

ABERDEEN CITY COUNCIL

COMMITTEE	Zero Waste Management Sub-committee
DATE	4th December 2013
DIRECTOR	Peter Leonard
TITLE OF REPORT	Impacts of Mixed Recycling Collections on General Waste Capacity
REPORT NUMBER:	ZWM/13/005

1. PURPOSE OF REPORT

The purpose of this report is to provide information on the potential issues and opportunities associated with provision of a mixed recycling collection city wide. Particular emphasis is upon the implications of reduced general waste collection frequency or reduced general waste containment size. Direction is sought from the committee as to how these issues should be progressed.

2. RECOMMENDATION

That the Zero Waste Management Sub-Committee notes the report and instructs officers to submit an options appraisal with recommendations on general waste frequency and capacity to the Zero Waste Management Sub-committee on 25 February 2013.

3. FINANCIAL IMPLICATIONS

Depending on the option taken forward there could be financial implications as detailed below. Investment in mixed recycling collections has already been secured by Aberdeen City Council.

- Capital to procure new containment e.g. underground systems, wheeled bins if existing ones are not reused (relates to kerbside only), bags for householders to carry recyclate to on street communal facilities, stanchions, ground-works to install etc;
- Capital costs to cover delivery of containment systems from the supplier;
- Capital to refurbish Household Waste Recycling Centres and Points to reflect service changes including containment and signage;

- There is allocation within the approved Capital Plan to support the introduction of mixed recycling collections, however, sufficiency will be dependent on the option chosen.
- Costs associated with the communications needed to raise awareness of the service change;
- Revenue costs covering staff time to undertake data gathering, survey work, installation, collection, maintenance of the containment systems offered, use of temporary staff to help support roll out and any work that is out-sourced e.g. door knocking campaigns; and
- Revenue/rebate from recycling old containers – this could be used to fund the procurement of new containment.

4. OTHER IMPLICATIONS

Table 1 – Implications of mixed recycling collections

Implication	Reduced frequency of general waste collections	Reduced general waste container size
Legal	Compliance with key waste legislation, with specific reference to the Waste (Scotland) Regulations 2012.	
Resource	Fewer collection crews will be required as a result of lower frequency collections resulting in cost savings.	Potential for more frequent recycling collections if fortnightly is not considered sufficient. Though this might be negated by increasing capacity through provision of a larger/more wheeled bin(s).
Personnel	The introduction of mixed recycling services will be implemented by existing Aberdeen City Council personnel however there may be a reduction in the number of staff required.	No significant change to the current situation
Property	Temporary storage for new wheeled bins will be required if existing bins are not utilised. Bulking facilities to deal with mixed recycling streams. This will be achieved temporarily through our current waste management contract until a new Materials Recycling Facility has been constructed.	
Equipment	None required.	Potential for smaller bins to replace existing general waste bins. Existing fleet can accommodate smaller wheeled bins.

Table 1 - continued

Implication	Reduced frequency of general waste collections	Reduced general waste container size
Sustainability	Promotion of more efficient use of resources. Reduced vehicle movements equating to fewer carbon dioxide emissions.	Promotion of recycling and better waste management behaviours. Surplus wheeled bins being either reused or recycled.
Health and Safety	Odour issues associated with less frequent collections may arise if residents do not use the recycling services for organic waste.	Increased provision for recycling – no longer a box and bag but a wheeled bin. Resulting in less manual handling issues for residents and crew sorting at the kerbside.
Policy	Aligns with the requirements of the Scottish Governments Zero Waste Plan, Aberdeen City Council's: Smarter Aberdeen, Single Outcome Agreement and the Aberdeen City Waste Strategy. Reduces the levels of concern, as expressed by the Health and Safety Executive, over kerbside sort systems and issues of manual handling/repetitive strain.	

5. BACKGROUND/MAIN ISSUES

The Scottish Government's Zero Waste Plan promotes increased recycling performance as part of our progression towards a Zero Waste society. By 2025 not more than 5% will be landfilled. The targets for recycling are phased as follows:

- 2013 50% Recycling/composting rate (Household waste)
- 2020 60% Recycling/composting rate (Household waste)
- 2025 70% Recycling/composting rate (All waste)

In 2012, Aberdeen City's recycling and composting rate was 37.3%; some distance from the above allocation. In order for Aberdeen City Council to attain higher rates either significant changes in behaviour need to be observed or an alternative method of collecting and extracting recycling needs to be offered. In consideration of the latter it is imperative that such a collection system makes it easier for residents to participate with more waste streams being offered for collection.

Aberdeen City Council believes that kerbside sort systems will not meet these requirements. Therefore it is to adopt a mixed recycling collection which includes glass through its kerbside, on street and network of bring facilities.

The introduction of a new mixed recycling service poses a number of issues for consideration; including whether the current frequency of general waste collections is necessary and whether the size of the general waste bin is reduced as a result of the enhanced recycling service.

This paper reviews these particular issues in more detail with particular onus on properties served by existing kerbside sort systems. A key aim of the review of general waste container use is to ensure that the future mixed recycling service encourages and achieves increased recycling performance. Widespread adoption of the mixed recycling service will result in operational and disposal savings that will allow the service to achieve the savings required under the Priority Based Budgeting system.

5.1 Reduced Need for the Existing Fortnightly General Refuse Collection

As part of providing a mixed recycling service it is envisaged that existing black box and white bag, kerbside facility (equating to 70 litres of provision/fortnight) will be exchanged for a larger 240litre wheeled bin. By increasing the capacity to recycle (by 170litres) and also the types of waste collected (all hard plastic packaging and beverage containers), there is likely to be a comparative drop in material disposed of through the general waste bin both in terms of weight but, most significantly, in volume. Many householders tell us that it is plastic trays and pots that now fill their bin. Take this material out of the refuse bin and there is less need to retain a 240 litre general waste collection on a fortnightly basis. The two options available in response are to reduced frequency of collection or reduce container size and each is considered below:

5.2 Reduced frequency of general waste collections

The main options to reduce general waste frequency are reducing uplift frequency to a three or four weekly rotation. It should be noted that the impact on those householders currently receiving assisted collections or who utilise a second bin would need to be considered; with potential exemptions or alternative arrangements provided.

Reducing the frequency of general waste collections poses challenges and some opportunities; some of which are highlighted in Table 2. The table also illustrates potential responses regarding these issues.

Table 2 – Challenges and opportunities associated with reduced collection frequency

Challenge/Opportunity	Response
A perceived loss of service by members of the public by having their general waste collection reduced.	The service for residents will actually be increased by having 170litres more capacity to recycle. In addition, cost savings will be achieved.
Odour issues associated with retaining general waste for a long period between collections.	The instance of odour should not arise if residents are utilising their garden and food waste collections properly. There should be little biodegradable material within the general waste.
Odour issues could arise from householders utilising nappies and other disposable sanitary wear (associated with medical conditions) arising from general waste being retained for a long period in-between collections.	It may be necessary to apply exemptions to householders who produce additional waste associated with a medical condition. Nappies can be replaced by reusable alternatives
Future-proofing the service to accommodate further legislative, operational changes and to take into account resource constraints.	When considering the bin volume associated with recycling; capacity needs to be available to accommodate increased waste materials collected for recycling. Strict targets imposed by legislation may dictate further items to be collected which should be considered. This could be addressed by increased frequency of collection of recycling.
Storage issues over additional wheeled bin for mixed recycling.	Properties currently have to store the box and bag system, the foot print of a wheeled bin is not much larger in area but would require external storage. An alternative to providing householders with individual bins would be to provide communal facilities. Some residents may see this as less favourable. There will be opportunity to provide smaller bins to replace the current 240litre general waste.

Table 2 – continued

Challenge/Opportunity	Response
Increased levels of recycling collected.	Increased volumes of recycling may warrant an increased frequency of collection for recycling; or even a second bin being offered for recyclable waste. This will impact upon the work of the collection crews and vehicles. There will also be a need to ensure there are end markets for the materials that are collected – this will be progressed through our waste contract negotiations.
Fleet and route changes.	Existing route arrangements would be amended to reflect service alterations. This will require time to develop and for route optimisation activities to be undertaken but will result in fewer collections and cost savings.
Awareness and engagement activity.	As rolling out such service changes is likely to require a phased approach; different parts of the city are likely to receive conflicting messages about what, how and where waste can be recycled. Effective communications directed at specific audiences will be essential.
Impact upon second bin policy for general waste.	Consideration will be needed as to how this policy is managed and monitored. Residents who are eligible for a second bin might be required to (i) retain the existing bin size as opposed to it being reduced or (ii) have a smaller bin which is emptied more frequently. The outcomes of this are yet to be determined; with a positioning paper likely Spring/Summer 2014. Consideration should be given to ensuring that such a policy states that only Council-supplied bins will be emptied.

Table 2 - continued

Challenge/Opportunity	Response
Timing.	Consideration needs to be given as to when the change of frequency of general waste collections is implemented. Should this be done in parallel with the roll out of mixed recycling or afterwards? Consideration should be given to the complexity of the message and the fact that this may get lost within the significant communications required to promote this service change.

5.3 Reduced general waste container size

Currently general waste is collected in 240litre wheeled bins. As a result of more waste streams being offered for recycling and the ease to which this will be provided to the householder; it is envisaged that the need for general waste capacity will decrease. It is likely that for many a 240litre wheeled bin for general waste will be considered to be a much greater capacity than what is required. There is potential for reducing the volume of the wheeled bin to between 180 and 120 litres per fortnight.

Reducing the container size for general waste collections offers challenges and opportunities; some of which are highlighted in the table below.

Table 3 - Challenges and opportunities associated with reduced general waste container size

Challenge/Opportunity	Response
A perceived loss of service by members of the public by having their general waste collection reduced.	The service for residents will actually be increased. The existing box (50litres) and bag (20litres) will be replaced by a 240litre wheeled bin for mixed recycling. An increase in capacity of 170litres. By reducing the general waste from 240litres to 180litres, this is a loss of a 60litre capacity for general waste but a net gain of 110litres overall. Also by having a physically smaller bin it encourages residents to consider what they dispose of; prompting them to use the recycling alternative.

Table 3 - continued

Challenge/Opportunity	Response
It could be questioned why the bin size would change given the slightly smaller bin has a similar footprint.	Retaining a larger bin would not encourage householders to use the mixed recycling service. Smaller bins may be more aesthetically pleasing for householders and help alleviate some storage space issues.
Retaining existing bins would negate the need of procuring newer smaller bins.	The existing bins could be (i) utilised elsewhere through Aberdeen City Council, (ii) sold to other Local Authorities/businesses, (iii) sent for recycling, whereby a rebate could be obtained or (iv) reused as recycling bins by changing the colour of the lid. This could be used to offset the procurement costs of new smaller bins.
Small wheelie bins have a tendency to blow over.	This effect increases as container size decreases – a 120 litre bin is significantly more prone than a 180 litre bin. Choice of bin size and discussions with manufacturers can minimise this issue.
Potential for side waste and fly-tipping.	Some householders may feel having a smaller bin is not sufficient. If they are not eligible to receive a larger (or second container) based on the number within the household and/or medical conditions, this could lead to side waste and increased levels of fly-tipping. This would result in increased ad hoc collections. Side waste and fly-tipping can be monitored and offenders targeted. Whilst we are working with COSLA to improve how we deal with fly tipping/side waste, it should be noted that enforcement measures are currently difficult to implement and no resource is committed to this activity. The network of bring facilities will continue to provide support to residents should they generate larger volumes of general waste when compared to the norm.

Table 3 - continued

Challenge/Opportunity	Response
There maybe more requests for second general waste bins. Some residents may feel aggrieved if they have procured their own bin and this is no longer serviced.	If capacity is reduced, there maybe an increase in the amount of applications for a second bin. The second bin policy is currently under review so that it considers the implications mixed recycling will have; maybe even offering a second mixed recycling bin as opposed to general waste. The policy is only sustainable if there is a ban on uplifting non-Council supplied bins.
Awareness and engagement activity.	It is likely that a reduction in general waste container size will be perceived negatively. Any reduction in general waste provision will be offset by the increased capacity to recycle. Effective communications directed at specific audiences will be essential; highlighting the positive attributes of recycling and the increased capacity to do so. There is prior experience from 2010 when Alternative Week Collection of refuse was introduced with relatively few issues.

5.4 Experience from other local authorities

At present Aberdeen City Council offers a fortnightly service for general waste and kerbside source segregated collections. It is important to err on the side of caution when making comparisons with other local authorities. There are significant differences in performance between rural and urban; between levels of kerbside service offered and the proportion of under-served communities within these areas, all of which impact on levels of participation.

At least two other local authorities in Scotland are considering or are in the process of implementing reduced container size (Fife) and reduced collection frequency (Falkirk). East Ayrshire Council is also intending to reduce frequency in 2015. There are many other examples across the rest of the UK including East Devon District Council who introduced a 180 litre bin for general waste five years ago. This system has been widely accepted and there is sector acknowledgment that this works. Further information on other examples will be provided in the next paper which discusses options in more detail.

As reported within “Review of Kerbside Recycling Collection Schemes Operated by Local Authorities¹”, produced by WYG, the highest dry recycling performances are achieved with:

- mixed recycling collected fortnightly in wheeled bins, plus,
- refuse collections being made fortnightly from wheeled bins, and
- at least the five main materials being collected for recycling: i.e. paper, card, cans, glass and plastic bottles.

Evidence suggests that 240 litre wheeled bins for recycling have sufficient capacity for collections to be made fortnightly without cutting yield. Kerbside sort collections need multiple containers or weekly collections to maximise yield. As detailed further within the WYG report the top performing local authorities use wheeled bins for general waste, but with four moving to smaller general waste bins. On average, mixed recycling collections out-perform kerbside sort collections by a similar margin (30 – 40 kg per household per year) across the affluence/deprivation spectrum.

Further analyses shows that there is a wide range of performance under different collection systems – there is no guarantee of high performance. Whatever the system, collections need to be optimised, albeit under the constraint of local authority budgets.

6. IMPACT

Corporate – The proposals in this report contribute to the Priority Based Budget Transformation Option HE_ES_WS2 ‘Review existing Waste Strategy to determine most cost effective options for diverting waste from landfill’. The development of alternatives to landfill and enhanced recycling will help Aberdeen move to become a Zero Waste City - a key action within the Smarter Environment – Natural Resources Strategic Priority of the Five Year Business Plan.

Public – The combination of increased recycling services that more than offset reduced refuse collections will result in a substantial improvement in the city’s recycling performance and provide the opportunity for the public to recycle more and be more responsible for the environmental impact of their lifestyles. Furthermore, by fully adopting the recycling opportunity, there will be a reduced overall cost from waste management. The full savings will only be achieved if the increase in recycling provision is partially offset by reduced refuse capacity, otherwise, many householders will default to filling the refuse bin before recycling.

The change will present many concerns to householders, however, it is evident from the analysis above that these concerns can be mitigated and alleviated through good service design and open, extensive and effective communication.

¹ Review of Kerbside Recycling Collection Schemes in the UK in 2009/2010

7. MANAGEMENT OF RISK

As yet a full risk assessment has not been completed for this service change. This will be undertaken the recommendation be adopted for a further report.

The major risk associated with reducing container size is the impact on public opinion and support for the wider recycling services offered by the Council.

Evidence from other authorities in England is such that the perceived problems are less severe than anticipated and that by fully embracing the recycling services, there will be few households that cannot manage reduced refuse collections services.

8. BACKGROUND PAPERS

Please refer to the following:

- Waste Strategy Review - Equality and Human Rights Impact Assessment August 2013
- Waste Strategy – Engaging with Stakeholders April 2010

9. REPORT AUTHOR DETAILS

Amy Gray
Waste Strategy Manager
amgray@aberdeencity.gov.uk
01224 489129

Peter Lawrence
Waste & Recycling Manager
plawrence@aberdeencity.gov.uk
01224 489331