
KERBSIDE RECYCLING

1. Purpose of Report

To seek agreement to consult on potential changes to the kerbside recycling service in Wellington City.

2. Executive Summary

Kerbside recycling collection is intended to be fully funded through a levy on waste disposed to landfill. However, revenue from the Council's levy on waste to landfill at the Southern Landfill does not cover the costs of the Council's collection services. Anticipated reduction in volumes of waste to landfill will increase the shortfall. This report considers options to address the current funding shortfall. Some of the wider implications of kerbside collection services for divertible materials in Wellington City are also considered. Currently, global markets for recyclables are depressed and recycling may not be the best option for some materials.

The Committee is asked to agree to consult the public on potential changes to the provision of kerbside recycling collection services in Wellington City. The recommended options would see:

- partial cost-recovery being met by users of the recycling service
- improvements to operational safety and street litter as a result of the use of prepaid recycling bags, rather than the current Council bins
- a focus on advocacy and facilitation at regional and national levels, and targeted consumer education.

If agreed, the recommended options would require changes to the Council's Solid Waste Management Plan 2003. It is intended that the report's recommendations be incorporated into the Long Term Council Community Plan 2009/19 consultation process.

3. Recommendations

It is recommended that the Committee:

1. *Receive the information.*
2. *Note that recyclable material collected through Wellington's kerbside collection services makes up a small proportion of the total waste volume managed by the Council, currently costs \$2.6m annually and earns \$165,000 in revenue.*

3. *Note that the economic and environmental merits of kerbside recycling are reduced landfilling, conservation of resources and positive public perception; rather than income from the sale of materials.*
4. *Note that there was a deficit of \$1.1m in 2007/08 for recycling services and that this deficit is expected to increase as landfill waste volume and levy revenue reduce, and the volume and costs for recyclables increase.*
5. *Note that the green bins are no longer considered to be suitable collection containers for divertible materials in Wellington City and note that changing from bins to pre-paid bags would be expected to provide partial cost-recovery, and operational, safety and environmental benefits, as well as additional flexibility for responding to externalities.*
6. *Agree to consult on changing the operating model for the Council's kerbside collection of divertible materials to one where:*
 - *residents are asked to sort recyclables into different plastic bags*
 - *the types of material collected, such as glass, may change.*
7. *Note that funding options which propose a reallocation of existing charges from waste disposers to the users of recycling services will be perceived by some ratepayers as introducing a new user charge.*
8. *Agree to consult on the following funding options for the provision of kerbside recycling collection through a bag model:*
 - *alignment (reduction) of service levels to match available landfill levy funding*
 - *100% rates funding, with consequent reduction of landfill levy charges*
 - *raising the landfill levy to fully cover the cost of recycling services*
 - *100% user pays, costing participating households approximately \$60 annually, with consequent impact on landfill levy charges*
 - *continued landfill levy funding, supplemented by partial user pays (approximately 50%) through the purchase of recycling bags (currently estimated to cost households \$30 annually) to fill the shortfall. This is the recommended option.*
9. *Agree that the recommended funding option would include a transitional period during which free recycling bags would be provided to residents to support the adoption of more effective personal waste management behaviours.*
10. *Note that this review of kerbside recycling is being undertaken as part of a wider programme of work required by 2012 under the Waste Minimisation Act 2008 and that officers will report to committee by the end of 2009 on progress.*

4. Background

4.1 Scope of this report

This report considers the Council's position on the provision of kerbside collection services for recyclable materials in the context of cost, emissions and markets. The review is also being undertaken as part of a wider programme of work required by 2012 under the Waste Minimisation Act 2008.

For the purposes of this report *recycling* is defined as both the materials that the Council identifies as being able to be separated from general household waste and collected separately for the purposes of *reuse* (used again in the same form for a similar purpose) or *recycling* (used again in a new form following some form of processing). The Council collects a limited range of divertible materials for recycling - cans, bottles, plastics 1 and 2, paper and cardboard.

Approximately 85% of all households in Wellington City, *participating households*, use the Council's kerbside collection services.

A review of kerbside collection of recyclables was undertaken because:

- A \$1.1m deficit resulting from falling revenue and increasing costs is causing pressure on the current funding model for kerbside recycling and this funding shortfall is not considered to be sustainable.
- Use of the existing 45 litre green plastic bins (Council bins) has proved problematic in Wellington City.

There are also concerns that our recycling of materials may contribute to negative effects on the environment, either through transport emissions over long distances or through the remanufacturing processes.

Submissions to the proposed Waste Management Bylaw in November 2008 were used to inform this review of kerbside recycling. Further public consultation will be undertaken on any proposed changes to kerbside recycling.

4.2 Why do we recycle?

Previous Committee decisions on recycling have been premised on a general view that diverting materials is preferable to landfilling because:

- The environmental effects of recycling are less than those of disposal to landfill.
- Many virgin materials are becoming increasingly scarce and there is a market for recyclables.
- There is a very strong 'feel good' factor associated with recycling for most residents. It is perceived as being 'good for the planet' and 'good for soul'.

4.3 Assumptions versus current trends

While recycling is a fundamentally positive aspiration, the complex range of factors to be weighed means many common assumptions are called into question:

- Diversion of some materials can have significant unintended environmental effects. For instance, glass is an inert addition to landfills with its volume being the main concern, whereas recycling it can require long-distance transportation. Each material and its markets must be considered before determining how it can best be managed.
- For each material, a complex mix of costs, including those of collection, separation, storage, transport, processing and unintended social impacts, must be weighed against the cost of using virgin materials to determine the total costs of recycling that material. Where the total costs exceed the savings and the diversion is still considered worthwhile, the revenue to sustain that diversion would need to be subsidised from non-market sources, such as rates. Currently the cost of kerbside recycling is partially funded through the Council's landfill levy.
- With little re-processing based in New Zealand, recyclable material from Wellington is heavily exposed to international market fluctuations and externalities such as monetary changes and transport costs. Currently the markets are depressed, particularly for paper and glass. Market conditions continue to deteriorate with collectors closing down and some other councils starting to stockpile materials until markets recover.

4.4 The current situation in Wellington

Currently, the Council's kerbside recycling is collected by in-house and contracted staff at a total cost of \$2.6m. Collection is not significantly offset by the approximately \$165,000 revenue from the sale of recyclables.

The Council green bins are not used in the Central Area. Users are able to use supermarket bags, boxes or bundles, or purchase recycling bags. These currently sold at \$3 for 20 and are colour coded (green for glass, plastic and cans, and red for paper and cardboard).

In May 2004, the Council agreed that all waste for disposal to landfill at the Southern Landfill and the Northern Landfill, other than green waste, would attract a waste levy charge providing approximately \$1.5m for kerbside recycling collection services. Since closure of the Northern Landfill in 2006 waste volume has declined and the funding available to pay for kerbside recycling has dwindled. Whilst overall the Council's management of waste continues to operate within budget, the shortfall in revenue for recycling services from the landfill levy was \$1.1m in the 2007/08 financial year. This deficit is expected to increase over time because:

- Landfill fees will increase as a result of levies imposed by the Waste Minimisation Act 2008 (WMA) in July 2009 and the Emissions Trading Scheme in 2013. This legislation will encourage further waste minimisation and reduce waste to landfill.
- Recycling volumes will continue to increase while relative volumes to landfill will decline.

Under the current model, kerbside recycling collections, totalling approximately 13,000 tonnes annually, represent around 12% of the waste and divertible material handled by the Council. At the current cost of landfilling, \$82 per tonne, this equates to around \$1.1m worth of landfill space. Whilst this is a

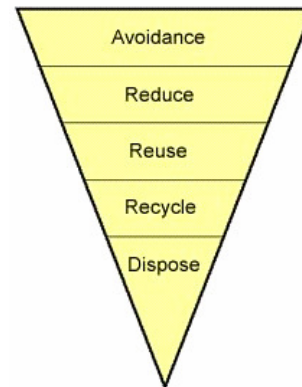
relatively small volume, recycling is of high interest to many residents. The annual total cost of recycling is currently around \$60 per year per participating household. This cost is similar to that for residents of Porirua and Hutt cities. Further detail of the current position and trends for Wellington's divertible material collection is provided at Annex 1.

4.5 National strategy

Recycling in New Zealand is challenged by:

- a lack of domestic processing opportunities and markets for materials
- poor economies of scale – we have a low population density
- relatively high transportation costs – both domestic and international.

Making the disposal of recyclables easy through the provision of a convenient service fails to highlight the importance of *avoidance*, as in the pictured waste hierarchy, for reducing waste. For instance, a consumer under the incorrect impression that they can meet their environmental responsibilities by simply separating their recyclables, may fail to be selective about their purchases and therefore not apply pressure to minimise waste through avoidance of packaging and containers.



Waste Hierarchy

Central government has recognised that producers, consumers and disposers, as well as local authorities, have a part to play in waste minimisation, and that legislation is required in order to modify waste behaviours in New Zealand.

This review forms part of a wider programme of work required by 2012 under the Waste Minimisation Act 2008. The WMA and the Emissions Trading Scheme aim to minimise the volume of waste landfilled but also aim to minimise the volume of waste produced. The WMA provides for product stewardship, a waste disposal levy and enforcement. It also imposes additional obligations around waste minimisation on territorial authorities. The Council made a number of submissions on these government initiatives.

The New Zealand Waste Strategy 2002 prioritises waste avoidance and reuse over recycling, and recycling over landfilling, except where the total cost or wider impacts of recycling means that landfilling offers a net benefit

Implementation of the WMA is expected to include a significant information campaign, assisting residents to better understand the nature of waste and how they can contribute to its reduction and management.

4.6 Regional collaboration

In the Wellington Region there have been no significant changes to recycling since the inception of kerbside recycling over ten years ago. In brief, the recyclable materials are collected and delivered to Transpacific AllBrite in Seaview where they are sorted (by plastic type, glass colour, and so forth) before being exported to various markets in Asia.

Recycling in the Wellington Region is characterised by:

- high participation in kerbside recycling (85% for Wellington City), and expectations that more recyclable materials will be collected in the future and that councils will continue to take responsibility for that recycling
- a council-specific rather than regional approach to kerbside recycling, although most Wellington councils use the same collection system. Collection of divertible materials is funded from rates in Porirua and the Hutt councils, and from a landfill levy in Wellington
- a lack of local markets for recycling and only one significant commercial market player, Transpacific AllBrite, in the region, although Wellington City Council continues to explore local opportunities as they arise
- a dominance of transportation costs, for both collections and export to market, in determining economic feasibility
- limited volumes of materials and economies of scale
- a limited public understanding of what happens to recycling after it has been collected. While the perceived benefits of recycling are often touted, the full economic and environmental impacts of recycling are often masked.

Some other regions, such as Auckland, Manukau and Christchurch, have recently overhauled their collection systems to promote diversion of materials from the waste stream. Wheelie bins have proved the preferred option in these locations but solutions must meet local needs and opportunities. For instance, transport impacts and volume efficiencies for Auckland are significantly different to those for Wellington.

4.7 Where does it all go?

The Council has no way of knowing what portion of the recyclables collected are actually reused or recycled, and what portion is ultimately landfilled elsewhere. Recycling changes from an environmentally driven activity into a commercially driven activity as almost all of our recyclable material is sent to markets in East Asia, where recyclers can get the best prices. There it provides raw materials for use in heavy industry, often with adverse effects on the local environments which most New Zealanders are unaware of.

Annex 2 outlines the current market environment for key recyclable commodities. The Council's current contract with Transpacific AllBrite, due for review before September 2009, leaves the Council exposed to the increasing commercial risk. In the current market it is considered that the Council ought to at least not increase the range of products being collected for recycling.

4.8 Who benefits?

The costs of kerbside recycling, and some of the environmental impacts, are borne locally. The annual cost of providing a recycling service in Wellington City is over \$2.6m.

Collecting recycling is the most expensive part of the process and this cost is currently borne indirectly by residents. However, most residents:

- pay no direct cost for collection as this is funded through a levy on waste disposed to landfill at the Southern Landfill and from other activities. This gives the impression that recycling is ‘free’
- have limited understanding of the operations, markets and industrial processes involved in the recycling industry, or of waste disposal
- perceive no link between their weekly consumption habits, recycling and heavy industry in Asia, or the associated environmental impacts.

There are no long-term adverse environmental effects of the Southern Landfill operation. There is no cost benefit from its operation either as, under the life cycle costing model, the operation is cost neutral. However, there is a break-even point in terms of waste volume below which the Council would have to subsidise the landfill operation through rates revenue.

The benefits of kerbside recycling do not directly flow back to Wellington. They are accrued:

- locally by Transpacific AllBrite, which is able to sell materials at a profit, and by Wellington residents, in that they feel good that reducing the material going to Wellington’s landfill extends the landfill’s lifespan
- overseas, particularly in Asia, by manufacturers who receive cheap raw materials for their plants, and through employment opportunities
- globally, through reduced use of virgin materials, and reduced energy use and related greenhouse gas emissions, but subject to market distance from New Zealand ports.

4.9 Council bins

The existing 45 litre green plastic bins (Council bins) are no longer considered the most suitable receptacle for kerbside recycling collection in Wellington City, and other cities are now moving away from this method of collection, because:

- Collectors are at least eight times more likely to receive an injury when these bins are used, compared to other methods.
- The volumes of recycling have become greater than the capacity of the bins for many participating households.
- Spilled and wind-blown material from the bins is unsightly, unhygienic and expensive to clean up. A high proportion of stormwater blockages are caused by plastic bottles spilled from recycling bins.

5. Discussion

5.1 Changing operational environment

Wellington City’s recycling collection service is operating in a complex and uncertain context and Wellington is only a minor participant in the international market for the management of recyclable materials.

The requirements of the Local Government Act 2002 and the New Zealand Waste Strategy have resulted in councils becoming de facto stewards of municipal waste and recycling. Yet councils have little or no influence over the

producers and consumers who create the waste, or over such factors as market prices or the adverse environmental impacts of processing. The WMA aims to push back responsibility for stewardship onto the producer and the disposer.

Within this complex environment, Wellington City Council:

- is obliged to meet the requirements of the WMA
- seeks to align its services with its Solid Waste Management Plan and Climate Change Action Plan
- is under financial pressure to match rate-payer and visitor expectation and demand for services, with revenue
- must meet the constraints of Wellington’s physical environment
- has national and regional leadership opportunities.

Wellington City Council cannot meet the competing demands in isolation. Central government has an important national role to play (see section 4.5), as set out in the New Zealand Waste Strategy and the WMA, and there are exciting regional collaboration opportunities for coordinated services and cost reductions (see section 4.6).

5.2 Funding options

Kerbside recycling was intended to be funded through landfill entry fees. The under-recovery of \$1.1m indicated below in Table 1 is currently provided for through revenue from other waste activities, such as the sale of Council rubbish and recycling bags.

The revenue shortfall is expected to increase as the volume of waste disposed to the landfill decreases and kerbside recycling volume and costs increase. This is also likely to be made worse by the implementation of the WMA, which sets out to discourage landfilling in favour of recycling. Further, revenue from sales is subject to market fluctuations and the unstable market for recyclables creates potential risks for the Council.

Table 1: Income and expenditure for Council’s recycling services in 2007/08

Income	\$1,213,454
Expenditure	\$2,311,577
Balance (Funding shortfall)	(\$1,098,103)

Kerbside recycling collection services could be funded through one or more of:

- a levy on waste disposed to landfill, as at present
- rates provision
- user charges collected through the sale of recycling bags, or regularly billed to users.

The following funding or service options based on the proposed collection model using bags have been considered, and an analysis is provided in Annex 3:

1. **Changing service levels**
 - **Match service levels to revenue** from the landfill levy
 - **Align service levels with market changes**
2. **Fully rates funded.** This would currently cost around \$60 per participating household annually, spread over all ratepayers
3. **Raising the levy** to meet the full cost of recycling collection services
4. **Fully user pays**
5. **Partial user pays**, with the balance funded from the landfill levy. This is the recommended option.

One of the principles underpinning the development of the 2009/19 Long Term Council Community Plan (LTCCP) has been that *no new user charges* would be introduced. While options 1, 2 and 3 are clearly consistent with this principle in that they seek to work within existing approaches to meet the shortfall, options 4 and 5, with their move to direct payment for services through a partial or a fully user-pays approach, will be perceived by some to represent the introduction of a new user charge.

1. Changing service levels

Matching service levels to revenue available from the landfill levy would:

- not be consistent with the Council's Solid Waste Management Plan 2003 or the waste minimisation imperatives of the WMA
- mean litter issues would likely be exacerbated and current user and visitor expectations would not be met.

Further, the landfill levy revenue is expected to drop as the volume of waste landfilled drops, so service levels would need to be reduced even more.

Options for alignment of service levels with market changes to manage costs include:

- landfilling glass (see Annex 2 for a discussion of the implications of glass collection)
- additional composting of papers and cardboard while those markets are depressed. Or paper to be landfilled could be collected with general waste
- continuing to limit the collection of plastics to those types with reasonable market value
- taking initiatives to further encourage the separation of metals for recycling while these markets are strong and stable.

Limiting the range of materials collected for recycling to those which have a net cost benefit could be effective in improving the cost effectiveness of the Council's collection service. Officers recommend canvassing public views on this approach, particularly the discontinuation of the collection of glass for recycling.

Officers do not recommend changes to service levels as the primary approach, but note that some of these changes could be considered further under the recommended, partial user-pays, option.

2. Fully rates funded

Funding through rates would require an increase to rating charges and over time this burden on rates would grow. Further, it would continue the masking of the costs of recycling from user awareness.

Currently the landfill levy is comprised of a base landfill fee and a recycling levy. Providing for the funding shortfall and including the government waste minimisation levy would bring the total fee to \$111.25. Overall, under a fully rates-funded approach, the landfill levy and yellow bag price could reduce as the recycling levy, \$35 plus GST, would no longer be required.

Because of the impact on rates, officers do not recommend this option.

3. Raising the levy

The intent of the existing levy could be achieved by raising the levy to meet the full cost of recycling collection services. This approach would likely appeal to most users of recycling services. However, others may see it as unreasonably burdening disposers to landfill whose levy payments would be paying the full cost of the recycling service for all users. The levy would rise initially to \$100, excluding the waste minimisation levy which would bring the total cost to \$111.25, and this would rise still further as the ratio of recycling volume to landfilling volume increased. As the Council waste bags are subject to the levy and contribute to the funding of recycling collection services, the price of these would also rise under this approach.

This level of increase would create a significant differential between the charges at the Southern Landfill and those at other regional landfills. As more than 85% of the general waste stream within Wellington is collected and transported for disposal by commercial waste collectors, differences in pricing practices and cost management at waste facilities within the region and beyond can significantly impact on waste movements. Projections of future waste movement as a result of a price adjustment would be uncertain, but a shift in customer base could mean the landfill levy revenue currently required would not be achieved.

Because of its potential negative impact on waste disposal behaviour, this approach is not recommended.

4. Moving to fully user pays

Moving to fully user pays would:

- see the total cost fully met by the users of the recycling collection services, rather than it being met from other sources
- currently cost users around \$60 per year per participating household, and would strongly encourage user self-management of their waste streams to reduce their recycling volumes
- provide flexibility for the Council to vary the range of materials collected as needed, to meet market opportunities for instance
- be introduced to coincide with the introduction of the WMA waste levy from July 2009, retaining some of the disincentivisation benefit of

having a levy, but avoiding having two full levies and supporting the use of the WMA waste levy for new waste minimisation initiatives

- fully expose users to the real costs of recycling and help engineer more selective consumption of goods.

Moving to a more transparent user-pays system may challenge the common public views on how recycling ought to work. There is a risk that some users would be unwilling to pay for the recycling service and would dispose of their divertible materials with their waste instead.

Waste avoidance, the reduction in waste generation, is a higher order goal in the waste hierarchy (see section 4.5) than increased recycling and, while a user-pays approach may reduce recycling volumes in the short term, it would also help focus resident awareness on the real cost of waste and promote waste reduction. National initiatives, such as the central government work on producer responsibility, are expected to be a key driver for encouraging waste avoidance.

As for a rates-funded approach, under a fully user-pays approach, overall, the landfill levy and yellow bag prices could reduce.

5. Moving to partial user pays

Under a partial user-pays approach, users would be expected to fund the current shortfall in revenue (\$1.1 million), currently approximately half of the total cost of recycling services. This would cost users approximately \$30 per year. This cost could grow as the revenue from the waste levy declines.

This approach would:

- ensure that the growing shortfall in revenue for funding recycling services could be met mostly by users of those services rather than from other sources
- support user self-management of their waste streams, encouraging reduction in waste and recycling volumes
- provide flexibility for the Council to
 - adjust charges to incentivise desired recycling behaviour
 - vary the range of materials collected as needed
- be introduced to coincide with the introduction of the WMA waste levy from July 2009, retaining the disincentivisation benefit of having a levy, but limiting the burden on disposers of having two full levies
- partially expose users to the real costs of recycling and help engineer more selective consumption of goods.

The risk of a negative response from users would be greater for fully user-pays than partial user-pays. However, the flexibility of using the landfill levy for adjusting costs to manage this under the partial user-pays option, would be lost under the fully user-pays option. Consequently, a partial user-pays approach offers a more effective and flexible tool. **This is the recommended option.**

Transitional measure

To support resident adoption of more effective personal waste management behaviours, recycling bags could be provided 'free' initially. This could see users experiencing an introduction to using bags without having to pay for all of them, and then gradually moving to partial user-pays funding as their 'free' bags ran out.

5.3 Collection container options and analysis

Continued use of the 45 litre Council bins would leave unresolved the issues of:

- unnecessary risk of injury to collectors
- inadequate container volume for meeting the needs of many participating households
- spillage and wind-blown material resulting in visual and hygiene impacts as well as avoidable stormwater blockages and clean up costs.

It is proposed that these bins be decommissioned in favour of a more safe and secure system. There are two major options, wheelie bins and bags. Either of the user-pays approaches would require a system such as these, so usage rates can be transparent.

5.3.1 Change to wheelie bins

A range of wheelie bin sizes is available, typically of 80 or 120 litre capacities. These have similar constraints on suitability to the current Council green bins.



Around 35% of Wellington households currently use privately operated wheelie bins for their rubbish collection. However, around one quarter of Wellington's residences are unsuited to wheelie bin use because of steps, steep terrain or lack of space. In some cases it may be possible to install concrete pads to facilitate a wheelie bin collection service, but such works would require careful design, safety planning, sufficient footpath width, consent approval, and adequate access for the collection truck (with consequent impact on available parking spaces).

The cost of the wheelie bins, approximately \$180 for the larger ones, would likely be provided for through a targeted rate, as in other jurisdictions.

The advantage of using larger wheelie bins is that collections can be less frequent. However, experience in other cities has shown that the additional capacity of large wheelie bins is often used for additional contaminating items, such as polystyrene or non-approved plastic types. Once contaminated, the cost of separating the materials again can mean the whole truck-load needs to be landfilled.

The cost for a commercial wheelie bin service is currently around \$5 per collection, or around \$260 annually for a weekly collection. A large rise in service charges may result from a rapid expansion in the use of wheelie bins as this would require:

- provision of a dual service to provide for areas where wheelie bins are impractical
- significant new capital expenditure (up to \$1m investment in the Council's truck fleet)
- significant new operational expenditure (up to \$1m in increased contract costs as commercial operators cover their necessary investment in trucks).

Any cost increase would impact on either rate payers or service users.

Officers do not recommend wheelie bins for Wellington City.

5.3.2 City-wide use of Council recycling bags

Bags are an efficient and clean mode of collection for recycling and are in use in the Central Area and in rural areas of Wellington City. Participating households would be asked to separate material types into separate bags for recycling.

Regardless of the funding option, bags would provide for operational improvements from both safety and collection perspectives.

A new bag would be designed to specifically meet the needs of the new operating model. This would take into account issues such as biodegradability and the ratio of strength to volume required for bottle collection.

Bags are the proposed option for all Council recycling collections because:

- customers already use approved Council bags for their rubbish collection and, in many cases, shopping bags for their recycling
- customers can use as many or few bags as they need, empowering them to better manage their waste and disposal costs and removing a current incentive for the use of plastic shopping bags
- this offers the most cost-effective approach for users and avoids the costs associated with the use of wheelie bins
- operationally, bags:
 - can be distributed using the same network as yellow rubbish bags and would be cheaper to collect than wheelie bins
 - allow for an element of cost recovery through the purchase price and offer the ability to pass on market and price fluctuations to users rather than insulating them from these. This is consistent with a key intent of the WMA and the Council's Solid Waste Management Plan 2003, both of which look to pass the cost of waste on to the consumer or producer
 - ought to reduce injury rates compared with those from using the current bins, although not as much as with wheelie bins
 - allow flexibility for future inclusion of other approaches, such as centralised collection points, and for the future addition of other waste streams to kerbside recycling services. For instance, subject to any health and safety issues and contamination risk, the collection of kitchen waste in recycling bags could be considered

- enable a single system to be used in all parts of the City. With wheelie bins a secondary system would be required for those areas not suited to that method
- reduce the risk of spillage and consequent littering and stormwater blockages
- allow existing vehicle fleets and contractual models to be used, avoiding the need for investment in new trucks.

Bags are also the preferred option for the current recycling operator because the material (such as glass) is not damaged or contaminated through mixing with different product types, as often occurs with wheelie bin use.

Under this system the charge per bag to cover the funding shortfall, based on officer assessment of likely volume reduction resulting from introduction of a user-pays approach and not including GST or any retailer mark-up, is estimated to be about \$0.60.

There would be a significant differential between the cost for waste bags (currently \$1.85 each) and that for recycling bags (estimated at \$0.60 each), encouraging recycling over landfilling. Officers estimate that waste bags cost a typical household about \$100 a year, and that recycling, under the recommended option, would cost about \$30 a year.

5.3.3 Centralised collection points

The establishment of centralised collection points, near supermarkets or schools for instance, has been very successful in some other jurisdictions, but has proved ineffective previously in Wellington due to graffiti, vandalism and non-approved dumping. Officers support revisiting this option, given the growing national profile and understanding of waste management issues, alongside either of the above container options.

5.4 Further work

This report proposes that the Council consult the public on some changes to the provision of recycling services in Wellington City. The recommended options would see:

- more of the cost of recycling met by the disposer
- improvements to operational safety and street litter as a result of the use of prepaid recycling bags, rather than the current Council bins
- a focus on advocacy and facilitation at regional and national levels, and targeted consumer education
- ongoing monitoring of commodity markets and research to inform future changes to the range of materials collected.

If agreed, the recommended option would require changes to the Council's Solid Waste Management Plan 2003, which is already required by the WMA to undergo full review by 2012.

To meet the requirements of the WMA, work is being undertaken to develop a detailed project plan to be presented to the Committee by the end of 2009.

5.5 Consultation

Following Committee consideration of this report, an information package will be developed to assist the public in understanding the current operation of the Council's kerbside recycling services. The proposed changes will be incorporated into the draft 2009/19 LTCCP for full public consultation.

Limited targeted engagement is also proposed, based on a representative sample of 5%, or 3,500 households. This would provide a balanced cross-section of views and quantitative data to assist the Council in its deliberations.

6. Conclusion

Some of the wider implications of kerbside collection services for divertible materials in Wellington City have been considered.

It is proposed that the Council consult the public on proposed changes to Wellington City's kerbside collection services.



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Supporting Information

1) Strategic Fit / Strategic Outcome

The management of municipal waste and divertible materials is consistent with:

- *Wellington Regional Strategy outcomes of a sustainable natural environment, and of high quality, secure essential services, consistent with sustainable growth*
- *Wellington City Council's LTCCP:*
 - *Community Outcomes: environment protected by well-planned and maintained infrastructure; move towards a zero waste policy; promote sustainable environmental management.*
 - *Council Outcomes:*
 - 4.3 *More actively engaged –collaboration, sharing information, establishing partnerships.*
 - 4.5 *More sustainable –reduce impact, efficient resource use; minimise waste.*
 - 4.6 *Safer –access to safe, reliable waste disposal systems to protect public health/ecosystems*
 - *Council Priorities: promote waste...efficiency...and use of renewables; strengthen partnerships to increase environmental awareness and participation.*

2) LTCCP/Annual Plan reference and long term financial impact

The project is contained in Annual Plan Project C079. Any proposed changes would be consulted on through the LTCCP process.

3) Treaty of Waitangi considerations

No Treaty of Waitangi implication from this report has been identified.

4) Decision-Making

This is likely to involve a significant decision. If agreed, the proposal would require changes to the Solid Waste Management Plan 2003 and the funding approach for the Council's recycling services.

5) Consultation

Consultation during the drafting of this report has included the waste industry and the Environment Reference Group. Mana whenua were made aware of the report. Market testing will be undertaken and wider consultation will take place through the LTCCP process.

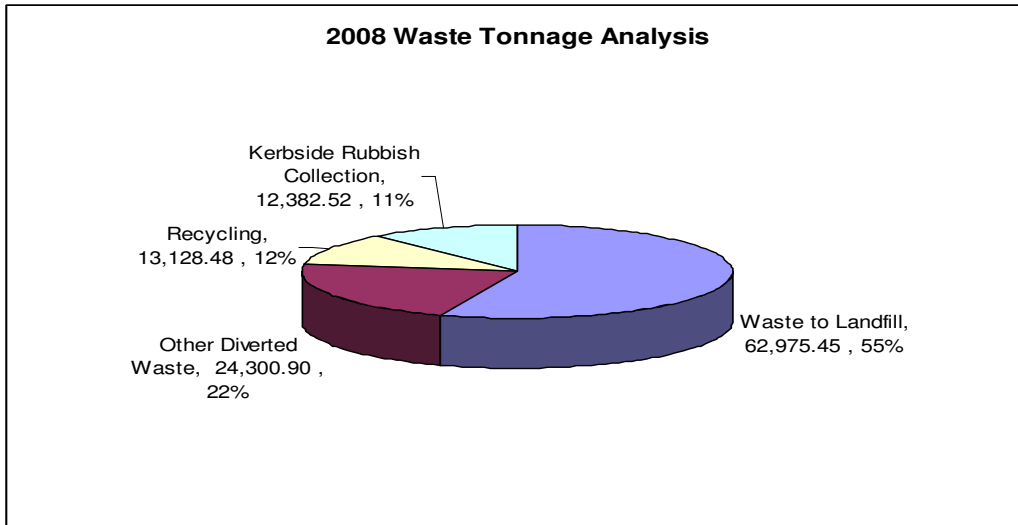
6) Legal Implications

Legal advice has not been received for this report.

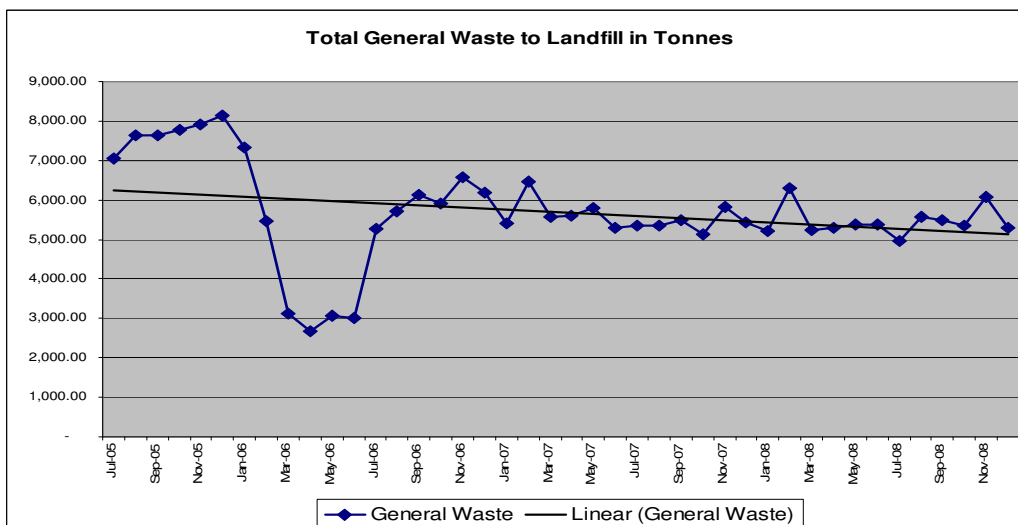
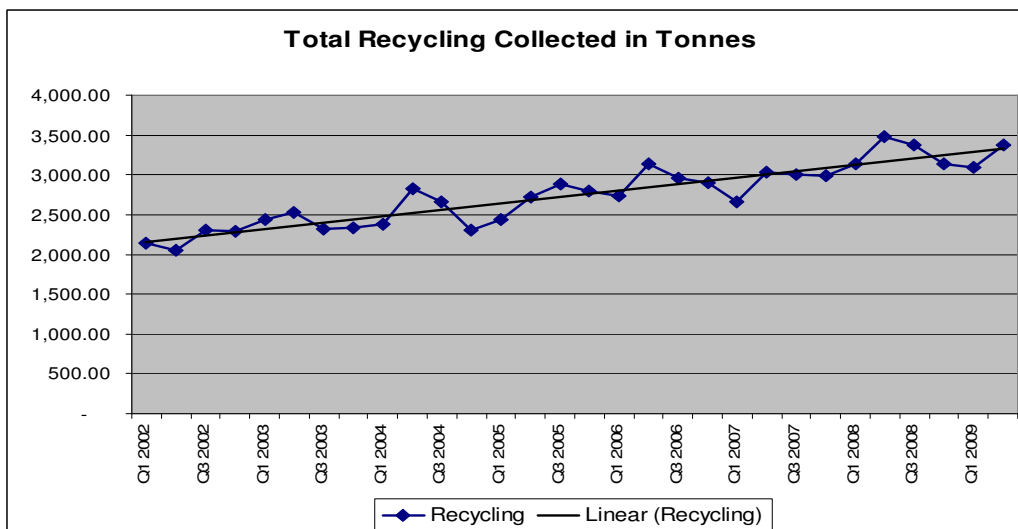
7) Consistency with existing policy

A user-pays funding approach for the Council's recycling services may be seen by some ratepayers as introducing a new user charge. Not collecting glass would be a departure from the principles of the Council's Solid Waste Management Plan 2003. This departure would reflect changes in the glass market, an externality that was not known when the Plan was adopted.

DIVERTIBLE MATERIALS COLLECTED IN WELLINGTON CITY



Total Tonnes collected in Wellington by quarter.



MARKET TRENDS FOR WELLINGTON'S DIVERTIBLE MATERIALS

The following sections outline the current market status for key recyclable commodities.

Glass

The inclusion of up to 90% pre-used of glass in the manufacture of 'new' glass can significantly reduce the energy requirements of the process, and related emissions, so recycling of glass is desirable.

However, the market for used glass in New Zealand is limited. There is one glass recycler in New Zealand, based in Auckland. This recycling operation is operating to current capacity. There is potential for plant expansion, but while used glass is in oversupply in New Zealand the market price remains low. Currently it does not even cover the cost of transport to Auckland. Instead, most glass from Wellington is exported to South East Asia where the price currently does cover the costs, including for transport from New Zealand. The international market is sensitive to commodity prices and the price of oil.

While this situation continues, there is a case for not recycling glass. Glass is an inert component when landfilled. It is dense and does not leach or produce emissions in the landfill. Yet it is a high-volume component in recycling collections and easily contaminates other materials if broken. It also requires careful sorting by colour for on-sale. Collection of glass in general waste would reduce the cost of collection by up to 33%. It would also result in simpler and cleaner sorting of material for the local recycling operator. Alternatively glass could be collected only monthly; reducing collection costs and encouraging user-sorting. Although some local authorities are stockpiling glass hoping markets recover, the greatest barrier to ceasing glass recycling is a public expectation that glass should be recycled. This barrier is significant and as a result the option of landfilling glass has not yet been pursued by the Council.

Plastic

Currently the Council only collects plastic types 1 and 2. Demand for recycled plastic is linked to the price of oil. Recent spikes in oil prices have meant that many recyclers started accepting grades 1-7 as manufacturers looked to alternatives. As the oil price has eased and other markets have weakened, so too has demand for plastics, leaving some recyclers with unwanted plastic. In the current environment our recycler cannot guarantee a market for plastics 3-7 and consequently there is a reluctance to commit additional resources to collection of this material.

Officers are also concerned that contributing to pollution, in those parts of Asia where recycled plastic is used and re-manufacturing occurs, would be contrary to the intent of the draft Wellington City Climate Change Action Plan.

Papers

Prices for papers and cardboard have waned in recent months. Transpacific AllBrite advises that there is still sufficient demand to keep stocks flowing, but that profitability is marginal at best. In Australia, some recyclers are making plans to stockpile used paper until prices improve.

Metals

Whilst prices have dropped substantially over recent months, there continues to be a sustained market for scrap metals.

ANNEX 3

ANALYSIS OF FUNDING OPTIONS FOR THE ONGOING PROVISION OF KERBSIDE COLLECTION SERVICES FOR RECYCLING

Funding option (recommended prioritisation)	Advantages	Disadvantages
(1) Match service levels to landfill levy revenue	<ul style="list-style-type: none"> No direct cost to users of the Council's recycling collection services. 	<ul style="list-style-type: none"> Severely reduced service levels, probably relying on local collection areas and user self-sorting of materials. Such approaches have proved unsuccessful in Wellington previously (graffiti, vandalism, dumping). Would likely result in reduced participation in recycling and increase disposal of divertible materials in general waste stream.
(2) Fully rates funded, with no landfill levy for recycling services	<ul style="list-style-type: none"> Would currently cost around \$60 per participating household annually. Relatively easy for the Council to collect fees and to manage operationally. Container type not constrained. 	<ul style="list-style-type: none"> Rates would fund services for all users, including non-ratepayers. The real costs of recycling would remain hidden and waste minimisation not be incentivised and the landfill levy would no longer disincentivise disposal to landfill.
(3) Raising the landfill levy to fully cover the cost of recycling services	<ul style="list-style-type: none"> Would initially raise the landfill levy to around \$100 per tonne, excluding the waste minimisation levy. Council would be perceived as supporting recycling and users would see 'no change' as the simplest approach for them to manage. Landfill levy can be adjusted as a tool to further disincentivise disposal to landfill. 	<ul style="list-style-type: none"> Insufficient funds may be generated as levy revenue will drop as waste minimisation practices are adopted and if 'waste flight' occurs. Burden on levy revenue will increase in time as waste volume to landfill decreases and costs (particularly for transportation) rise. Real costs of recycling remain hidden and waste minimisation not incentivised.
(4) Partial user pays – to top up landfill levy revenue This is the recommended option.	<ul style="list-style-type: none"> Based on the current shortfall in levy revenue, users would initially cover about half the total cost - an average of around \$30 per participating household annually. This would increase steadily, but would vary widely between individual users according to their needs. The landfill levy disincentivises disposal of waste to landfill and provides funding to incentivise diversion of further waste through recycling. (Household waste contributes a relatively small proportion of the total volume of waste to landfill.) Charges can be adjusted to incentivise appropriate recycling behaviour. 	<ul style="list-style-type: none"> The WMA waste levy, in addition to the Council's landfill levy for recycling service provision, would create a significant burden on disposers to landfill and could increase inappropriate waste dumping. Users only partially exposed to the real costs of recycling. Would require a system, such as bags or wheelie bins, so individual usage can be monitored.
(5) Fully user pays, with no landfill levy for recycling services	<ul style="list-style-type: none"> Current cost of around \$60 per participating household per year, spread over all ratepayers. Users fully exposed to the real costs of recycling and waste minimisation incentivised. Supports user self-management of their waste streams. Charges can be adjusted to incentivise appropriate recycling behaviour. Maximises flexibility to Council for responding to emerging waste environment developments. 	<ul style="list-style-type: none"> This significant departure from current practice may be unpopular with some users. Would require a system, such as bags, so individual usage can be monitored.