

ABERDEEN CITY COUNCIL

COMMITTEE:	Zero Waste Management Sub-Committee
DATE:	25th February 2014
DIRECTOR:	Pete Leonard
TITLE OF REPORT:	Reduction in general waste container size following introduction of mixed recycling collections
REPORT NUMBER:	ZWM/14/001

1. PURPOSE OF REPORT

This report addresses the instruction of the Zero Waste Management Sub-Committee of 5 December 2013 for officers to submit an options appraisal with recommendations on general waste capacity to the Zero Waste Management Sub-committee on 25 February 2013.

2. RECOMMENDATIONS

1. That the sub-committee approves the reduction in general waste bin capacity from 240l to 180l for residents receiving existing kerbside recycling collections.
2. That this reduction in capacity is implemented in conjunction with the roll out of mixed recycling collections with glass.

3. FINANCIAL IMPLICATIONS

The procurement of new wheeled bins for either general waste or mixed recycling is incorporated in the capital plan allocation for the Zero Waste Project.

4. OTHER IMPLICATIONS

Legal - Compliance with key waste legislation, with specific reference to the Waste (Scotland) Regulations 2012.

Resource – The transition to reduced general refuse container size and provision of increased size recycling containers will require a major project management and staff commitment from Waste and Recycling Services. This will be resourced from within existing teams and supported by the funding allocated to the Zero Waste Project.

Property - Temporary storage for new wheeled bins will be required if existing bins are not utilised.

Equipment – There will be a need to procure smaller bins to replace existing general waste bins. Consideration will be given to utilisation of the 240l general waste bin through other council services or replacing the lid and converting these to the mixed recycling bin. It should be noted that the existing fleet can accommodate smaller wheeled bins.

Sustainability – Reduction in general waste container size will encourage householders to maximise the use of their recycling container, thereby ensuring higher recycling rates and minimisation of the landfilling of general waste. As noted under equipment implications surplus 240l wheeled bins could either be reused, or if this is not an option, recycled.

Health and Safety – Smaller wheeled bins weigh less and therefore the hazards associated with moving heavy bins is reduced. The move to mixed recycling will replace the box and bag with a wheeled bin. This will result in less manual handling issues for residents and crew and addresses concerns expressed by the Health and Safety Executive over kerbside sort systems and issues of manual handling/repetitive strain.

Policy - Aligns with the requirements of the Scottish Governments Zero Waste Plan, Aberdeen City Council's: Aberdeen: The Smarter City, Single Outcome Agreement and the Aberdeen City Waste Strategy.

There are no implications on personnel. Such changes will be implemented within existing resource levels.

5. BACKGROUND/MAIN ISSUES

The Zero Waste Management Sub-Committee of 5 December 2013 instructed officers to submit an options appraisal with recommendations on general waste capacity to the Zero Waste Management Sub-committee on 25 February 2013. This report addresses that instruction.

From 2015 Aberdeen City Council will be expanding its recycling service substantially through the provision of 240l wheeled bins for the following range of recyclable materials:

- Paper and Cardboard
- Glass Bottles and Jars
- Steel and Aluminium cans
- Plastic bottles
- Plastic pots, tubs and trays
- Waxed beverage containers (commonly known as tetrapak)

This change will effectively triple the recycling capacity for every household with a wheeled bin service and remove a large quantity of materials that fill the general waste bin. The outcome of J. Baird et al's report demonstrates that close to property and kerbside recycling services recycle more than twice that of bring facilities. Their research also suggests lower participation through kerbside boxes as opposed to wheeled bins.

As a result, the volume of general waste produced will be significantly lower than at present providing full use is made of the recycling bin. This calls into question the need for householders to have large 240l bins for general waste and this issue has been addressed by a range of authorities across the UK.

A recent article in the Daily Telegraph suggests that 94 Local Authorities in England and Wales have reduced their general bin size to improve recycling. With one in four of these reducing from a 240l to 120l wheeled bin. This reduction being introduced alongside increased recycle collection.

Some examples of what other Local Authorities offer is illustrated within the table below:

Local Authority	Containers offered	Collection frequency	Recycling performance 12/13
Rochford	240l mixed recycling with glass 180l general waste	AWC	66.78%
South Oxfordshire	240l mixed recycling with glass 180l general waste	AWC	65.32%
Vale of White Horse	240l mixed recycling with glass 180l general waste	AWC	65.13%
North Lanarkshire	240l mixed recycling with glass 240l general waste	AWC	44%
South Ayrshire	240l mixed recycling with glass 240l general waste	AWC	43%

In order to maximise the effectiveness of recycling services it is proposed to reduce general waste capacity when the mixed recycling service with glass is rolled out to properties served by current kerbside collections. These collections are currently undertaken through the presentation of a kerbside box and bag system; equating to 70l of provision every fortnight. This will be replaced by a 240l wheeled bin to accommodate recyclable material, an increase in capacity of 170l.

In order to minimise the cost of introducing a smaller bin, consideration has been given to the three main sizes available provided by manufacturers:

Bin size	Net increase in capacity per house	Advantages	Disadvantages
120l	50l	Would drive more householders to make more use of recycling bins than other options	<p>Many householders would struggle to adapt to this solution given their familiarity with using 240l</p> <p>Likely to increase risk of contamination of recycling bin with general waste</p> <p>Small cross section of bin makes disposal of black bins bags difficult and likely to result in inefficient use of bin.</p> <p>Bin is likely to blow over in windy conditions</p>
140l	70l	Strikes a balance between other options but would push householders to make more use of recycling bins	<p>Some householders will struggle to adapt, especially those with children.</p> <p>Limited cross section still makes the use of the bin inefficient for bagged waste</p> <p>Bin prone to blowing over in strong winds</p>
180l	110l	<p>Most likely to be seen as an acceptable change</p> <p>Does reduce the capacity and sends a message that householders should amend their behaviours</p> <p>Bin cross section is wider and so more suited to efficient disposal of bagged waste. Most stable of three options</p>	Least likely to force change.

Recommendation

Whilst the optimum solution from a waste management perspective would be 140l it is considered that this solution would be problematic

for a wide range of householders. The overall effectiveness of the change to mixed recycling services may be compromised by removing 100l of general waste capacity. As the table above demonstrates local authorities have achieved very high recycling rates with 180l general waste bins and therefore it is proposed that this option be selected.

Mixed Recycling with Glass – assessment of best practice

In October 2012 the Scottish Government sent a letter to all local authority Chief Executives to strongly encourage them to review any decisions to mix glass with other recyclates, particularly paper, unless they are certain that they will get very high levels of high-quality material (i.e. colour separated) through a sorting process. It was advised that systems which do not include a separate glass collection could be in contravention of the regulatory requirements.

The reason for discouraging the mixed recycling of materials with glass is because a significant amount of the glass collected will not go for re-melt (i.e. recycled back into glass packaging). When collected and mixed with other materials, a proportion of the glass breaks down into very small particles, which can only be recycled for fibre glass insulation or as an aggregate substitute. This is not classified as 'closed loop' recycling and, therefore, regarded as lower quality.

Alternative options for collection of glass have been considered. A separate kerbside collection of glass only would incur a significant cost and would require households to store another container or utilise various communal facilities that maybe someway from householders. This is not considered to be affordable or practical and, therefore, is not viable.

The non-collection of glass at the kerbside and direction of the public to the use of Household Waste Recycling Centres and Points, was also considered. This would inevitably lead to a lower overall capture rate for glass; with the potential for a large proportion of glass to enter the general waste stream (Baird et al).

Taking all of the above into account, the collection of glass mixed with other recyclables is considered the preferred option. Of the top 20 performing Local Authority's in England, 13 employ mixed recycling wheeled bin collections with glass.

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 – Offering increased capacity for residents to recycle 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.

7. MANAGEMENT OF RISK

The change will present many concerns to householders, this can be mitigated and alleviated through good service design and open, extensive and effective communication.

A full risk assessment will be completed for this service change as part of the project scoping and further roll out of the mixed recycling service with glass. Lessons learnt from the pilots undertaken this year will inform this process.

The major risk associated with reducing container size is the impact on public opinion and support for the wider recycling services offered by Aberdeen City 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 general waste capacity.

8. BACKGROUND PAPERS

Please refer to the following:

- Impacts of Mixed Recycling Collections on General Waste Capacity – paper ZWM/13/005
- Waste Strategy Review - Equality and Human Rights Impact Assessment August 2013
- Waste Strategy – Engaging with Stakeholders April 2010
- Development and application of a multiple linear regression model to consider the impact of weekly waste container capacity on the yield from kerbside recycling programmes in Scotland - Jim Baird, Robin Curry and Tim Reid, 2013.
- Article - http://www.ciwm-journal.co.uk/archives/5662?goback=%2Egde_1999142_member_5829151030310371331#%21

9. REPORT AUTHOR DETAILS

Peter Lawrence, Waste and Recycling Manager
plawrence@aberdeencity.gov.uk or 01224 489331