Official Statistics Publication for Scotland – Household waste summary (Jan-Dec 2019)

Scottish Environment Protection Agency (SEPA) statisticians have published Official Statistics today (27 October 2020) which provide detail of Household Waste collected across all Local Authorities during 2019.

- Carbon impact of waste down 1.1 million tonnes of CO2 equivalent from 2011
- Less than 1 million tonnes of household waste sent to landfill for the first time
- Plastic and glass recycling increase, paper and cardboard continues downward trend
- Total household recycling rate 44.9%
- Scottish households generated the equivalent of 0.44 tonnes of waste per person in 2019

Scottish Environment Protection Agency (SEPA) statisticians have published Official Statistics today (27 October 2020) which provide detail of Household Waste collected across all Local Authorities during 2019.

Scottish households generated the equivalent of 0.44 tonnes of waste per person in 2019, with 0.20 tonnes recycled, 0.14 tonnes sent to landfill and 0.11 tonnes diverted through other means such as incineration, composing and anaerobic digestion.

The total volume of household waste generated in Scotland remained largely the same as 2018, up 17,000 tonnes (an increase of 1%) from 2.41 million tonnes in 2018 to 2.42 million.

CARBON IMPACT OF SCOTTISH HOUSEHOLD WASTE CONTINUES TO DECREASE

The Scottish carbon metric measures the whole-life impact of resources. A measure of national performance, the metric takes a holistic view, from resource extraction and manufacturing emissions, through to resource management emissions.

Measuring the true impact of waste and waste management is most accurate when viewed in terms of emissions. This is measured in carbon dioxide equivalent (CO2e). This provides a more accurate picture than merely looking at tonnage (glass weights a lot more than paper), and takes into account the emissions created when waste is disposed of, whether through recycling, incineration, composting, anaerobic digestion or being sent to landfill.

The 2019 metric shows a continued downward trajectory since 2011 in Scotland’s household waste carbon impact. This is largely due to increased recycling rates – particularly for high impact waste materials – as well as

reductions in waste generated and reduced landfilling of biodegradable waste.

The carbon impact of household waste generated and managed in 2018 was 5.7 million tonnes of carbon dioxide equivalent (CO2e) – which is 1.0 tonnes per person. This was a decrease of 94,000 TCO_2e from 2018 and a decrease of 1.1 million from 2011.

LESS THAN 1 MILLION TONNES OF HOUSEHOLD WASTE SENT TO LANDFILL FOR THE FIRST TIME

2019 saw a further decrease of household waste sent to landfill – falling below 1 million tonnes for the first time – down 26% or 273,000 tonnes from 2018. This is the eighth consecutive decrease in household waste landfilled since 2011 – and for the third consecutive year there was more Scottish waste recycled (1.1 million tonnes) than landfilled (0.76 tonnes). Waste recycled included reuse and composting.

The total amount of Scottish household waste managed by other diversion from landfill was 577,000 tonnes, an increase of 93% from 2018 – 369% from 2011. Most was managed by incineration (78%, 454,000 tonnes), followed by other treatment (16%, 91,000 tonnes) and non-certified composting/digestion (6%, 32,000 tonnes)

PLASTIC, GLASS, PAPER AND CARDBOARD

Plastic recycling rose by 1,000 tonnes (1%) to 57,379 tonnes in 2019, continuing the trend of increasing each year for the last eight years. Glass remains the second most recycled material, with 107,000 tonnes, similar to 2018.

Paper and cardboard as a whole remains the largest volume of material recycled at 192,562 tonnes. However, there has been a general downward trend of paper and cardboard wastes recycled –in 2018 was down 17,000 tonnes (8%) – a 48,000 tonne (20%) reduction since 2011. Within this mix, segregated paper waste is in continual decline – while cardboard and mixed paper and cardboard wastes have remained constant or increased over time. This may be partly due to replacement of segregated paper collections with mixed paper and cardboard collections. It is also likely that a move away from print media to electronic media has decreased paper waste, while cardboard wastes have not decreased on the same scale, which could be a result of increased packaging materials as consumer habits move online.

HOUSEHOLD RECYCLING RATE 44.9%

Scotland’s overall household waste recycling rate was 44.9%, an increase of 0.2 percentage points from 2018 and 5.4 percentage points up from the 39.5% achieved in 2011. Data for every one of Scotland’s 32 local authorities are available on SEPA’s website.

WASTE DATA COLLECTION

Data on waste are collected to monitor policy effectiveness, and to support policy development, particularly commitments in the Scottish

Government's Making Things Last – A Circular Economy Strategy for Scotland. Further details on the methodology used to produce the figures are provided in the "Household waste" section of the annual Waste Data Quality Reports.

The figures are accurate at the time of publication, however data may be updated if further revisions are necessary. Normally these revisions will be published concurrent with the next official release.

ENDS

NOTES TO EDITORS:

Scottish partnership identifies Covid-19 RNA traces through waste water monitoring

Scientists at the Scottish Environment Protection Agency's (SEPA) have successfully pinpointed fragments of coronavirus' ribonucleic acid (RNA) in local waste water samples across the country.

SEPA was among the first European agencies to begin this exploratory work back in May, with the backing of Scottish Government and Public Health Scotland (PHS), alongside Scottish Water, CREW (Centre of expertise for Waters) and academic partners from the University of Edinburgh's Roslin Institute and Heriot Watt University.

The aim was to detect fragments of the virus' RNA – a genetic footprint which can be measured in waste water even after the virus has begun to breakdown. The World Health Organization has said there is currently no evidence that coronavirus has been transmitted via sewerage systems.
Analysis on samples from across Scotland has now identified traces in waste water from 12 health board areas. The results have been shared with PHS and areas with positive RNA findings are consistent with the areas known to have confirmed Covid-19 cases.

One such example is Aberdeen, where SEPA's analysis demonstrates how the prevalence of the virus in waste water samples is mirroring cases in the population. At the beginning of August, SEPA analysed a sample from the Aberdeen area which was positive for Covid-19 RNA. This was consistent with an increase in positive cases in the areas.

On SEPA's request Scottish Water increased the sampling rate to four times a week to provide more information, and over the following three weeks there was a gradual decline to below the level that concentrations can be detected

with sufficient accuracy. Sample results remained at the same level until the end of September when they began to rise again, reflecting PHS data on known cases.

Sample results across the rest of Scotland, including in the Central Belt, continue to be consistent with PHS information on cases in the community. SEPA has made data available for all samples analysed at https://informatics.sepa.org.uk/RNAmonitoring/

Since May SEPA and partners at the Roslin Institute have been refining analysis methods to lower the concentration of RNA that can be reliably detected.

Testing is conducted on incoming waste water samples collected by Scottish Water and its operators at 28 public waste water treatment works across the country, covering all 14 NHS Scotland health board areas. Most locations are tested weekly, but this can be increased when local outbreaks are apparent. Samples are representative of waste water from between 40-50 percent of the Scottish population and, in combination with community testing, are helping Scotland understand the prevalence and distribution of the virus.

SEPA continues to work with academia and public health officials to understand how this monitoring can be best used to support Scotland's response to the pandemic.

Terry A'Hearn, SEPA CEO, said:

"As Scotland's environmental watchdog and as a public agency, we remain proud to be playing our part in the national effort to combat coronavirus.

"Our scientific capabilities and expertise in designing and implementing monitoring networks made us ideally suited to delivering this trial and the results we are seeing demonstrate its scientific validity.

"Central to the delivery of this project has been our partnership working Scottish Water and the University of Edinburgh's Roslin Institute, and we will continue to work closely together to refine our techniques and understanding.

"We've received support from across the public sector, agencies and institutions – including a donation of specialist kit from Science and Advice for Scottish Agriculture – demonstrating how Scotland is coming together to find ways of tackling this virus."

SEPA is also assisting UK government scientific advisors, who are engaging with the research community to investigate how waste water monitoring can be used to track the transmission of coronavirus.
Environment Secretary Roseanna Cunningham said:

"In order to manage the coronavirus pandemic, it is vital that we continue to develop our understanding of it, and I welcome this UK-wide programme of research and the development of waste water monitoring to help build our knowledge base.

“SEPA and Scottish Water have translated this experimental programme into a comprehensive, Scotland-wide monitoring network. The early data is already providing our public health experts with new information, which complements the wider population testing programme to give a more robust picture of the prevalence of Covid disease in Scotland. I look forward to the programme providing further, valuable data over the coming months to support our fight against the pandemic.”

Scientists at The Roslin Institute have been working with Scottish Water and SEPA to develop robust methodologies for detecting and measuring SARS-CoV-2 genetic material in wastewater. Funding from the Centre of Expertise for Waters (CREW), which is supported by Scottish Government, has allowed scientists in Scotland to work with academic colleagues across the UK to keep pace with international developments in the rapidly expanding field of wastewater epidemiology.

SEPA’s response to the COVID-19 pandemic can be found at coronavirus.sepa.org.uk.

Ends

SEPA helped Scotland prepare for weekend of severe weather

Communities, businesses and travel networks across the north and east of Scotland benefitted from an early warning of flooding as record-breaking rainfall hit parts of Aberdeenshire.

- SEPA Flood Forecasting and Warning gave four days’ notice of flood risk to public partners, communities and businesses
- Key infrastructure protected through early action
- 32 local Flood Warnings issued from Aberdeenshire to Fife between Friday 2 and Sunday 4 October
- Over 15,000 direct flood messages were delivered to the public over three days
- Over 34,000 visits to sepa.org.uk/floodupdates over the weekend
- Public urged to ensure they will receive Flood Warnings for their area as only 31% of properties in Aberdeen and Aberdeenshire, Dundee and Angus, Tayside and Fife signed up.

Early information from the Scottish Environment Protection Agency (SEPA), Scotland’s flood warning and informing authority, was crucial in enabling organisations and individuals to plan and prepare – including a partial shutdown of the North East rail network before it flooded.

Vincent Fitzsimons, SEPA's Head of Hydrology and Flooding Services, said:

"Helping Scotland plan for flooding is crucial and thanks to the co-ordination of SEPA and the Met Office, through the Scottish Flood Forecasting Service, the significant flood disruption was forecast four days prior to the flood event – and information was issued to over 540 emergency responders in 135 organisations.

"That enabled local authorities, the emergency services and Network Rail to take pre-emptive actions across the north east, which reduced the impacts of the flooding. It also allowed us to reach thousands of people directly through our Floodline service, sending Flood Alert and Warning messages directly to their phones, meaning they could take action to protect their homes and businesses."

The worst of the recorded rain fell across a wide area from Fife to Aberdeenshire. The worst of the recorded rain fell across a wide area from Fife to Aberdeenshire with the local daily rainfall for Mongour near Stonehaven showing a record-breaking 115 mm in 24 hours – previous highest rainfall recorded for this area was 86.6 mm in 2009. That's well over one month's average rainfall in one day.

The importance of being prepared

SEPA's North East coastal flood warning scheme went live in 2018 to 2,029 properties at risk of flooding and covered 125km of coastline from Inverallochy to Montrose. This improvement for coastal communities between Firth of Forth and Tay and the Moray Firth, means the whole of the east coast of Scotland is now covered by flood warnings.

SEPA issued 32 local Flood Warnings between Friday 2 and Sunday 4 October across Aberdeen, Aberdeenshire, Dundee, Angus, Perthshire and Fife. In addition, 12 regional Flood Alerts were issued in areas across the North and East as well asaster Ross and Great Glen, Caithness and Sutherland, Orkney, West Central Scotland, Findhorn Nairn Moray and Speyside, Central, Edinburgh and Lothians and Scottish Borders.

These flood messages, alongside early forecasting and information sharing enabled a number of key actions to be taken to reduce the impact:

- Local authorities were able to clear culverts, making sure water didn't build up.
- The contractor working on Stonehaven's flood scheme had time to ensure flood water could pass though the work area – resulting in minimum impact on the community.
- Residents were able to secure property level resilience measures including door barriers, seals and covers.
- A controlled shutdown of Scotland's train network.

With the Inverness to Aberdeen train line flooded in several places Network Rail's decision to do a controlled shut down of their train network avoided major disruption and danger if trains had continued to run.

A vital service for Scotland

Floodline will send an automated message to your landline or mobile phone when flooding is likely in your area – for free. You can sign up multiple phone numbers to one account so anyone in your family can get the message, and you can sign up for more than one area if you travel regularly, if your business is in a different area, or if you want information on the possibility of flooding near relatives.

Vincent Fitzsimons explains:

"It's really important that people are prepared ahead of the winter, when we often see more flooding. While you can sign up for Floodline at any time, and 349 people did just that over the weekend, it's important you have time to understand what those messages mean – and what you can do in advance of rainfall. Across Aberdeen and Aberdeenshire, Dundee and Angus, Tayside and Fife there are currently 5,506 properties signed up out of the 18,032 covered by Flood Warnings – so we want to encourage people to make the time to visit sepa.org.uk/signup and get registered. If you're not online you can also call Floodline on 0345 988 1188.

"There's a wealth of information available at floodlinescotland.org.uk to help you prepare, including what to do before, during or after a flood. There's advice for your homes, your business and you travel, with links to key sources of information. Don't wait until flooding's at your door, sign up to Floodline now and make sure you're ready before you need to be."

Across Scotland over 32,000 people have already signed up for Floodline. Flood Alerts and Warnings are also posted to SEPA's website at sepa.org.uk/floodupdates – with 34,000 visits over the weekend as people checked for live updates.

SEPA's 24/7 service

More than 25 members of SEPA's hydrology, resilience, communications and information services teams were on call over the weekend to provide the vital 24 hour service. The specialist team uses hydrological information from over 250 rainfall, river and coastal monitoring stations throughout Scotland, that operate 24 hours a day, and combine this with meteorological information from the Met Office, to predict the likelihood and timing of river, coastal and surface water flooding.

What are Flood Alerts and Flood Warnings?

SEPA uses forecast weather information provided by the Met Office combined with observations of rainfall and river levels and advanced hydrological modelling to provide advance warning of flooding.

Regional Flood Alerts are early advice that flooding is possible across a wider geographical area. The purpose of the Alerts is to make people aware of the risk of flooding and be prepared. Some areas are not covered by a SEPA Flood Warning scheme and therefore an Alert is the only advanced warning of flooding they will receive. In addition, during thunderstorm events, that are

difficult to predict, flooding may occur anywhere within a Flood Alert area. SEPA normally issues Flood Alerts 12 to 24 hours in advance of the possibility of flooding.

Flood Warnings are more locally specific and are issued for areas where SEPA has gauges on rivers to measure the exact river height. They are issued at shorter notice when SEPA is more certain that a specific area will be affected.

MOSSMORRAN UPDATE : 14:30 Tuesday 6 October 2020

Chris Dailly, Head of Environmental Performance at SEPA, said: "Whilst we are pleased that the site has now returned to normal operations and is no longer flaring, we remain frustrated by the frequency of flaring and the flow of information from the operator. We've also clearly heard the impact flaring continues to have on local communities through over 740 reports to us since Sunday…"

Having received reports of elevated flaring at the ExxonMobil Chemical Fife Ethylene Plant shortly after 3:30am on Sunday, SEPA officers remained in contact with the site throughout the period. Specialist scientific and enforcement officers also continued to deploy to record community impacts and gather information, data and evidence.

SEPA's four remote monitoring points around the site, at Lochgelly, Auchtertool, Donibristle and Little Raith continue to capture data. Monitors continue to demonstrate no breach of air quality standards.

As always SEPA has been in contact with partners in Fife Council and NHS Fife.

Chris Dailly, Head of Environmental Performance at SEPA, said:

"Whilst we are pleased that the site has now returned to normal operations and is no longer flaring, we remain frustrated by the frequency of flaring and the flow of information from the operator. We've also clearly heard the impact flaring continues to have on local communities through over 740 reports to us since Sunday.

"Whilst we await a full, detailed report from the operator on the cause of the latest flaring incident, the operator has indicated a compressor fault. The evidence we are gathering will enable us to determine whether there has been a breach of the site's permit conditions and what our next steps should be in line with our published Enforcement Policy.

“We are clear on our expectations of ExxonMobil Chemical Limited, including requiring the installation of noise reducing flare tips followed by the installation of ground flares. What we need now is for ExxonMobil to step up and recognise the depth of community anger and make real progress in making flaring the exception rather than the routine – and we will employ all available measures to ensure they do so.

“Updates will be available on social media and sepa.org.uk/mossmorran and we urge the public to report community impacts at SEPA.org.uk/report.”

Mossmorran Unplanned Flaring Update : 20:00 Monday 05/10/20

“Whilst its again important to stress that limited, controlled flaring is an authorised and important safety feature of industrial sites, we’ve heard clearly from over 380 reports to SEPA of the impact this further flaring event is having on local communities. “Having referred ExxonMobil Chemical Limited to the Crown Office and Procurator Fiscal Service (COPFS) for consideration of prosecution related to Easter 2019 flaring, we remain frustrated by the frequency of flaring and the flow of information from the operator. “We are investigating whether there has been a breach of permit conditions which would inform our next steps in line with our published Enforcement Policy.”

MOSSMORRAN UPDATE : 20:00 MONDAY 05/10/20

Having received reports of elevated flaring at the ExxonMobil Chemical Fife Ethylene Plant shortly after 3:30am on Sunday, SEPA officers have remained in contact with the site over the period.

Whilst SEPA awaits a full, detailed report from the operator on the cause of the latest flaring incident, the operator has indicated a compressor fault. The operator has advised that they are currently working to re-start equipment and that flaring is expected to continue overnight. Fluctuations in the elevated flare may occur as the process restarts.

SEPA’s four remote monitoring points around the site, at Lochgelly, Auchtertool, Donibristle and Little Raith continue to capture data and specialist scientific and environment protection officers continue to deploy to record community impacts and gather information, data and evidence.

We continue to do so to determine whether there has been a breach of permit conditions and what our next steps should be in line with our published Enforcement Policy. Whilst monitors continue to demonstrate no breach of air quality standards*, officers continue to note impacts on local communities.

SEPA will continue to provide updates on social media and sepa.org.uk/mossmorran
We urge the public to report community impacts at SEPA.org.uk/report

Chris Dailly, Head of Environmental Performance at SEPA, said:

“Whilst its again important to stress that limited, controlled flaring is an authorised and important safety feature of industrial sites, we’ve heard clearly from over 380 reports to SEPA of the impact this further flaring event is having on local communities.

“Having referred ExxonMobil Chemical Limited to the Crown Office and Procurator Fiscal Service (COPFS) for consideration of prosecution related to Easter 2019 flaring, we remain frustrated by the frequency of flaring and the flow of information from the operator.

“We are investigating whether there has been a breach of permit conditions which would inform our next steps in line with our published Enforcement Policy.

“We are clear on our expectations of the operator, including requiring the installation of noise reducing flare tips followed by the installation of ground flares. Moreover, the operator must take steps to make flaring the exception rather than routine and if they will not, SEPA will consider further options to ensure they do so.

“Updates will be available on social media and sepa.org.uk/mossmorran and we urge the public to report community impacts at SEPA.org.uk/report”

* Published at sepa.org.uk/mossmorran