing each household with a 120L MGB, three 45L recycling bins, and coupons which could be redeemed for two collections of garden waste from a 240L MGB.

Prior to the trial, audits showed that the composition of the refuse in the MGBs was similar to that found citywide, with a large amount of organic and recyclable material being placed in the bins. This proved that the residual waste component for every household could easily fit in a 120L MGB, if the waste was sorted properly.

By the end of the trial results showed the average bin weight had gone down by 45%. The most significant change in composition was the reduction in green waste of about 90%. (Bruce Middleton – Waste Not Ltd, Trial of Integrated Waste Management System for the Auckland City Isthmus, 2001) Although some householders still felt the 120L MGB was too small, nearly all of the trial participants opted to continue with the system until the city-wide implementation six months later.

One of the trial participants was a household of 12 people. The person responsible for managing the rubbish and recycling for the household initially believed that there was no way she would be able to cope with a 120L bin. With support from the project manager, and advice on recycling and composting as much as possible, she was able to manage within the constraints of the new system. This was a very useful test case and was used many times during the subsequent implementation as an example of what could be done.

Green.cycle – a garden waste collection coupon system

The data showing that about 50% of the average MGB contents could be composted indicated that a system to remove garden and food waste from the waste stream was

crucial to achieving the targeted reduction. A coupon system was developed using the now redundant 240L MGBs, relying on a partnership with the garden waste collection companies already operating in the City. Seven garden waste collection companies were confirmed as 'registered' operators for the green.cycle system. There were also a number of retail outlets that were registered retailers for the system.

The main alternative to this system was to tender for a kerbside collection of garden waste. Due to the strong presence of a garden waste collection industry in the city already, a partnership with this industry with Council subsidising collections was seen as a better option.

Each rated property in the Isthmus (including non-residential properties) were provided with six green.cycle coupons, which could be used in three ways:

1. When all six coupons were given to a chosen registered operator and a regular garden waste collection was requested, six collections would be provided of garden waste from the old 240L MGB. If the customer chose to have a one-off collection, or wanted to use a garden bag instead of the bin, they could negotiate with the operators as to how many coupons would be required.
2. Coupons could be used to help pay the gate fees at a garden waste drop-off centre.
3. Coupons could be used to help pay for a compost bin or worm bin from one of the registered retailers.

Each coupon was individually identifiable by a bar code and serial number. Coupons would be given to the registered operator or retailer who would then claim redemption from Council each month.

The total budget for the green.cycle system in its first year of operation was \$2.3M. This included all set-up costs and a contingency in case the redemption rate for the coupons was higher than predicted.

Issues

- The coupons were mailed to the ratepayers for properties, as this was a rates funded service. In the case of rental properties, these were often not passed on to tenants who were therefore unable to take advantage of the service.
- Coupons went missing – in the post, in drawers, accidentally thrown out, or taken by previous owners or tenants. 'Lost' coupons were replaced, which resulted in added administration time and expense reprinting coupons.
- Many customers believed that six coupons (which usually meant six collections) were insufficient. The number of coupons was essentially a budget restriction issue.
- The system was seen as unnecessarily complicated and confusing by many residents and operators.
- While the service was essentially being paid for by Council, the chosen registered operator provided the service. In many cases this service was of poor standard and Council would continually be called on to mediate in customer disputes.

Green.cycle was originally planned to run for at least two years and possibly three, with the intention of getting customers into the habit of using a garden waste collection. The theory was that when the coupons were reduced or no longer provided, customers would continue to use the service.

Following the election of a new Council in late 2001, green.cycle was discontinued after operating for only 12 months. At the end of this time, over 35% of the coupons issued had been redeemed for services and the total budget spent was \$1.8M. Considering this and the results that had been achieved in waste diversion over the year (see next section), this was a disappointing outcome for many.

Results so far

Immediately following the introduction of the new system, a reduction was seen in refuse and a large increase in recycling collected.

The figure below shows the amounts of refuse and recycling collected by the isthmus contractors over the 18 months from January 2001 to June 2002. Also included is the amount of paper/cardboard collected by Full Circle during this time, and an estimate of the amount of green waste collected by the garden waste operators through green.cycle (based on available information - in reality this figure would be significantly higher).

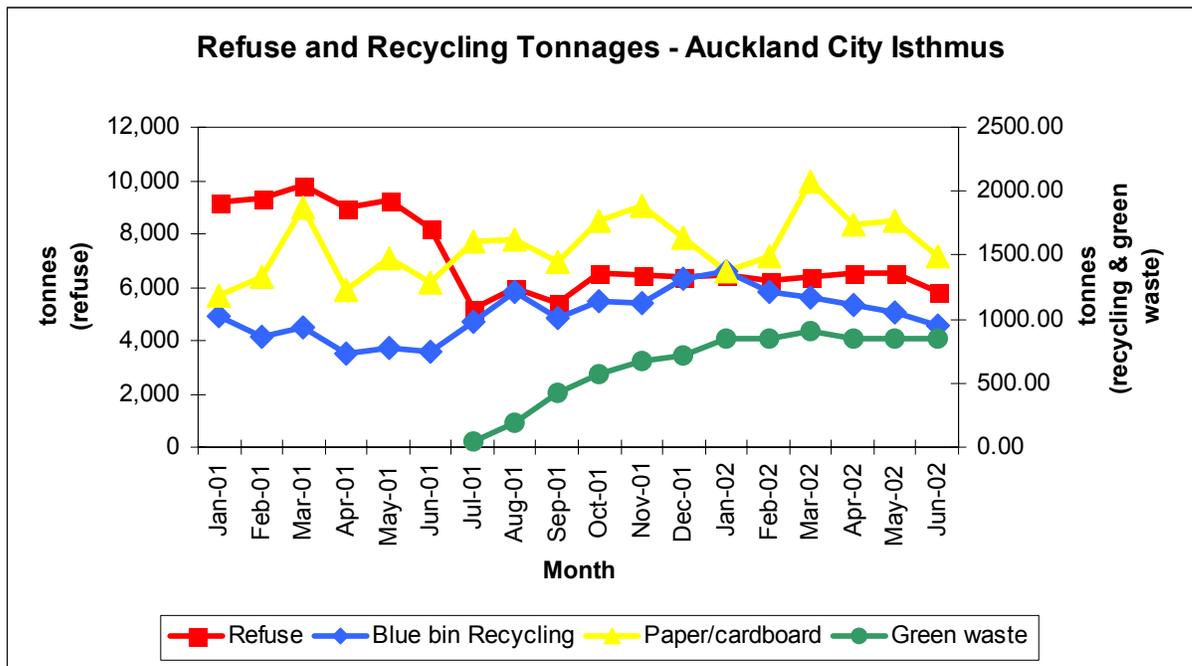


Figure 3: Refuse and Recycling collected in Auckland City Isthmus January 2001 – June 2002

Comparing July 2001 with July 2000, refuse shows a 36% decrease, and blue bin recycling shows a 55% increase.

Over 130,000 recycling bins were delivered during July, August and September 2001. The most significant immediate increase noted was the amount of plastic recycled (grade 2 increased by 190% and grade 1 by 115%). Aluminium and steel both increased by about 75%, and glass by about 50%.

A closer look at the data shows the decrease in refuse is not matched by an increase in the three other ‘recycling’ materials. One of the reasons for this is the number of customers that as of 1 July 2001 were no longer eligible for a service from Auckland City, due to a change in Council’s allocation policy. The main customer group affected were non-residential properties that had been paying for additional 240L MGBs from Council, which had been provided at a commercially competitive rate of \$185 per year. This was seen to be non-conducive to encouraging waste reduction, and so a change was made to the allocation policy reducing the availability of additional services. This resulted in approximately 6,000 fewer refuse MGBs being in service at 1 July 2001 as had been in service at 30 June 2001. Obviously this has had a great impact on the amount of refuse collected by our contractors.

A more informative view of the changes to the waste stream is by looking at the changes in composition of waste. The first WAP audit to be completed following the implementation of the new systems (November 2001) shows several significant changes:

- A large reduction in the average weight of an MGB
- Recyclable material had reduced – paper and cardboard, glass bottles & jars, steel cans
- Greenwaste had reduced significantly.

The figure below (courtesy of Bruce Middleton, Waste Not) shows the changes and the relative significance in more detail.

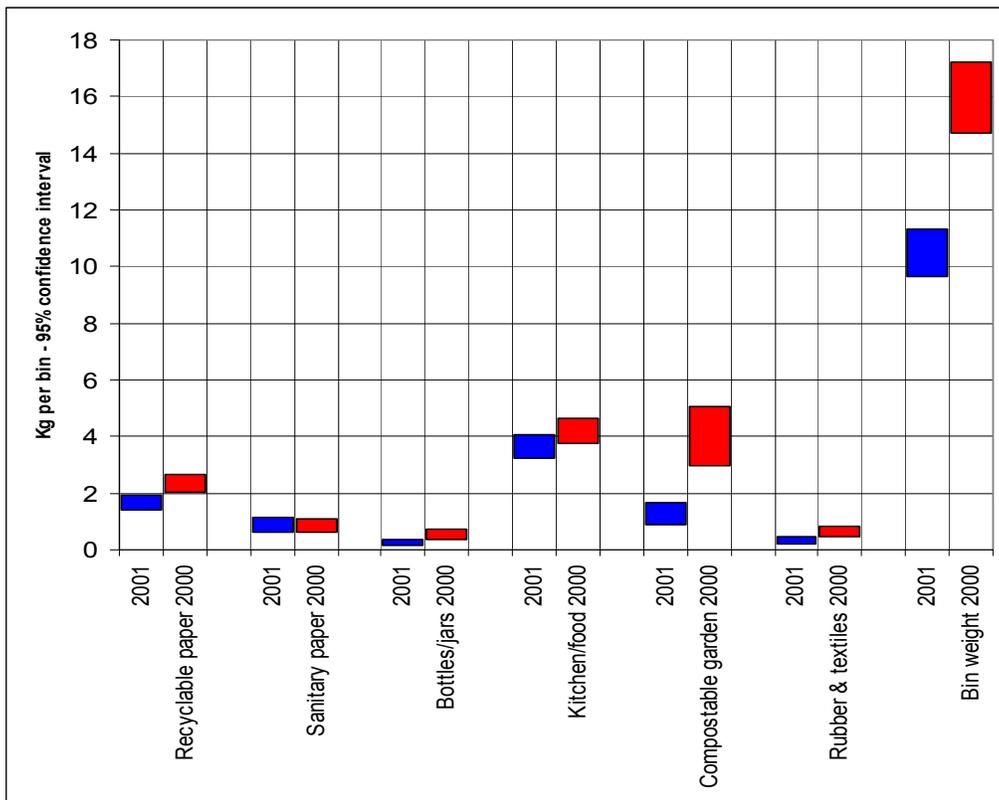


Figure 4: Comparison of WAP audits prior to and following the implementation of the new refuse and recycling services (courtesy Bruce Middleton, Waste Not)

These results show the most significant change was in the reduction of garden waste. This is not surprising, considering that the introduction of the green.cycle system was the most significant service addition when the 120L MGBs were introduced. The results also make it all the more disappointing that the green.cycle system has now been discontinued. The effect of this on the refuse tonnages is yet to be seen, but further information will be presented at the conference in November.

Summary

The introduction of the 120L MGBs has resulted in a significant (35%) reduction in the amount of refuse collected by Auckland City, and the amount of recycling collected has increased (40%). However one of the most significant behavioural changes over the first year of the scheme has resulted in the diversion of green waste. This is concerning given the recent cancellation of the green.cycle scheme.

The recycling results continue to be encouraging, but the WAP results show that there is still potentially recyclable material being put into the refuse MGBs.

Now that the 'big stick' approach has been taken, it is time to see how the 'carrot' can work in getting the remainder of the recyclable and compostable material out of the refuse MGBs. It is highly unlikely that Auckland residents would accept a reduction to an even smaller MGB! An intensive public education and communication program seems to be the only remaining tool to help divert the further 15% from the waste stream required to reach the Waste Management Plan target of 50%. However considering the enormous negative public reaction during July to September 2001, Auckland City customers have now accepted the new systems and are using the available services well.

Acknowledgement

Bruce Middleton of Waste Not Ltd for audits, project management of the trial, and patience in answering 'but what does this really mean?'

References

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Middleton, B: various reports, but most significantly
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