apse membership resources

Briefing14-48 **December 2014**

Contamination issues within recycling

To: All Chief Executives, Main Contacts and APSE Contacts

Key Issues

- Contamination of waste and recycling can lead to significant additional costs and substantial lost income.
- Contaminated waste can also inflate recycling performance figures and should be considered when assessing recycling successes
- This briefing explores the experiences of local authorities in tackling the contamination of recycling and consider how contamination of recycling can be minimised if not eradicated

1. Introduction

At a recent APSE Performance Network event the Refuse and Waste workshop raised the question of contamination levels within recycling collections and what Councils were attempting to do about it.

The questions posed within the workshop concerned whether or not contamination within recycling is a big issue and whether contamination levels are fully understood? The workshop also explored whether the method of collection had any impact upon contamination within loads. For example is contamination more likely within co-mingled or bulk bin collections? Are flat collections more prone to contamination? The workshop also queried whether kerbside sorted and more frequently collected box collections naturally reduce contamination and produce a cleaner recyclate?
The group also considered the impact of any contamination further along the process within Material Recycling Facilities; questioning whether costs could be reduced by educating residents to recycle diligently and appropriately and also whether in light of the costs involved to councils should an education or enforcement approach be taken?

Whilst these questions were debated extensively they are impacted upon by local circumstances. However the issue is a matter of wide concern across APSE member authorities.

2. Network Query Specific Issues of Concern

As part of APSE's services to members a recent APSE network query on this subject explored the subject of contamination further, to gain more specific information. This briefing details some of the comments, feedback and case studies received in response.

From the snapshot of comments received in response to the network query it would indicate that contamination is a subject of concern to many waste professionals and that it is impacted upon by the methods of collection and nature of properties being collected from.

Interventions can be highly labour intensive and costly with limited success and any immediate improvement will reduce over time without a sustained effort.

Key comments from respondent authorities are as follows:-

- "We collect recycling in a wheeled bin which is resulting in a high level of contamination in communal back street alleys"

- "The situation in recycling bins on estates is rather worse with contamination in the region of 20-25%"

- "We would not say it has been entirely successful but about 2 years ago we had a concerted effort which started with crews placing stickers on bins, residents having a series of advisory leaflets and warning letters, visits from waste advisory wardens and the ultimate removal of the bin if there was still a problem and in all fairness this had some success. The above seemed to work for a while (and we still undertake some pre-sorting at our WTS to remove any obvious contra items prior to transfer to MRF's) but we probably need to start again."

- "We piloted a contamination procedure from the end of September 2013 to April 2014, the process has been found to be very labour intensive."

- "We have had 32 reports (since April this year) of contaminated recycling bins which is relatively low considering we have

approximately 160 blocks of flats and apartments throughout the Borough"

- "We work very closely with the company that reprocesses our mixed recycling. Any contamination is photographed and the area on where it lies on the full load is identified (e.g. Part 1, 2, 3 or 4 of the load). We then check our vehicle tracking system to identify the area the crew were working in"

- "My Council have done much to reduce contamination in recent years and with some success, reducing from an average of 19.8% in 2011/12 to around 13.2% during 2014/15 to date (these figures cover both recycling bins on estates and sacks provided to low-rise premises)"

3. Tackling the issue

Alongside these responses APSE also received some detailed information about what authorities are attempting to do to tackle this and three case studies with good results are show cased below.

Case study 1: Rochdale Metropolitan Borough Council / GMWDA

GMWDA believe incorrect recycling costs them £25 million pounds per year across the area.

Rochdale Metropolitan Borough Council piloted and was successful on the 'Right Stuff Right Bin campaign' which recently won an award for best local authority recycling initiative at the Material Recycling Weekly event.

The campaign was delivered in a poor performing round with high levels of contamination and rejected loads and was very successful.

Initially designed to reduce contamination levels by 3% and increase the recycling rate across all 3 material streams by a further 3% the achieved results far exceeded these expectations.

Contamination reduced by 61% for the co-mingled recycling stream and the level of recycling being achieved increased by 49%. Rochdale MBC believes this intervention was cost effective as it utilised existing resources and saved over £10,000 in disposal costs.

Details on the campaign can be found at
http://www.recycleforgreatermanchester.com/news/news?action=view&newsID=233

Case Study 2: Wandsworth Borough Council

Wandsworth Borough Council has worked for many years to improve the MRF outputs and to reduce abortive costs of contamination which it estimates can be up to £169.50 per tonne in the worst case.

Wandsworth Borough Council and WRWA have been working closely together and have jointly introduced initiatives to reduce contamination in recent years and with some success, reducing from an average of 19.8% in 2011/12 to around 13.2% during 2014/15 to date (these figures cover both recycling bins on estates and sacks provided to low-rise premises). Much of this improvement can be explained by MRF improvements which have enabled certain 'contaminants' to now be treated as acceptable (small electrical appliances & textiles) but many other measures have been taken within the collection side including the very successful "Recycle Right" awareness campaign.

However the situation in communal recycling bins on estates is rather worse with contamination in the region of 20-25%.Wandsworth are currently targeting this issue and are trialling Lid locks which appear to be effective at reducing this level of contamination with slam locks, which don't go missing the most effective. They are also centralising bank provision on estates so that recycling bins are in less conveniently located places than refuse bins. This is intended to ensure that people looking for the nearest bin in which to throw general waste in don't find a recycling bank first.

Most recently Wandsworth has seen contamination rates dip below 10% for the first time and the MRF output consistently achieving the requirements of the material processors.

Case study 3: Enfield London Borough

Enfield council piloted a contamination procedure from the end of September 2013 to April 2014. The procedure was rolled out with one collection round for both dry recycling and garden and food waste wheeled bins. The process was originally started with the Monday round and then introduced over several months across the week.

Prior to the roll out of the process, a new form of communication to advise the resident of contamination was developed with the crews. Previously hangers had been left on the bin handles. However the hangers often dropped off or split, so residents did not see the communication. Stickers were developed that seal the bin lid shut, that could be easily used by the crews. A contamination code sheet was also developed with the crews. This is used to enable the crews to easily record the item/s that a bin has been rejected for.

Crew refresher training was also undertaken with the dry recycling and organic crews. This was so that there was consistency across crews with contamination tolerance level and consistency in the items being collected.
By engaging with the crews at the start of the development stage, they were engaged with the project from the beginning.

The process followed 4 stages.

1. ***Stage 1***

Contamination identified by the collection crew. Contamination sticker placed on the bin.
Letter and pictorial information sent to resident advising them of contamination.

2. ***Stage 2***

Contamination identified by the collection crew. Contamination sticker placed on the bin.
Letter and pictorial information sent to resident advising them of contamination.
Property door knocked by a waste and recycling officer.

3. ***Stage 3***

Contamination identified by the collection crew. Contamination sticker placed on the bin.
Letter and pictorial information sent to resident advising them of contamination. Letter advises that if the bin is reported as contaminated again it will be removed.
Contaminated bin emptied by the refuse crew on the next collection day.

4. ***Stage 4***

Contamination identified by the collection crew. Contamination sticker placed on the bin. Bin removed from the property. Letter sent to the resident advising that the bin has been removed due to persistent contamination.
Environmental crime team notified of removal. Property monitored for side waste. If side waste occurs, Section 46 served on the property.

The process has been found to be very labour intensive. The process has been rolled out to one crew and has one waste and recycling officer working

on the project full time. The process is therefore unsustainable and an alternative procedure is required.

The process has now been condensed into three stages, with officers no longer needing to make repeat visits if they are unable to speak to a resident face to face. The process will now only be applied to a round that has a 10% or higher contamination rate at the MRF. However this is a reactive way of tackling contamination, and will need to be supported by a communications campaign in the council magazine and website.

APSE Comment

Waste collection and recycling practices and procedures that treat the waste materials as a valuable commodity can produce extensive cost offsetting opportunities in both collection and disposal budgets. Contamination within those waste streams can impact substantially on the value of that commodity and be very difficult to eradicate. Greater Manchester Waste Disposal Authority alone believes incorrect recycling costs them in the region of £25 Million Pounds a year which could be better spent elsewhere.

In future as more and more opportunities arise for additional materials to be added within recycling streams and residual waste collections may be reduced in frequency or volume, resident engagement with the method of collection is critical if contamination is to be kept to a minimum.

The case studies have identified a number of approaches but they all start with a communication campaign backed up by appropriate levels of enforcement action and are bespoke to the individual needs of the particular areas. These interventions can be costly but if implemented utilising existing resources then they can be made to be cost effective.

This briefing was prepared with the kind assistance of John Jeffrey APSE Associate Consultant and formerly Director of Localities at Cheshire West and Chester Council.

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