

Executive Decision Report

Decision regarding the continuation of co-mingled recycling collections as a result of the Waste (England and Wales) (Amendment) Regulations 2012

Decision to be taken by: Cllr Sarah Russell
Assistant City Mayor Neighbourhood Services

Decision to be taken on: 6th February 2015

Lead director: John Leach



City Mayor

Useful information

- Ward(s) affected: All
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- Report version number: 1

1. Summary

This report summarises the findings of, and assessments undertaken by, Leicester City Council (LCC) to ensure household waste collections conform to the requirements of the revised Waste Framework Directive (2008/98/EC) (rWFD) transposed through the Waste (England and Wales) (Amendment) Regulations 2012.

The regulations state that from 1st January 2015 separate collections of at least paper, metal, plastic and glass are required where they are technically, environmentally and economically practicable (TEEP) and appropriate to meet 'the necessary quality standards for the relevant recycling sectors'.

LCC collects recycling co-mingled (mixed) in orange bags and therefore it has been necessary to assess whether LCC needs to change its recycling collection methodology to comply with the regulations. LCC has followed the suggested assessment methodology of the Waste Regulations Route Map, provided by the Waste and Resources Action Programme (WRAP) and conducted the tests required.

The necessity test and technical, economic & environmental practicability (TEEP) tests have assessed the household recycling collections that are undertaken by Biffa Waste Services as part of the 25 year Private Finance Initiative (PFI) contract (2003 - 2028). The outcome of the necessity and technical tests is that separate collection is necessary and practicable respectively. However, economically, it is deemed impractical to implement separate collections of metals, paper, plastic and glass for household kerbside collections in Leicester City. This is primarily due to high transitional costs, specifically the need for capital outlay of new vehicles and containers amounting to circa £4m.

2. Recommendations

1. To approve:-

- (i) It is not economically practicable to reintroduce kerbside separate collection of paper, plastics, metal and glass from households in Leicester City and therefore the current co-mingled service should continue to operate.
- (ii) That the assessment findings for kerbside household recycling collections are reviewed when Materials Recycling Facility (MRF) quality data is available from Biffa Waste Services in 2015, which is required of Biffa by schedule 9a of the Environmental Permitting Regulations 2014.

- (iii) That assessments indicate Bring Bank and Household Waste Recycling Centres (HWRC) collections are “likely to be compliant” (when following the Waste Regulations Route Map) / meet the quality standards of reprocessors, and therefore the separate collection of materials through these collection methods should continue.

3. Supporting information including options considered:

This report provides an overview of assessments of household waste collections undertaken to ensure Leicester City Council (LCC) conforms to the requirements of the Waste (England and Wales) (Amendment) Regulations 2012. The regulations state that from 1st January 2015 separate collections of at least paper, metal, plastic and glass are required where they are technically, environmentally and economically practicable (TEEP) and appropriate to meet 'the necessary quality standards for the relevant recycling sectors'.

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The necessity test and technical, economic & environmental practicability (TEEP) tests have assessed the household recycling collections that are undertaken by Biffa Waste Services as part of the 25 year Private Finance Initiative (PFI) contract (2003 - 2028). The key outcome is that economically, it is deemed impractical to implement separate collections of metals, paper, plastic and glass for household kerbside collections in Leicester City. This is primarily due to high transitional costs, specifically the need for capital outlay of new vehicles and containers amounting to circa £4m.

The findings of the assessments will need to be reviewed periodically, in line with the suggestions of the Waste Regulations Route Map. This is particularly important where a service change is being considered or circumstances change. Further quality information data will be made available in 2015, due to the requirements of the Environmental Permitting Regulations (2014), which will need to be considered in the next assessment.

The Waste Regulations Route Map was developed by a working group comprising members of the local authority waste networks, coordinated through the London Waste and Recycling Board (LWARB), the Waste Network Chairs (WNC), and the Waste Resource Action Programme (WRAP). It is available to help individual local authorities assess their compliance with the Regulations and it has been used to help the judgments made in this report.

The Route Map considers a number of factors including what waste is collected and how, checking how collected materials are treated and recycled, application of the waste hierarchy, deciding whether separate collections of the four materials is required, obtaining sign off, retaining evidence and re-evaluating. Further details can be found at: <http://www.wrap.org.uk/content/requirements-waste-regulations>.

Importantly for this report the following sets out the tests undertaken and the findings for each:-

Necessity test

Leicester City Council collects paper, plastic, glass and metal co-mingled from households. Co-mingling has been in operation since 11th October 2011. Previously three materials (glass, paper and plastic bottles) were collected using a kerbside sort system, which is a form of separate collection. Kerbside sort is where materials are hand sorted into separate compartments on the recycling collection vehicle, as was the case with the green box service.

It is likely that some of LCC's co-mingled material does not fully satisfy the Necessity Test requirements of 'high quality' recycling, although due to the lack of definition to this term there are some challenges in making an assessment. The following assessment is therefore based on the premise that materials are deemed to be high quality when used in closed loop recycling applications, as suggested by the Waste Regulations Route Map. Closed loop recycling applications relate to where a waste product is recycled back into a similar product, for example, glass bottles that are recycled back into new glass bottles. For information, open loop recycling is the conversion of material from one or more products into a new product, involving a change in the inherent properties of the material itself (often with degradation in quality).

The four materials are currently dealt with in the following way by Biffa and subsequent reprocessors:

Glass

Glass is used for aggregate (62%) and non-remelt purposes (38%). The Waste Regulations Route Map suggests glass remelted to create new bottles and jars is high quality recycling. It is therefore likely that separate collection would increase the quality of glass material collected. Based on Leicester's previous kerbside sort service, there is no evidence to suggest that there would be an increase in the quantity of material if collected separately; indeed the current co-mingled service collects on average 531 tonnes more glass per annum than kerbside sort yielded.

Paper

It is likely that separate collection would improve the quality of paper for recycling, as currently most paper is sent to board mills in China to be recycled into containerboard. The Waste Regulations Route Map suggests that high quality paper recycling would be where paper is reprocessed back into fresh newsprint – this does not currently happen. Based on Leicester's previous kerbside sort service, there is no evidence to suggest that there would be an increase in the quantity of material collected as on average co-mingled collections have yielded 1,435 tonnes more paper per year than kerbside sort.

Metals

It is unlikely that separate collection would improve the quality of material collected as metals are sent for closed loop recycling. There is no evidence to show that separate collections would lead to an increase in the quantity of material collected. Whilst metals were not collected under Leicester's previous kerbside sort service, the very low participation rate of just 49% in the old service suggests there would be no increase in

the quantity of metals collected. The trend for the three materials collected is that greater tonnages of all three materials have been collected under the co-mingled service than when kerbside sort was used.

Plastics

It is unlikely that separate collection would improve the quality of material collected as plastics are sent for closed loop recycling, where markets exist. HDPE and PET (plastic bottles) are largely recycled in the UK back into food grade plastic bottles, achieving closed loop recycling. C grade film, rigid and mixed plastics are generally exported for reprocessing to replace virgin polymers in the European and Chinese plastic manufacturing industries. Closed loop recycling is therefore achieved where possible, subject to available technologies and markets. Based on Leicester's previous kerbside sort service, there is no evidence to suggest that there would be an increase in the quantity of material collected.

Therefore, Leicester City Council's household recycling collections require separate collection of paper and glass, subject to separate collection being technically, economically and environmentally practicable. They do not require separate collection for plastics and metals.

Household Waste Recycling Centres (HWRCs) and Bring Banks

Glass is separately collected through bring banks and at HWRCs and used for remelt purposes. Paper/cardboard are separately collected through bring banks at HWRCs. Metals are also separately collected at HWRCs. Plastics are processed as per household kerbside recycling collections.

Therefore, Leicester City Council's HWRC and bring bank collections likely conform to the requirements of separate collection, except for plastics. However, plastics, for example from household kerbside recycling collections, are likely deemed to be of 'high quality'.

Technical test

Leicester has several factors that make separate collection challenging, but not technically impracticable when following the Waste Regulations Route Map. These are:

- Density of terraced housing and storage – Leicester has over 43,000 terraced properties, many of which have limited storage space for containers.
- Language barriers - Having an easy to understand service is critical to a successful recycling scheme in Leicester. According to the ONS 2011 census, Leicester is one of just 12 local authorities in England and Wales where under 75% of the population speak English as their main language.
- Transient population – again having an easy to understand service is critical. Leicester is a university city with approximately 42,000 students meaning population transience is high.

Noting these challenges it is still believed that it is technically practicable to implement separate collections of recyclables.

Environmental test

Lifecycle emissions analysis was conducted by Biffa Leicester on the current co-mingled recycling service and on a theoretical kerbside sort service collecting plastic

bottles, metals, paper and glass to determine which collection method provides the most environmentally beneficial outcome regarding carbon emissions.

The current co-mingled service achieves a net Carbon Dioxide (CO₂) equivalent saving of 8,500 tonnes per year, compared to just over 6,700 tonnes with kerbside sort. This takes into consideration direct emissions from handling by Biffa (i.e. processing, haulage, collection) as well as whether closed loop or open loop recycling occurs for recyclable materials collected. Although separate collection of paper, card and glass would increase the environmental benefit achieved, the net effect is negative because mixed plastics would be processed by the Ball Mill rather than recycled.

Therefore it is likely that it is environmentally impracticable to implement separate collections of the four materials as a decrease in carbon emission savings would be experienced compared with LCC's current position. Whilst separate collection would deliver greater carbon emissions savings for glass because it would be subjected to remelt applications, the net result of separate collection of all materials would be a worsening of the environmental benefits currently achieved through co-mingling.

Economic test

Costs were modelled for the separate kerbside collection of plastic bottles, metals, paper/card and glass. The model is an estimate prepared by the Council, based on a combination of the PFI financial model, known costs from Biffa, market rates for materials, etc. The costs have also been adjusted to take into account expected poor participation in the service, as Leicester's experience has shown that kerbside sort performs poorly compared to co-mingled collection.

For a kerbside sort collection, an annual operating cost increase of circa £550k would be expected, due to the more labour and vehicle intensive requirements. In addition, circa £4m of transitional/one-off costs would be incurred under the PFI contract for purchase of new vehicles, replacement of bins, current vehicle lease early termination penalties, the purchase of kerbside recycling boxes, etc. The total cost over the remaining 14 years of the contract would be in excess of £11.5m.

The Council does not receive any income from the sale of recycled materials, as all value lies with Biffa Leicester under the PFI contract and is reflected in the contract costs paid by the Council. Whilst this could potentially be changed such that the Council receives the income, the overall financial effect is expected to be broadly neutral, as the contract fee paid to BIFFA would consequently increase and one-off negotiation and legal costs would be incurred. Hence, such a change has not been modelled in detail.

In the current environment of severe reductions in Government grant funding and significant budgetary pressures facing the Council, moving to kerbside sort is therefore not deemed to be economically practicable. In addition, any renegotiation of the PFI contract so that the Council retained material income could be expected to be broadly neutral.

Conclusions

Although the Council would achieve a higher quality recyclate if separate collection of the four materials was deployed, it is likely that overall recyclable material yields would be lower than at present due to decreased participation in the service. In addition, for household recycling collections the costs of moving to kerbside sort are prohibitive.

Therefore it is concluded that the current arrangements for collecting recyclable material should not be changed.

4. Details of Scrutiny

This report has not been reviewed by Scrutiny committee, but the technical report used to inform this report for future decision has been reviewed by the Head of Legal Services, Head of Waste Management, Assistant Mayor Sarah Russell and the Director of Local Services and Enforcement.

5. Financial, legal and other implications

5.1 Financial implications

Moving to separate collection of recyclable materials would be prohibitively expensive for the Council, particularly in the current financial environment. Little advantage is likely to be gained from the Council receiving income for recycled materials.

Colin Sharpe, Head of Finance

5.2 Legal implications

The Waste (England and Wales) (Amendment) Regulations 2012 make amendments to the 2011 regulations. The amendment that is relevant for this report is to Section 13 "Duties in relation to the collection of waste". The amendment comes in to force on the 1st January 2015. It states that: (2) Subject to paragraph (4), an establishment or undertaking which collects waste paper, metal, plastic or glass must do so by way of separate collection. (3) Subject to paragraph (4), every waste collection authority must, when making arrangements for the collection of waste paper, metal, plastic or glass, ensure that those arrangements are by way of separate collection. (4) The duties in this regulation apply where separate collection (a) is necessary to ensure that the waste undergoes recovery operations in accordance with Articles 4 and 13 of the Waste Framework Directive and to facilitate or improve recovery, and (b) is technically, environmentally and economically practicable.

The Environment Agency may ask the local authority to provide a copy of their report in order to confirm why that authority has made the decision it has, either to continue to co-mingle recycling or to commence separate recycling collections. This should be made available upon request from the Environment Agency.

Hannah Price, Legal Services

5.3 Climate Change and Carbon Reduction implications

The environmental benefits of keeping the current co-mingled household collection service have been detailed in the Environmental Test (please see section 3). Although paper, cardboard and glass would benefit from a separate kerbside sort service, the need to process mixed plastic through the Ball Mill rather than recycle it, means the net

environmental benefit would be less under a system of separate collection. It is therefore recommended that the current orange bag system remains in use.

Louise Buckley, Environment Team

5.4 Equalities Implications

No implications other than those noted in the Technical Test in Section 3 of this report.

5.5 Other Implications (You will need to have considered other implications in preparing this report. Please indicate which ones apply?)

All implications are covered within section 5.

6. Background information and other papers:

Leicester City Council (2014) *Necessity and TEEP Assessment Technical report – Waste Management*

7. Summary of appendices:

None

8. Is this a private report (If so, please indicated the reasons and state why it is not in the public interest to be dealt with publicly)?

No

9. Is this a “key decision”?

Yes. It is proposed that this issue is placed on the Council’s Forward Plan for a future decision.

10. If a key decision please explain reason

Waste Management recommends the recycling service remains unchanged, but if the service was changed to one with separate recycling collections, annual costs of £566K would likely be incurred. Such a provision is not catered for in the approved revenue budget. The capital expenditure needed to make a change to the service is also not approved.