

WASTE MANAGEMENT AND RECYCLING CONTRACT 'RIGID PLASTICS'
RECYCLING
WDA/13/16

Recommendation

That Members:

1. note the response to the request made to the Authority by Wirral Council “to consider increasing the range of materials that are permitted to be accepted at the Materials Recovery Facilities as part of district kerbside co-mingled collection service; to include plastic pots, tubs and trays;” and
2. note that at the present time, due to current financial conditions, investment in the recycling of Rigid Plastics is not considered to represent sufficient value for money given other competing priorities and the financial austerity facing the Authority.

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Report of the Chief Executive

1. Purpose of the Report

- 1.1 To consider the request from Wirral Council to increase the range of materials that are permitted to be accepted at the Materials Recovery Facilities (MRF's) as part of the district kerbside co-mingled collection service; to include plastic pots, tubs and trays in the Waste Management and Recycling Contract.

2. Background

- 2.1 Co-mingled collections on Merseyside undertaken by Knowsley, Liverpool, Wirral, Sefton and Halton target five materials (paper, glass bottles/jars, cans, cardboard and plastic bottles). Delivery and sorting of co-mingled materials is undertaken at our MRF's, one located at Bidston, Wirral, and another in Gillmoss, Liverpool.
- 2.2 Rigid Plastic materials typically include margarine tubs, soup pots, microwaveable meal trays, yoghurt pots, food trays, egg cartons and are commonly made from polypropylene (PP) and polystyrene (PS) types of plastic. These items are not currently target co-mingled materials for processing at the MRFs due to a lack of a recycling market for these materials. All types of plastic bottles, which are typically made from Polyethylene terephthalate (PET) or High Density Polyethylene (HDPE) plastic are target co-mingled materials in the MRF's, this is due to there being a sustainable market enabling recycling of these materials.
- 2.3 In partnership with our contractor (Veolia), the Authority continually assess sustainable opportunities to increase the range of materials accepted for recycling into the MRFs as part of the districts' co-mingled collection service.

3. Key Issues

- 3.1 Local authorities face the challenge of operating high-performing sustainable recycling schemes in a cost-effective manner. The Authority works in partnership with its contractors and district councils to work towards assisting in achieving these objectives.

- 3.2 In providing a response, key areas of supporting details have been considered. The Authority has undertaken a trial to assess the feasibility of accepting plastic pots, tubs and trays (Rigid Plastics) as part of the co-mingled material accepted at the MRFs, and undertook a review of the recycling services provided by the six Joint Waste Disposal Authority (JWDA) areas in England.
- 3.1 Under the Waste Management and Recycling Contract (WMRC), Plastic Bottles are target materials. There is an established and competitive market for mixed plastic bottles accepted at the MRF's.
- 3.2 The Authority and Veolia has recently trialled the recovery of rigid plastics from the co-mingled input materials. Mixed plastics (plastic bottles/ rigid plastics) were recovered, baled and sent to Rainham Plastic Recovery Facility (PRF). This facility allows the plastic to be further sorted into different grades. Regrettably the trial proved to be unsustainable, and the cost of the additional sorting and transport process and the significant reduction in income compared to sale of plastic bottles were the determining factors.
- 3.3 Our contractor has stated that there remains no established or sustainable market for the direct sale of mixed plastics. Processors/recyclers have to remove the low grade rigid plastics as a contaminant, and at significant cost. This is the principal barrier to recycling rigid plastics.
- 3.4 Recycling Rigid Plastics would require recovery of mixed plastic at the MRFs and PRF. There is currently no sustainable market for mixed plastics and the potential income of rigid plastic, recovered from mixed plastics is negligible. These factors make targeting rigid plastics in a cost effective manner unfeasible.
- 3.5 The Authority receives a Guaranteed Income Payment from its contractor for the sale of recovered target materials which includes mixed plastic bottles. This income payment reduces the overall cost of the Authority's waste management contracts and overall costs levied on the districts.
- 3.6 Introducing rigid plastics into the Merseyside Councils co-mingled collection service brings with it the potential significant risk of contamination to fibre outputs from the MRFs, especially paper. Paper accounts for approximately 52% of the MRFs' recyclable outputs and commands a significant beneficial income. Our contractor must adhere to particularly high quality specifications to enter the recycling market, and this additional risk of increased contamination may affect the beneficial

income, the costs levied on the districts and the continued recycling performance of the fibre output from the MRFs.

- 3.7 When considering the volume of material available in the form of rigid plastics on Merseyside there is a relatively small tonnage, estimated to be in the region of 1650 tonnes on the basis that households produce a yield of 3.6kg/hh/yr (Merseyside Waste Composition Analysis and WRAP reports).
- 3.8 The Authority has reviewed other local government approaches to Rigid Plastics collections. The Joint Waste Disposal Authorities (JWDAs)(six in total), four within London, Greater Manchester WDA and MWDA, cover 31 District Councils in total acting as Waste Collection Authorities.
- 3.9 There are varying methods of recyclable waste collections in the London area; including semi co-mingled (just 2 stream collection), full co-mingled (more than two streams) and separate collection of individual waste stream (including rigid plastics). What was apparent is that it appears paper and card are often collected separately and delivered directly to processors (rigid plastic contamination is a high risk to full co-mingled collected paper). This then avoids contamination of the paper output if rigid plastics are dealt with separately.
- 3.10 Certain London District Councils separately collect rigid plastics. There appeared to be a mixture of outlets for rigid plastics collected in London, some are recycled and some sent to Energy from Waste (EfW) facilities. One of the London JWDAs reported that they were experiencing continuing difficulties to find any outlet for their rigid plastics.
- 3.11 District Councils falling under GMWDA and of course those under MWDA (both areas covering 14 District Councils) do not collect rigid plastics via co-mingled kerbside collections.
- 3.12 Cheshire West and Chester Councils' collection service offers collection of rigid plastics separately from fibre materials. The rigid plastics are collected with cans and plastic bottles i.e. not paper (which is collected separately). The cans are extracted prior to the mixed plastics being sent to a PRF.
- 3.13 Options have been considered with regards to the potential acceptance of rigid plastics in the co-mingled waste stream and delivery to the MRFs for recovery and further processing. There is an existing option to accept rigid plastics as part of the co-mingled waste stream, and an option which requires investment in the current MRF infrastructure.

- 3.14 In the event that rigid plastics were collected as part of the kerbside co-mingled collection service, the minimum added cost to the Authority per year would be approximately £315k, this cost is derived from the lack of income from the sale of plastic bottles.
- 3.15 If contamination levels in MRF recovered materials (such as fibre) should increase due to rigid plastic acceptance, there could be additional costs to the Authority as a consequence of a reduction in the income received from recyclates.
- 3.16 In the event plant modifications are required, Veolia have indicated that the approximate costs to produce separate plastic bottles and rigid plastic streams could be as much as £600k per MRF. The overall cost would be approximately £1.2m to implement the modifications at both MRF facilities. In addition, capital expenditure would be required to construct added storage facilities at both MRFs, and Veolia would seek to recover this cost from the Authority.
- 3.17 This option will reduce the contamination potential on the other material streams (especially fibre) by separating the rigid plastics from the other recyclable materials. However there is currently no market for exclusively rigid plastics.
- 3.18 The Chief Executive Officer and Director of Operations met with Wirral Councillors and Officers on the 30th March 2016 to highlight the issues and share the findings of the enquiry.

4. Risk Implications

- 4.1 The following risks have been identified in the event that rigid plastics were to be collected as part of the kerbside co-mingled collection service.

Identified Risk	Likelihood Rating	Consequence Rating	Risk Value	Mitigation
Outlets for MRF materials cannot be maintained.	3	5	15	<ul style="list-style-type: none"> • MWDA/Veolia professional consideration of MRF materials accepted and recovered. • Contractor capabilities

				trading within secondary recyclable materials markets.
Contamination levels in MRF recovered materials increase due to higher contamination causing sales income to decrease.	2	4	8	<ul style="list-style-type: none"> Contractor capabilities to operate the MRF plants effectively.
Plant performance levels are decreased due to higher contamination.	2	2	4	<ul style="list-style-type: none"> Application of Waste Acceptance Protocol at the MRFs. Utilisation of both MRFs.
Increased levels of contamination due to incorrect items being placed in collection receptacles causing plant down time and significant available processing time is lost.	2	4	8	<ul style="list-style-type: none"> Delivery of communication and awareness programme to householders regarding rigid plastics.

5. Environmental Implications

- 5.1 Including Rigid Plastics in the accepted materials will move the waste materials further up the Waste Hierarchy; materials will be recycled/diverted rather than disposed.

6. Financial Implications

- 6.1 If mixed plastics (plastic bottles/rigid plastics) are collected, recovered, baled and sent for recycling, the approximate added cost would be £315k per year. There is also the potential risk associated with the contamination of other recyclable materials for which the Authority receives additional

income. In addition to the added cost, there is currently a lack of a sustainable market for mixed plastics recycling, and a relatively small estimated rigid plastics tonnage. Therefore targeting rigid plastics for recycling in the districts co-mingled collection is impracticable.

- 6.2 Veolia have explored solutions to modify the MRFs, producing two separate plastic streams (plastic bottles and rigid plastics). Veolia estimate this modification would be in the region of £1.2m additional costs. This option would maintain the favourable plastic bottle income and reduce the likelihood of contamination to the fibre materials whilst recovering rigid plastics. There is however no market for rigid plastics and no guarantee this material would be recycled at this time.

7. Conclusion

- 7.1 In the context of current austerity measures and required cost savings facing the Authority and our partner District Councils, the financial costs required in order to provide a service for recycling rigid plastics does not at this time appear to represent value for money. It may be that investments in projects to increase the yield of existing target materials with sustainable economic markets would provide better value for money.
- 7.2 Members are therefore asked to note the request from Wirral Council to increase the range of materials processed at the Authority's MRFs, and also the findings of this review which establishes that there is no business case for extending the range of target materials to include rigid plastics at the present time.

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The background documents to this report are open to inspection in accordance with Section 100D of The Local Government Act 1972 - Nil.