

STRONSAY PLASTIC RECYCLING TRIAL – FINAL REPORT

The Orkney Islands Council Environmental Services team would like to thank the Stronsay community in supporting the plastic recycling trial.

The trial came to an end in September 2020 and below is a report summarising the trial and its findings.

Colin McAlpine
Stronsay Island Link Officer
9 August 2021

Background

Orkney Islands Council is aware that there is a strong desire in certain outer Isles communities to be able to recycle plastic on the Islands. This has been raised in particular by the Stronsay Development Trust and the Community Council. It has always been a challenge to deliver an equivalent service to the 13 non-linked Isles given the low population numbers and resulting low volumes of material that can be recycled and reused. This results in higher costs per weight for each material, plus additional carbon costs associated with additional trips to the islands to collect the small volumes of material from each.

As part of the overall Council waste service, the outer isles are provided with communal recycling facilities (bring banks) which accept metals, glass, and paper/thin card. Isles residents can use these facilities to recycle 3 out of the 4 materials that mainland residents can recycle through their kerbside collection scheme. It should be noted that the only plastic recycled by the Council waste collection service is plastic bottles.

There are several reasons why plastic bottles are not currently collected on the outer isles. One is that the skips are un-manned and plastic recycling is notoriously difficult to understand given the various types and qualities, making contamination a very real issue. As there is neither the technology to allow the separation and sorting of plastics at the Council's Waste Transfer Station at Chinglebraes, nor the manpower resource to implement a manual picking line to sort incoming materials, any contamination would mean that the materials collected could not be recycled but would instead be sent for disposal as residual waste. Added to these, we must consider the cost of double shipment firstly from the isles to the Mainland for consolidation and baling, and then onward to the Scottish Mainland which does come with significant added expenditure. Multiply that across all the isles and cost becomes a significant factor.

The Trial

To examine the real impact of the above challenges and assess whether any could be overcome to allow us to provide a viable service to the people of the outer isles, a trial was proposed. An agreement was put in place between the Stronsay Community Council, the Stronsay Development Trust and Orkney Islands Council for a period of

one year from January 2019 to January 2020 initially. As the first skip empty took place in April 2019, the last skip planned to be brought in was April 2020. However, due to Covid-19, the skip was not brought in until later in the year, in September 2020.



Collection of Plastic

It was agreed that collections of the skip would take place four times over the trial period between April 2019 and September 2020. Each time the skip came into Chinglebraes, the Waste team went through the contents of the skip and removed any contamination which was then categorised and weighed. The total weight is then deducted from the total weight of the skip contents which was logged through the weighbridge.



Key Findings

The total weight of plastic bottles collected during the trial was **652.76kg** with an average contamination level of **5.11%**. When this weight is divided by the number of households in Stronsay (**194**), the average weight of recycled plastic per household is **2.38kg/hh/year**. When compared with the UK average collection rate (kerbside) of plastic bottles, **12.65kg/hh/year** (Recoup 2019 Report), the rate of plastic recycling in Stronsay is clearly much less. However, the trials contamination level of **5.11%** is a very low value considering that the location of the trial skip was unmanned and is a testament to the Stronsay residents' commitment to the project.

The overall costs of collection, processing, transport and final disposal were calculated, together with any savings as a result of diverting the materials from disposal in Shetland and additional rebates from the plastics reprocessing facility which accepts material from Orkney. This resulted in an estimated collection cost of £768/tonne.

Summary

The Stronsay Plastic Recycling Trial has proved worthwhile in delivering tangible data regarding the viability of providing plastic recycling services to the outer isles. The trial did show that the cost benefit ratio of recycling in this context is not compelling however information gathered from this study will inform the future waste strategy for Orkney and has therefore proved very useful.

There is currently a wider strategic project in development regarding the waste management solution for Orkney. New facilities will lead to change in Orkney's waste management infrastructure and replace the now outdated Orkney and Shetland Area Waste Management Plan published in 2003. The services delivered to the Isles have been considered as part of this ongoing review and will be part of continual discussion and community engagement this year.

This report represents the close of the trial. We would like to thank those who have worked with us, the Stronsay Development Trust, Stronsay Community Council, colleagues in Operations at our Hatston depot and the people of Stronsay for their involvement.