


Food waste
intervention trials
in
South Ayrshire
APSE Sheffield




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New or existing collections

- This presentation outlines the results from a Zero Waste Scotland-funded intervention working with South Ayrshire Council
- Compares the results with other interventions in local authorities with existing food waste collections.
- The outputs and findings are useful whether wanting to **boost current yields** or when **starting a new service** under **Simpler Recycling**.
- **N.B. Scotland isn't covered by Simpler Recycling but a collection co-design process!**



A Scottish perspective!



Background to collections in Scotland

- **Local Authority Duty:** Since 2014, the **Waste (Scotland) Regulations 2012** has required local authorities in non-rural areas to provide a separate food waste collection service to householders.
- **Business Mandate:** Food businesses (like cafes and restaurants) that produce more than **5 kg** of food waste per week in non-rural areas must present it for separate collection.
- And if you want to look up “rural”! [Defining rural and non-rural areas to support zero waste policies - gov.scot](#)

(Split into three: 'remote rural areas', 'accessible rural areas' and 'remote



Scottish food collections & residual frequencies

32 local authorities

Food separate - 17

residual fortnightly: 8 - Angus, Edinburgh, D&G, Dundee, Highland, Inverclyde, Midlothian, Borders

residual 3-weekly: 7 - Aberdeenshire, A&B, East Ayrshire, East Dunbartonshire, East Lothian, Glasgow, South Ayrshire

residual 4-weekly: 2 - Clacks & Falkirk

Mixed food & garden - 13

residual fortnightly: 6 - **Aberdeen City**, Fife, **P&K**, South Lanarkshire, **West Dunbartonshire**, **West Lothian**

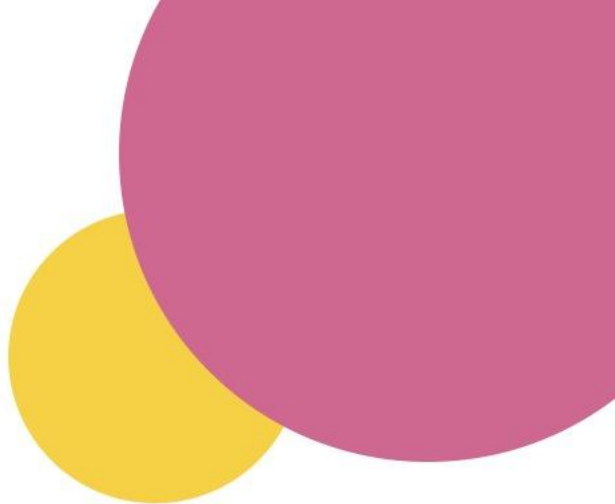
residual 3-weekly: 6 - **East Renfrewshire**, **Moray**, North Ayrshire, North Lanarkshire, **Renfrewshire**, Comhairle nan Eilean Siar (Lewis/Harris only)

residual 4-weekly: 1 - **Stirling**

Orkney and Shetland have neither food nor garden waste collections, residual is fortnightly.

8 of the 13 mixed food & garden charge for the garden materials (red above)

50% of Scottish local authorities collect residual waste on a lower frequency than fortnightly, the rest collect residual fortnightly.



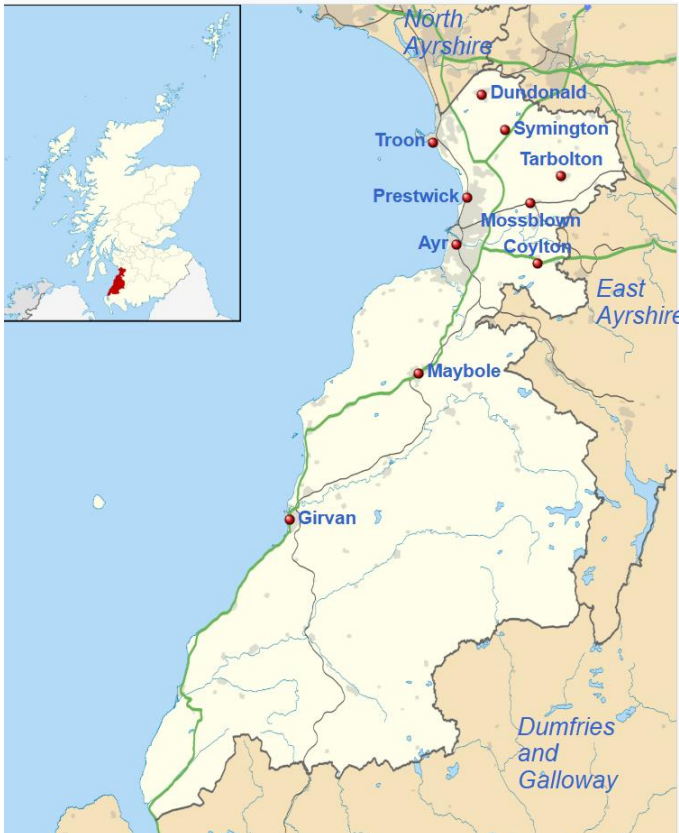
Background and aims

Council area



Coat of arms

Motto: Ne'er Forget the People



- Location, with Ayr, Prestwick and Troon the biggest towns.
- **South Ayrshire Council – a great council to work with!**
- **Collecting food waste since 2013**
- **Wanting to revitalise the service:**
 - Relatively simple, replicable interventions
 - Reducing background “noise”
 - Testing against a control group
 - **To improve participation in the collection service and the capture of food waste**
 - Assessing public attitudes to the interventions



Background to LA collections

Overall service

- 56,700 hhs, collecting **FW from 55,446 hhs**
- FW collected **separately** from garden waste
- Six specialised vehicles
 - 2 x 12t gvw
 - 4 x 7.5t gvw
- Processed at Energen Biogas, Cumbernauld (50 miles from Ayr)
- Collection services
 - **Food waste - weekly** via internal & external caddies (7 litre & 23 litre)
 - **Residual waste - three-weekly**
 - **Carton, plastics, metals – four-weekly** (alternating with paper and card) & **Paper and card – four-weekly** (alternating with cartons, plastics and metals)
 - **Glass - six-weekly**
 - **Garden waste** (charged for) - **four-weekly**



Background to LA collections



Intervention design

Intervention area	Round and day	Area	Number of households
Control (none)	FW3 Tuesday	Seafield/ Heathfield	2,165
Communications	FW3 Thursday	Doonfoot	1,389
Liners	FW4 Wednesday	Castlehill/ Holmston	1,941
Sticker	FW Thursday	Belmont/ Forehill	2,935

- It was a long study - pre intervention data from a whole year beforehand and data from October 2023 to October 2024 following implementation.
- Data was collected quarterly, in four phases.



The interventions

- A **targeted communication campaign**, which comprised:
 - to each household -
 - four issues of “Food for Thought”;
 - a Christmas postcard;
 - a “do-goodie” box, containing pasta measurers, clips for resealing open bags and other food waste prevention items;
 - overarching social media activity for the selected area; and
 - lamp post sleeves, providing messaging on food waste reduction, within the specific intervention area.
- Providing **free food waste caddy liners** (two initial rolls of 26 liners, then ad-hoc, on request)
- **Residual bin stickers**
- **The interventions were separate and not combined.**



The interventions



The interventions



The interventions



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The results



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Summary of results

- All interventions were successful to a greater or lesser degree.
- Backed up by trials elsewhere - a package of interventions may be preferable.
- However, if a single intervention is preferred, then the residual bin sticker is proven to be highly effective.



Detailed results - yield increase

The sticker trial area started from a lower yield but had the highest increase by percentage – by 42.1% - (kg/hh/yr)

Intervention area	Pre-trial yield	Average yield phases 2-4	Average yield increase from pre-trial	Percent (%) increase from pre-trial
Control	38.7	39.4	0.7	1.6%
Communications	56.6	62.5	5.9	10.4%
Liners	47.7	54.5	6.8	14.4%
Stickers	28.1	39.9	11.8	42.1%

Detailed results – relationship between yield and set out

This shows the **yield by household actually setting out**, rather than covered by the collection service (kg/hh/yr) – **only the stickers' area participants increased the amount of food waste they segregated on an individual household basis.**

Intervention area	Yield, Phase 1 (pre-intervention)	Average yield, Phases 2-4	Difference from Phase 1
Control	145.7	144.9	-0.9
Communications	175.9	174.8	-1.2
Liners	145.2	144.2	-1.0
Stickers	160.3	168.3	8.0

Summary of results - costs

Based on the cost of the intervention and the avoided disposal alone - when extrapolated to cover the whole of South Ayrshire - the most cost-effective was the sticker intervention.

Intervention area	Avoided disposal saving (residual treatment - FW treatment) /yr	Cost of intervention /yr	Total calculated cost /yr
Communications	-£45,053	£829,145	£784,092
Liners	-£52,314	£45,571	-£6,743
Sticker	-£90,419	£16,205	-£74,214

Consumer opinions

- The **communications campaign** was the most well-remembered of the three interventions (89% of respondents), **although it had the lowest increase in food waste yield**. That said, the campaign was also for food waste reduction – so there are some difficulties in disaggregating impacts.
- Of those who separated their food waste, people from the **caddy liner**-provided areas were the most likely to say that the trial was the “main influence” behind their more frequent use of this recycling service.
- **Free caddy liners** seemed to be the most popular intervention overall.



Consumer opinions

- Interviewees, in both the communications and bin stickers areas, questioned why caddy liners were not distributed to them as part of the intervention.
- Stickers were the most poorly recalled intervention of the three. However, despite having the lowest recall, the stickers area showed the largest increase in yield.
- Both survey data and interviews indicate that the stickers seemed to work best for both existing users of the recycling service and lapsed users.



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Other trials

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Other trial results

- Other trials across the UK usefully backed up the findings from South Ayrshire.
- In WRAP trials, between 2013 and 2015, 19 different combinations of interventions were tested in 11 local authority areas, **each authority having an existing and separate food waste collection service.**
 - Those pilot areas which provided residual bin stickers within their interventions, saw the greatest increase in yield, **with an average of 28%.**
 - The most effective “package” was that of liners, residual bin stickers and leaflet, which saw **an increase of c. 32% on average.**



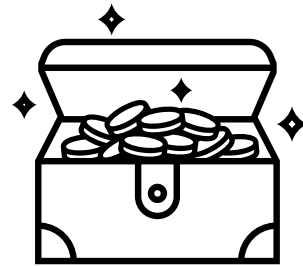
Other trial results

- **Essex** – package - bin sticker for the residual waste bin, a free roll of liners, and an information leaflet – **21% increase in yields**
- **Norwich City** – package as above – **40% increase in yields**
- **Eastleigh BC** – package as above – **34% increase in yields**
- **Caerphilly County Borough Council** – free caddy liners – **21% increase in yields**
- **Renfrewshire Council** - The first quarter's results (January – March inclusive 2025), comparing 2024 with 2025, show a **22% increase in yields**, mixed



Conclusions

- Interventions work!
 - The most effective interventions include the residual bin sticker.
 - Householders appreciate being provided with free liners and having easy access to caddies and replacements.
 - Savings can be made - but must be considered by each individual local authority as resource requirements and treatment/ disposal costs will differ.



Conclusions

- It can be concluded from evidence across the UK that a package of interventions, or a multi-layer approach, is effective at increasing food waste yields - plus being a publicly acceptable approach.
- The multi-layer approach:
 - **motivates** residents to use the food waste collection service – this sticker
 - **provides the equipment** – the caddies and liners
 - **provides the knowledge** – the information leaflet and other communications.
- **However, singly, the sticker intervention does work!**



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Thank you!

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