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INTEGRA

Title of Report	**Waste Composition Analysis Update**
Report for	Project Integra Strategic Board
Date	26 February 2019
Approval Required	No (for information only)

1 Purpose of report

1.1 The purpose of this report is to highlight the key findings from the comprehensive Waste Composition Analysis recently undertaken across the Project Integra area.

1.2 The analysis was undertaken over a 5 week period in 2018 and comprised the hand sorting of a predetermined sample of both household recyclables (DMR) and black bag (residual) waste. Approximately 150 samples from each Waste Collection Authority (WCA) and Unitary Authority (UA) were sorted. Additionally, 10 household waste recycling centres were also sampled and sorted.

1.2 The executive summary below is taken from the full report that has been sent to all PI Partners.

2. Executive Summary

2.1 Resource Futures carried out a comprehensive analysis of kerbside collected household waste and HWRC residual waste streams for the Project Integra partnership. The aim of the project was to provide up to date information on the composition of the waste streams and the performance of the recycling services. The data will inform future service improvements and communication campaigns.

The kerbside waste analysis of residual waste and dry mixed recycling (DMR) was based on a representative sample of approximately 150 households in each of the WCAs (including the two Unitary Authorities) making the total sample for PI 1,956 households. Output Area Classification data from the Office for National Statistics was used to stratify the sample ensuring that a variety of household types were represented in the sample.

The HWRC residual waste analysis was based on samples from 10 sites selected to represent the PI partnership area. Site throughput, performance and layout were taken into account during the selection.

The sample collection and analysis took place in September and October 2018.

The kerbside results show that an average household within the PI area set out 8.94kg of residual waste and 2.63kg of dry mixed recycling (DMR) per week.

2.2 Kerbside residual waste consisted predominantly of putrescible waste (42.0%). This was mostly made up of food waste (34.7% of the total composition) and most of it was avoidable (26.3%). This suggests that

residents in the PI area are throwing out considerable amounts of food that could have been eaten.

Other combustible waste was the second most prominent category (12.4%) and this was mostly made up of nappies (5.7%) and other absorbent hygiene products (1.2%) as well as miscellaneous combustible items (3.6% e.g. wet wipes and cleaning products). Paper and card made up 11.7% of the total composition and included 4.9% that was potentially recyclable. Plastic film contributed 7.9% to the composition while 7.2% was dense plastics. Overall 7.8% of the residual waste could have potentially been recycled via the dry mixed recycling (DMR) services provided to all residents. Figure E 1 (reading from 12 o'clock clockwise) shows the composition of kerbside residual waste for the PI area.

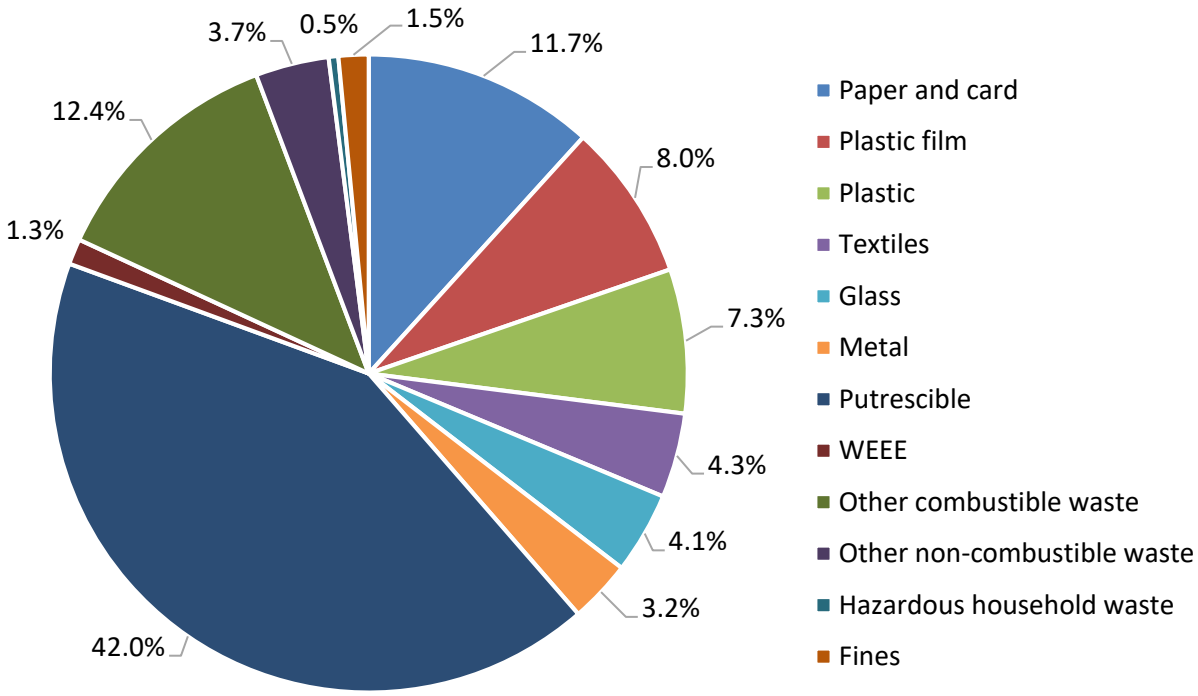

Figure E 1 Composition of kerbside collected residual waste in PI (%)

2.3 DMR samples were collected from the same sets of households included in the residual waste analysis. The analysis of the material showed that paper and card made up the great majority of the DMR collected by PI at 69.9%. This was followed by plastic at 13.9% (with 3.7% being non-target plastics including pots tubs and trays) with bottles accounting for 10.2% of the composition. Metals contributed a further 7.0%. Putrescible waste was the most prominent non-target material contributing 3.1% to the composition followed by plastic film (1.6%), other combustibles (1.4%) and glass (1.3%). The average contamination rate of the DMR in PI was 17.4%. Figure E 2 shows the DMR composition graphically.

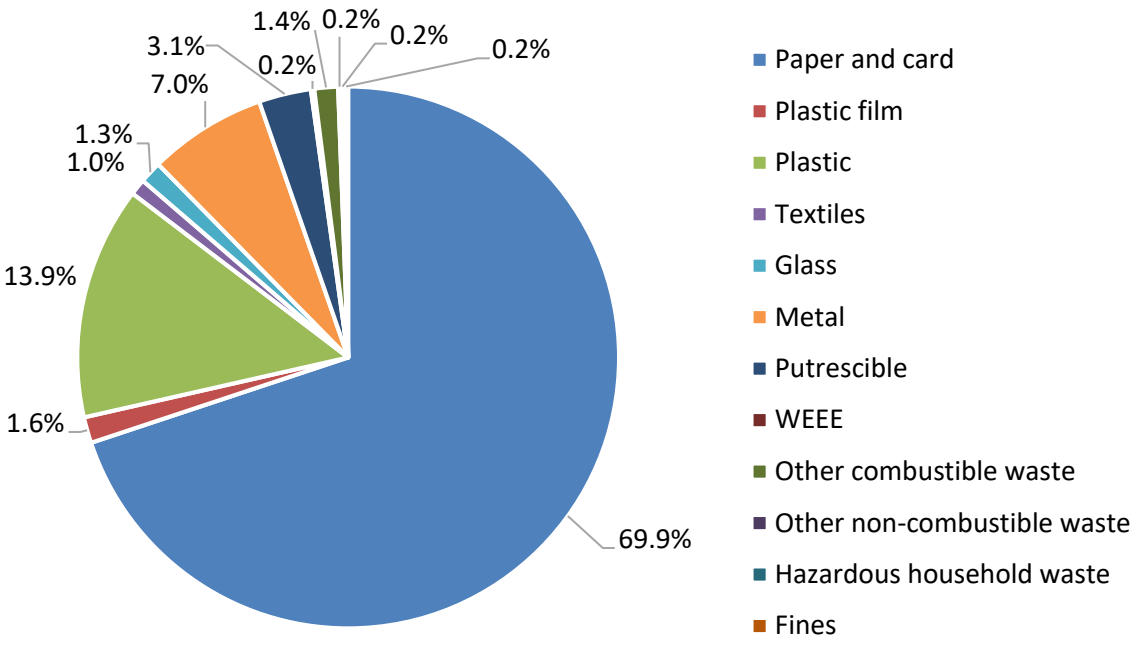

Figure E 2 Composition of kerbside collected DMR in PI (%)

The overall capture rate for the DMR service was 76% with card, paper and plastic bottles captured more than the other materials.

2.4 The HWRC residual waste in PI consisted of other combustible waste (29.0%) which includes carpet and underlay (7.8%) and miscellaneous combustible items (8.8%) such as mixed material household items, cleaning items (sponges, wet wipes) and combustible DIY waste), putrescible waste (16.8%, mostly food waste and pet bedding), and plastic (12.3%, mostly household plastic items such as bowls and toys). Paper and card accounted for a further 13.9% followed by textiles (7.3%) and plastic film (6.8%). Figure E 3 shows the composition graphically.

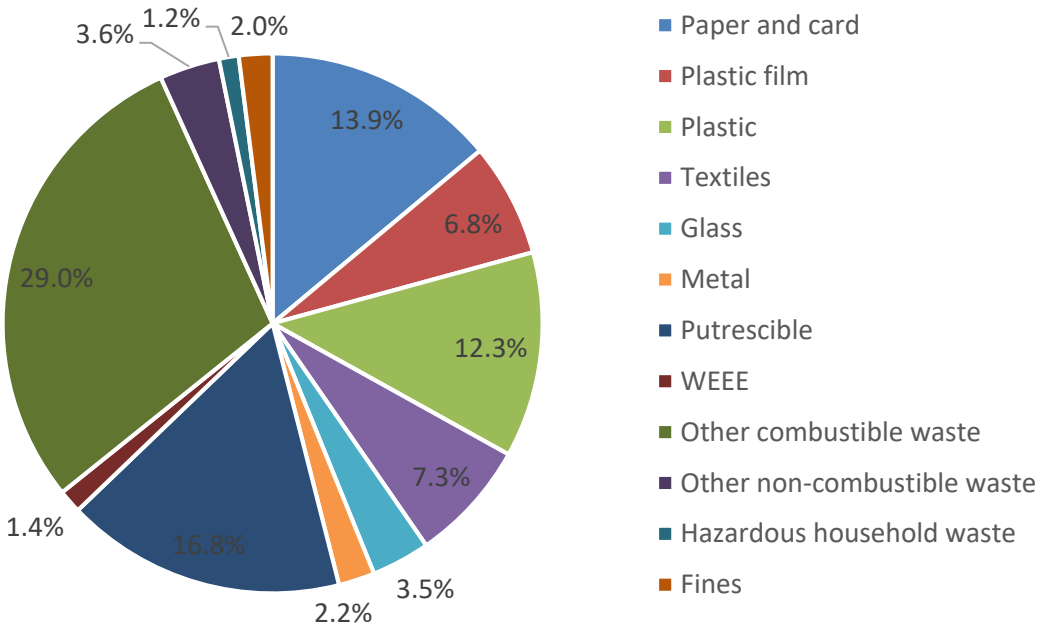

Figure E 3 Composition of HWRC residual waste for PI (%)

Overall 12% of the HWRC residual composition could have potentially been recycled using the kerbside DMR services provided by the PI WCA and 26% could have potentially been recycled at the HWRCs and local recycling banks.

2.5 The overall waste composition, including all waste collected via the kerbside residual waste collection, DMR collection, HWRCs, brink banks, bulky waste as well as garden, food waste and glass collection across PI included 33.8% of putrescible waste, 16.7% of paper and card, 16.3% of other combustibles, 7.2% of glass, 7.0% of plastics, 4.8% of metals, 4.6% of plastic film and 3.8% of textiles.

The analysis showed that the kerbside collected residual waste is the biggest waste stream collected across PI at 44% of the overall waste produced.

3. Next Steps

4.1 The full PI and individual reports for each of the WCAs and UAs have been sent to all PI Partners, including the raw data.

4.2 It is suggested that the results are used by PI Partners to support both the Behavioural Insights work and other related programmes, such as waste prevention.

4.3 The outputs will also be used to inform infrastructure and service reviews; and changes as necessary.

4.4 The Partnership proposes to publish a press release about the work and how the information will be used. This will be approved by all PI Partners through the Strategy Officer Group.

5. Recommendations

5.1 That the PI Strategic Board note the results of the Waste Composition Analysis and accompanying report.

5.2 The PI Executive shall retain all the information and act as a hub for future partner enquiries and projects.

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