

## Materials Recovery Code – Recyclate Quality

### Summary

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Quality recyclate (recyclable material) is a critical factor in achieving Scotland’s long-term recycling targets and ensuring that high value secondary materials are produced. In March 2015 the Materials Recovery Code was introduced, requiring Materials Recovery Facilities (MRFs) to record the amount and quality of their recyclate input and output, and report this data to the Scottish Environment Protection Agency (SEPA). From October 2015, SEPA worked with MRF operators to support their reporting obligation and to undertake independent site audits. In July 2017, the first 15 months of MRF data, with an accompanying report, were published on Scotland’s environment web (SEWeb). Publishing this data has lent transparency to the waste-industry market place and provides information about how Scotland’s recyclables are managed. The publication of this data also supports Scotland’s transition to a more circular economy, as set out in the Scottish Government’s Making Things Last (2016) document.

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*“While Scotland is recycling more and landfilling less than at any point in our recent history we must dramatically cut waste production across the economy, recover more and dispose of only the very minimum”*

*Terry A’Hearn, Chief Executive, SEPA*

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Recyclate sorting at a Materials Recovery Facility. Image copyright SEPA

## The challenges

Under The Waste (Scotland) Regulations 2012, dry recyclable waste must be separately collected, to allow for easier recycling of materials. Co-mingled collection of dry recyclables is permitted, providing this does not impact the quantity or quality (contamination rate) of material available for recycling. The introduction of the Materials Recovery Code in 2015 required MRFs treating more than 1,000 tonnes of mixed dry recyclate per year to record the amount and quality of their recyclate input and output, and report this data to SEPA.

To ensure the requirements of the Code were progressed, and that the data reported provided information on the quantity and quality of co-mingled recyclate, a number of challenges were identified:

- Development of new reporting form and manual for use by MRF operators, to ensure data is submitted in a standard format.
- Ensuring MRF operators understood their reporting obligations.
- Verification of recyclate data to assess its accuracy.
- Publication of the data in an open format to enable data transparency.

## The solution

SEPA developed MRF operator guidance and associated standardised data return forms to facilitate consistent reporting of data. Initial MRF guidance was updated and supplemented by Frequently Asked Questions following early audit findings and feedback from operators on issues which were not clear to them. Data returns are submitted on a quarterly basis and routinely assessed by SEPA allowing regular contact with MRF operators regarding data errors or queries. In addition to operator provided data, SEPA undertook site audits, during which a cross-portfolio team, including waste data specialists sought to:

- assist sites with understanding their obligations under the code;
- ensure data was reported as accurately and consistently as possible;
- develop an overall understanding of site operations;
- independently sample recyclate input and output contamination to assess quality;
- address any logistical issues regarding future sampling visits from SEPA.

Site audits were supplemented by a workshop event in late 2016 to facilitate further engagement between SEPA and MRF operators, and to improve understanding of the code requirements and common issues facing operators.

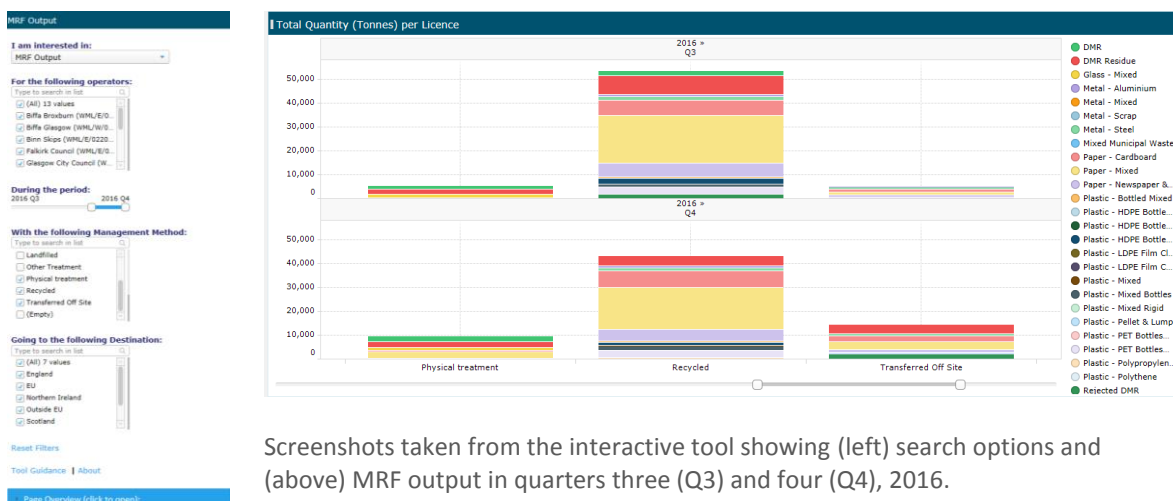
A further event was hosted by SEPA prior to publishing the data to allow operators a preview of what would be published.

## The outcomes

SEPA worked with all 13 MRF operators that are required to report their data to SEPA, from October 2015 to July 2017 (initial reporting period). During this time it was apparent that most operators work hard to get maximum value from the material they manage and are committed to meeting sampling requirements.

During this reporting period SEPA identified an average contamination rate of 17% for material entering MRFs. Contamination via non-target and non-recyclable material included items such as baby wipes, low grade plastics and crisp wrappers.

In July 2017 the recycle-quality data and associated report were published on Scotland's Environment Web. The data is presented as an interactive tool and can be searched and viewed in different formats. This data provides initial evidence on the quality of MRF input and output recycle. The report also highlights the importance of recycle identification and improved engagement to increase future recycle quality. Further work to facilitate supply chain engagement is intended.



Screenshots taken from the interactive tool showing (left) search options and (above) MRF output in quarters three (Q3) and four (Q4), 2016.

### Fact and figures

- Approximately 279,913 tonnes of mixed-recycling (mix of paper, plastic packaging and aluminium cans) was processed in 2016, producing 201,099 tonnes of material to be recycled.
- The average contamination rate of single stream output material leaving MRFs during the reporting period was 10%.
- Offensive and hazardous waste was found in eight of the 22 output samples SEPA undertook, including waste electricals, batteries and soiled nappies.

## References

Scottish Government (2012) The Waste (Scotland) Regulations 2012:  
[www.legislation.gov.uk/ssi/2012/148/pdfs/ssi\\_20120148\\_en.pdf](http://www.legislation.gov.uk/ssi/2012/148/pdfs/ssi_20120148_en.pdf)

Scottish Government (2015) Code of Practice on Sampling and Reporting at Materials Recovery Facilities: <http://www.gov.scot/Resource/0047/00472355.pdf>

Scottish Government (2016) *Making things last – a circular economy strategy for Scotland*:  
<http://www.gov.scot/Resource/0049/00494471.pdf>

## Find out more

View the recycle-quality data (<https://www.environment.gov.scot/data-analysis-applications/recyclate-quality/>) and associated report, *Materials Recovery Code, a summary of the quality of recyclables processed at Materials Recovery Facilities in Scotland* (<https://www.sepa.org.uk/media/306565/materials-recovery-code-the-quality-of-recyclables-processed-at-mrfs-in-scotland.pdf>).

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