

Comments on recycling and incineration from local authorities

April 2021

The Ferret asked local authorities to comment on suggestions that a proportion of the waste they collected for recycling ended up being burnt in energy-from-waste plants. Below are the full responses received.

City of Edinburgh Council

Cllr Karen Doran, Transport and Environment Committee Vice Convener, said:

“We report the numbers that we recycle, and in turn what has to be incinerated once it’s mechanically sorted by our contractors Biffa, openly and transparently. “Decreasing the percentage of potentially recycle-able waste sent to incineration is a priority for us. We want to make sure that all items that are put in mixed recycling bins by our residents can end up being completely recycled. Education is extremely important to help people understand what should be disposed in green and communal recycling bins and what items need to be properly cleaned. As opportunities arise to look at recycling new materials we will take advantage of these as much as possible.

“We therefore work closely with Keep Scotland Beautiful and Zero Waste Scotland to maximise the effect of campaigns we all run to encourage recycling and how best to do that. We have commissioned Changeworks to help us influence behaviour through educational programmes. Their work in schools and with other the community groups will resume again when restrictions allow.

“At the moment we’re improving our recycling and waste services for people living in flats by making changes so it’s easier for them to recycle more from home. We’re creating designated bin hubs to keep communal bins neatly and safely in one location.

“I’d like to thank our residents for helping us recycle 40% of Edinburgh’s waste - this makes a huge difference to our environment. Around 70% of our household waste can be recycled, so it’s important we all try to improve on this and recycle as much as we can.”

Background information

Edinburgh’s tonnage will appear large because we have a large population compared to most Councils and so have larger waste arisings to start with. The figures presented are not a large proportion of our total recycle.

This is material which is not suitable for recycling either because it is not recyclable and possibly should not be in the bin, or is contaminated with food because people did not clean it first.

All dirty materials should be rinsed or cleaned before they go in the recycling bin. Our mixed recycling collections accept only the following materials:

We accept:

Paper and card

Plastic bottles, pots, tubs and trays (inc PP trays)

Metal cans, tins and foil, including empty aerosols

We use these broad descriptions (which are common across our industry) to explain to people in a simple, straightforward way what they can and can't do. With the huge number of products out there, unfortunately we can't give a list of every single item. We do of course realise that there will be items within this which they can't recycle and those get removed (see below) and reprocessed into a fuel.

Our contractor has a range of outlets to which they sell each type of material. The value of the materials and the prices paid when they sell them vary constantly. This means there will be times when they carry out further sorting. For example if the value of clear plastic bottles is high enough, they could sell those separately from the mixed coloured bottles. This also means though that there are materials which are easy to sell on, some which they do recycle as far as possible, but may not be able to recycle all the time, and finally those which they can't use at all.

So for example:

Easy to sell on: Newspaper, magazines, clean card, plastic bottles, most clean plastic pots, tubs and trays, clean tins, cans, foil;

Recycled when possible: wrapping paper, some clean pots, tubs and trays (e.g. black microwave trays in particular are very hard to recycle);

Not recycled: mixed household rubbish, plastic bags, food wrappers, dirty plastics, paper and card contaminated by food.

It is the responsibility of the contractor to source outlets for all materials including those which are reprocessed into refuse derived fuel.

When asked to say to which incinerators the council sent its recycling waste, an Edinburgh council spokesperson said:

“As mentioned before Biffa is our contractor. It has a range of contracts given the size of the company so unfortunately we don’t know the exact incinerators our recycling waste, that can’t be physically recycled, goes to. “

West Lothian Council

A West Lothian Council spokesperson said:

“West Lothian has one of the highest recycling rates in Scotland, which were verified by SEPA as 58.2% for 2019, 13% above the Scottish average.

“We do not send any separately collected recyclable materials direct to incineration, as this would be in breach of the Waste (Scotland) Regulations 2012. All materials presented by households for recycling are sorted by our contractors, with any materials that are suitable for recycling removed.

“Unfortunately, a percentage of material presented for recycling is contaminated, which is usually caused by items such as liquids , foodstuffs and black bag waste being incorrectly put into recycling bins. In these circumstances, the only alternative to landfill, which has the greatest negative impact on the environment, is energy from waste.

“Using energy from waste instead of landfill, where possible, means that West Lothian’s landfill tonnes per person rate for 2019 was one of the lowest in Scotland at 0.06, less than half the Scottish average of 0.14. Our carbon impact for 2019 was again below the Scottish average of 1.04 at 0.87.

“We will continue to work with local residents and organisations, such as Zero Waste Scotland, to reduce contamination and ensure as much material as possible in West Lothian can be recycled.”

When asked to say how many tonnes of waste collected for recycling were sent to energy-from-waste plants and where those plants were, a council spokesperson added:

“5,061t of waste collected for recycling were sent to energy-from-waste plants (after having been sorted at the processor).

“The destinations were:

Aalborg Portland Cement Rørdalsvej, Aalborg, Denmark

CEMEX 10 Rupnicas Street, Broceni Latvia

Levenseat Renewable Energy, By Forth, Lanark

Renova Miljo AB EFW facility in Gothenburg
Ferrybridge Multifuel 2, Stranglands Lane, Knottingley, West Yorkshire, Yorkshire
Viridor (Dunbar), Energy from Waste - Oxwell Mains, Dunbar, East Lothian”

Glasgow City Council

A council spokesperson said:

“Any material that can be viably recycled in the current market for recycled waste and is put in a blue bin in Glasgow will be recycled.

“Unfortunately recycling bins are often contaminated with general waste or other material that we do not target for recycling as we know there is no realistic prospect of that material going on to be processed as recycling.

“Such non-target materials will be mixed with the dry recyclables collected by our refuse vehicles and that waste then included in the overall tonnages of waste that cross the weighbridge at our recycling facility.

“Every effort will be made to find the most suitable and sustainable destination for all the materials we receive, but reprocessing of material is driven by the market place and in some instances there just isn’t a market for recycling certain materials.

“Disposing of that material as energy from waste is next best option as it ensures there is at least some recovery of value from the material.

“Despite the mis-characterisation by Friends of the Earth Scotland, the materials city householders put in their bins are not sent to burn inside incinerators.

“Instead, any materials sent to become energy from waste are extensively reprocessed until they become a gas that is combusted in a controlled setting with any emissions fully in-line with SEPA standards.”

The spokesperson added:

“In respect of tonnages the information that I have is that in 2019/20 our materials recycling facility received 28,303 tonnes of waste and of that 4,664 tonnes (or 16.5%) was sent to be processed as energy from waste.

“Hopefully the comment explains why there is little or no prospect of this 4,664 tonnes of waste being recycled in the current market for recyclables. Energy from waste as a form of recovery is obviously next step down on the waste hierarchy.”

Aberdeen City Council

Councillor Philip Bell, Aberdeen City Council's environmental spokesman, said:

"The figures quoted in the Dispatches programme need to be placed in the context of the upcoming landfill ban in Scotland and that consequently, residual waste is now sent to Energy from Waste plants, currently in Europe while we progress the building of our own plant here in Aberdeen. With that in mind, our figures should be compared with the amount of wastes authorities collect for recycling that are sent to other disposal methods such as landfill.

"It is significantly more expensive to either landfill or incinerate recyclable items than it is to recycle them and we have invested £27 million in building a state-of-the-art Materials Recycling Facility that ensures the recyclables produced are of the highest quality and therefore always attractive to re-processors. This means that the best value can be derived from recycling for the householders and that even in times of market stress Aberdeen's recyclables will always be recycled.

"We completely revamped our city wide waste collection system to support this process. While the Aberdeen public has responded positively no system will ever be 100% perfect and so the real issue here is not incineration but of wrong materials ending up in recycling bins. What we describe as "contaminated" material which is incorrectly placed in recycling bins largely comprises items cannot be recycled. The 14.62% figure quoted is therefore made up of a wide range of non-recyclable materials; not only bottles, cans, paper but also item such as black bags, nappies, contaminated paper such as food packaging with food still in it.

"This material has to be removed as otherwise none of the waste will be accepted for reprocessing. Cities invariably suffer from slightly higher levels of contamination due to their more densely populated nature with higher proportion of householders using communal bins and a more transient population which make the challenge greater. Aberdeen is no exception but nevertheless Aberdeen has a very high performing recycling service given its city status and has made huge progress in recent years on the recycling rate.

"SEPA figures published in November 2020 show that more people in Aberdeen are recycling than ever before with 2019 49.9% of household waste in Aberdeen was recycled in 2019, compared with 47.3 % in 2018 and 39% in 2016.

"The same figures show that Aberdeen recycled more than the Scottish average (44.9% in 2019) for the second year running and it continues to be the highest performing city compared to Edinburgh with 38.6%, Glasgow with 24.7% and

Dundee with 38.4%. Aberdeen also produced 1% less total household waste compared to 2018.”

When asked to say how many tonnes of waste collected for recycling were sent to energy-from-waste plants and where those plants were, a council spokesperson added:

“The sites are in England, Scandinavia and Shetland. The tonnage equates to 4025T. I would reiterate, though, that this is not quality material collected for recycling but rather non-recyclable material put in a recycling bin or materials that are contaminated e.g. by food stuff or other wastes.”

Aberdeenshire Council

Ros Baxter, waste manager for Aberdeenshire Council, explained:

“The 11% is not recyclable material, it is contamination put into bins of items that can’t be recycled. We continue to work with the public in Aberdeenshire to reduce the contamination levels through education and regular communications.”

We gave the information in calendar years as that is how we manage data for reporting to the regulator:

- 1) The total tonnes of recyclate that the council/authority/partnership managed in 2018/19. – 2018 Recyclate managed was 15,540 tonnes (kerbside mixed recycling only)
- 2) The total tonnes of recyclate that the council/authority/partnership managed in 2019/20. – 2019 Recyclate managed was 15,502 tonnes (kerbside mixed recycling only)
- 3) The proportion in tonnes, of the 2018/19 recyclate total that the council/authority/partnership managed, which was sent for incineration via either Energy for Waste (EfW) or without Energy for Waste (EfW). 1,760 tonnes (11%) – RDF (rejects/contamination found in the mixed recycling)
- 4) The proportion in tonnes, of the 2019/20 recyclate total that the council/authority/partnership managed, which was sent for incineration via either Energy for Waste (EfW) or without Energy for Waste (EfW). 1,705 tonnes (11%) - RDF (rejects/contamination found in the mixed recycling).

Renfrewshire Council

A Renfrewshire Council spokesperson said:

"We strive to recycle everything presented at the kerbside by residents in their recycling bins and more than 84% of material collected was recycled in 2019-20.

"Only material which has been contaminated to the extent that it is not possible for it to be recycled is sent to energy-from-waste facilities, rather than landfill, and our contractors only use this option as a last resort.

"We're committed to improving recycling wherever possible in Renfrewshire as part of our ambitious plans to tackle climate change.

"We will continue to do all we can to avoid recycling going to landfill or for incineration and residents can continue to present their recycling with confidence that it will be recycled wherever possible."

Additional information

(Not including food and garden waste)

Total recycling collected (2019/20) – 14,769.94 tonnes

Total recycled – 12,463.12 = 84.38%

Total sent to efw – 2,152.03 = 14.57%

Total landfilled – 154.74 = 1.05%

(All recycling collected by Renfrewshire Council)

Total recycling collected (2019/20)- 28,130.67 tonnes

Total recycled – 25,823.85 = 91.8%

Total sent to efw – 2,152.03 = 7.7%

Total landfilled – 154.74 = 0.5%

North Ayrshire Council

A spokesperson for North Ayrshire Council said:

"The contractors that deal with material that is collected as part of our recycling services are not permitted to send any of this waste to landfill.

"That's because landfill is linear – material sent to landfill is lost within the waste system and offers no further recovery.

"However, not every piece of material that is collected via our recycling services and sent to our contractors is actually recyclable. This could be for a number of reasons such as people unintentionally putting an item into the wrong bin, where the material collected is contaminated with food or where material is contaminated with another non-recyclable material, meaning it cannot be recycled.

“In these instances, this non-recyclable material is used to create energy, meaning that 100 per cent of the material collected in North Ayrshire via our recycling services is either recycled or recovered. We believe creating energy from waste offers a more sustainable and environmentally friendly way to deal with non-recyclable waste as opposed to sending to landfill.

“We try to minimise the amount of non-recyclable material which is collected through our recycling services by supporting our residents and providing guidance through our ‘Right Stuff, Right Bin’ messaging. This has helped us reach a 56.3% recycling rate – making North Ayrshire one of the top areas for recycling in the Scotland.”

West Dunbartonshire Council

A spokesperson for West Dunbartonshire Council said:

“All recyclable waste collected by the Council is sent for recycling. Where material placed in these bins is contaminated or unsuitable for recycling, it is removed and incinerated by an Energy from Waste facility to produce electricity and heat. We continue to work with residents to ensure they are well informed about the types of materials which can be disposed of in their recycling bin as we work towards national targets for reducing landfill.”

Highland Council

A spokesperson for Highland Council said:

“The Highland Council provide a co-mingled recycling collection to householders and businesses. The co-mingled collection accepts a wide range of materials including paper, cardboard, plastic pots and bottles, tubs and trays, food tins, drinks cans and aerosol cans. The 9.7% is non-targeted material (contamination) that has been removed from the collected recycling by the council’s contractor. This element is waste that has been incorrectly placed into recycling bins.”

When asked to say how many tonnes of waste collected for recycling were sent to energy-from-waste plants and where those plants were, a council spokesperson added:

“There is no waste collected as targeted recycling sent to energy from waste plants.”

Scottish Borders Council

A Scottish Borders Council spokesperson said:

“The only ‘recyclable’ material which the council directs to energy-from-waste plants is that which cannot be recycled due to contamination. Contamination largely occurs where residents inadvertently place non-recyclable items into their kerbside recycling bins.

“The council is committed to continuing to educate the public about what can and can’t be recycled, and the issue of contamination, to maximise the amount of waste that is recycled.

“In 2019, Scottish Borders Council closed its landfill site and awarded a new residual waste contract that saw recycling performance increase from 38.8% to 49.2% - the largest increase in Scotland over that period.”

When asked to confirm that the amount of waste collected for recycling and sent to energy-from-waste plants was 11%, and to say how many tonnes that was, and which plant it was sent to, a council spokesperson added:

“We’ve not heard back from the waste team, but no reason to believe the 11% figures in incorrect from other information I have seen which suggests that contamination level a few years ago was around 12% and generally fairly static.

“In terms of tonnage, latest SEPA data (for 2019) shows SBC had a total household waste tonnage of 52,300 tonnes, with 25,718 tonnes recycled and 11,500 tonnes diverted from landfill (this latter figure will include contaminated recycling which went to energy from waste plants, but will not solely make up that total).”

Perth and Kinross Council

A spokesperson for Perth and Kinross Council said:

“The recyclable waste material sent for incineration represents contaminated dry mixed recycling, but also included other materials such as tyres and timber which the council opts to send for energy recovery. The timber is used in a biomass plant as a renewable energy source and tyres are burnt in an Energy from Waste plant – both creating electricity which can be used to power and heat homes.

“We ask our residents to take care with what they are putting in their kerbside recycling bins and to ensure that only the correct materials are disposed of to minimise contamination.

“We continue to be committed to maximising the volume of recycling within Perth and Kinross as well as the value from the material that we collect.”

Stirling Council

A spokesperson for Stirling Council said:

“We do not divert any recycling waste for incineration directly. This is only done by re-processors where, following the processing of the material, some waste is determined to be contaminated and unrecoverable which is then classed as reject waste material and subsequently sent to incineration.”

Dundee City Council

Dundee Council said:

“Thank you for your recent Freedom of Information request.

I acknowledge receipt and your request which has now been registered under the Freedom of Information (Scotland) Act 2002. Please quote Reference 20210401003 in any correspondence.”

The council then added:

“We have not sent any of recycling waste to an energy from waste plant, so the answer is zero tonnes. The second question is therefore irrelevant.”

Fife Council

Fife Council Chief Operating Officer Robin Baird commented:

"Here in Fife we pride ourselves on our recycling rate and we are committed to maximising the potential of all waste material.

"We have state of the art recycling facilities and none of the recyclable material dealt with there is sent to landfill or incinerated.

"It's important to note however that when waste is processed, there is always some material that should not have been presented for recycling eg nappies and pizza boxes that still contain pizza! It's this material that is separated from the recyclable material and subsequently sent to landfill.”

When asked to confirm that none of the waste collected for recycling in Fife was incinerated, and that all contaminated waste was sent to landfill, a council spokesperson added:

"That's certainly my understanding from the service."

Falkirk Council

A spokesperson said:

"Falkirk Council has not sent any waste to incineration or EfW to date.

"Waste data is submitted to the Scottish Environmental Protection Agency for each calendar year, on an annual basis from the Council. The data is submitted using the WasteDataFlow portal which can be found via www.wastedataflow.org. Anybody can register for public access to WasteDataFlow. You can then run reports on the waste and recycling figures reported by all the local authorities in the UK and information on material destinations etc."

North Lanarkshire

North Lanarkshire: "None of the council's recyclate is sent for incineration but contaminated material, which is extracted from the recyclate, would be sent to either landfill or for incineration as it can't be recycled."