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Edward Mountain MSP
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Scottish Parliament
Edinburgh
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8th August 2025

Dear Edward,

Waste Reprocessing Infrastructure in Scotland

I am writing to inform you that on the 8th August 2025, the Scottish Government will publish a report on the waste reprocessing infrastructure in Scotland in accordance with section 23 of the Circular Economy (Scotland) Act 2024 ("the Act"). Following publication, the report will be laid in the Scottish Parliament.

In accordance with the requirements in section 23, the report sets out current, planned and proposed waste reprocessing infrastructure in Scotland and also summarises Ministers' policies and proposals for the use and development of Scotland's reprocessing infrastructure.

Although approximately 85% of our waste is processed in Scotland, there remain opportunities to further support domestic reprocessing, particularly for plastics and critical raw materials. That is reflected in the range of policies we have put in place, our wider Green Industrial Strategy, and our investment in local authority infrastructure and the Grangemouth Refinery Site. I continue to engage with the waste and resources sector and with the UK Government on these opportunities, so that we can maximise the value of our resources and grow new economic opportunities in Scotland

I will be happy to provide any further information the Committee may require.

Yours Sincerely,

Gillian Martin MSP,

Cabinet Secretary for Climate Action and Energy

Waste Reprocessing Infrastructure in Scotland

August 2025

Scottish Government
Riaghaltas na h-Alba

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Executive Summary

Material reprocessing is a cornerstone of Scotland's transition to a circular economy. Converting waste materials into valuable new resources at their end of life opens up new economic opportunities, and underpins our transition to net zero. As we face a more uncertain world, with volatile global supply chains and an increased demand for critical raw materials, there is an even more pressing need to retain the value of our resources. Our objective is to manage and process as much as possible here in Scotland, taking responsibility for reducing emissions and waste, preventing the loss of local economic opportunities, and fostering a resilient, resource-efficient economy.

This report sets out how fifteen key material streams are currently managed in Scotland, and our existing and planned reprocessing infrastructure to transform these materials for future use. The report fulfils a requirement of the Circular Economy (Scotland) Act 2024 and provides a basis for ongoing sector engagement and future policy, including the development of a Circular Economy Strategy and engagement with other governments of the UK.

Scotland generated 9.55 million tonnes of waste in 2023, a reduction of around 20% since 2011, of which 86% was managed in Scotland[1]. However, despite a significant increase in our overall material recycling from 52.5% in 2011 to 62.2% in 2023, over 98% of Scotland's material use still stems from virgin sources[2].

Across the 15 material streams considered in this report, 169 licensed reprocessing facilities treated Scottish-origin waste on site. These facilities span a range of technologies and geographies, with the majority concentrated in the central belt where there is a greater supply of inputs and good transport and supporting infrastructure. An additional 14 facilities are in the planning pipeline, covering organic, aluminium, tyres, and electronic waste.

However, this report highlights that our domestic reprocessing capability and infrastructure varies substantially depending on material type. Scotland has significant domestic capacity for organic waste, building materials, glass, and wood, with almost all these material streams processed in Scotland. Yet for plastics, metals, paper and card, and textiles, the majority of material arisings are managed by export, primarily in the rest of the UK or the EU. For other materials, including organic wastes and plastics, a large proportion is still lost in residual waste rather than being captured for reprocessing. Looking further ahead, there are likely to be strategic reprocessing needs for critical raw materials and battery reprocessing as our transition to net zero accelerates, alongside an opportunity to become a leader in

[1] Waste (from all sources)
[2] Circularity Gap Report | Zero Waste Scotland

wind infrastructure reprocessing once decommissioning of the first generation of turbines commences at scale.

The Scottish Government has set out our existing and planned policies to drive the transition to a circular economy in the Circular Economy and Waste Route Map to 2030, including those that support domestic material reprocessing infrastructure. Key policies are summarised in this report, focusing on three dimensions. These seek to support a stable supply of materials for reprocessing, stimulate demand for reprocessed materials and products, and support investment in material reprocessing, including the associated planning and infrastructure requirements and potential financial seeding for emerging technologies.

While the majority of reprocessing infrastructure investment is led by the private sector, the Scottish Government has also invested over £1 billion to support recycling and reprocessing infrastructure since 2016, including our £70m Recycling Improvement Fund. Most recently we have made £25 million available through the Grangemouth Just Transition Fund, alongside £200 million from the UK Government's National Wealth Fund, to support opportunities arising from Project Willow at the Grangemouth refinery site, with materials reprocessing forming a key component of the project sets identified. This is critical, not just for securing the industrial future of the area, but in promoting Scotland's place as a leader in new reprocessing technologies.

Significant barriers for the reprocessing sector remain. High energy costs, market volatility, competition from imported virgin material, and insecure access to material inputs are identified as common barriers for domestic investment. Taken together, the ongoing disposal and export of valuable resources represents a loss of economic potential in Scotland, and more can be done to support the sector. We set out six priorities for further engagement and policy development, noting that in some cases action is dependent on powers reserved to the UK Government. These are supporting strategic capability for critical raw materials, batteries and wind reprocessing infrastructure, continuing to drive a stable supply of materials and divert resources from landfill and incineration, facilitating business access to material streams, driving demand for reprocessed materials and ensuring a level playing field against imports, targeting EU alignment, and improving waste data. Any action must be underpinned by ongoing sector engagement to build deeper insights into the barriers and opportunities for material reprocessing in Scotland and help ensure that our circular economy is built for growth, creates green jobs, and underpins supply chain resilience and security.

1. Introduction

Purpose of this report

This waste reprocessing infrastructure report has been prepared by Scottish Government in line with requirements in section 23 of the Circular Economy (Scotland) Act 2024[3] ("the Circular Economy Act"). The report sets out the current, planned and proposed waste reprocessing infrastructure in Scotland, and the policies of Scottish Ministers which are in place to support its use and development. Information is supported by research conducted by Zero Waste Scotland.

For the purposes of this report, reprocessing is considered to include the various steps involved in recovery operations by which waste materials are reprocessed into products, materials or substances whether for the original, or other purposes, across the whole material value chain.

The report does not consider waste disposal sites (for example landfill), energy from waste, or bulking and transfer stations except where material is treated on site. The report also does not consider reuse, refurbishment or repair of products; it applies only to the reprocessing of constituent materials. An independent review of Scotland's incineration capacity was conducted in 2022[4], with a follow up assessment published last year[5]. Separate research on Scotland's landfill capacity has been commissioned by Zero Waste Scotland.

The report summarises the current, planned and proposed waste reprocessing infrastructure across Scotland, the main barriers and opportunities for its future development, and the key policies in place to support the material value chain. Individual chapters for each material stream provide data on waste arisings and capacity. It provides a baseline to underpin further sector engagement and policy development, based on replicable, publicly available data sources. The report focuses on fifteen material streams which comprise the majority of waste arisings in Scotland[6].

All policies described in this report are existing Government policies or proposals; it does not set out any new policy commitments or proposals. Regard has been given to the National Planning Framework 4 (NPF4) throughout this report and reference is given to other Scottish Government publications where relevant. Key challenges and opportunities highlighted by the analysis will be considered through the forthcoming Circular Economy Strategy required under the Circular Economy (Scotland) Act

[3] Circular Economy (Scotland) Act 2024
[4] Stop, Sort, Burn, Bury - incineration in the waste hierarchy: independent review
[5] Landfill Ban Assurance Study | Zero Waste Scotland
[6] Soils arise in large quantities in Scotland but are not a focus material for this report due to the availability of existing treatment routes and reprocessing infrastructure

2024, and inform ongoing policy discussions in Scotland and with the other UK nations.

Scotland's Circular Economy

A circular economy, based on sustainable consumption and production, is essential to power Scotland's transition to a fair, green and sustainable economy, and critical to meeting our obligations to tackle the twin climate and nature emergencies.

This means minimising our demand on primary resources and maximising the reuse, recycling and recovery of resources, rather than treating them as waste. Keeping materials in productive use for as long as possible will reduce the carbon and biodiversity impacts associated with the extraction and disposal of raw materials, support resource security, particularly of critical raw materials, and provide economic and job creation opportunities in Scotland.

To achieve this, we are committed to delivering a different approach to our economy, one where we move from a "take, make and dispose" model to one where we value materials and keep them in use. The Scottish Government's key policies to achieve this are set out in Scotland's Circular Economy and Waste Route Map to 2030[7], which focuses on:

- **Responsible Production**, where a circular economy is embraced by the businesses and organisations that supply products, ensuring the maximum life and value from the natural resources used to make them.
- **Responsible Consumption**, where people and businesses demand products and services in ways which respect the limits of our natural resources. Unnecessary waste, in particular food waste, will be unacceptable in Scotland.
- **Maximising Value from Waste and Energy**, where the environmental and economic value of wasted resources and energy is harnessed efficiently.

The Circular Economy and Waste Route Map identified waste reprocessing infrastructure as a key element in delivering this transformation. Appropriate domestic reprocessing supports our recycling objectives and offers significant opportunities for job creation and economic growth, as we retain material value within the Scottish economy. This underpins the need to identify future strategic infrastructure requirements, both in Scotland as a whole, and on a place-based basis. As part of this work, we need to understand the available waste reprocessing capacity for material resources in Scotland, and the opportunities and barriers associated with future development of domestic reprocessing, where it is appropriate and economically viable to do so.

[7] Scotland's Circular Economy and Waste Route Map to 2030

Exporting materials for reprocessing may be the most appropriate approach in certain instances. There are already functioning markets for many materials, which include both export for reprocessing elsewhere, and import of some materials for reprocessing in Scotland. However, our objective is to manage and process as much as possible here in Scotland, taking responsibility for reducing emissions and waste, and preventing the loss of local economic opportunities. Reflecting this, NPF4 identifies Circular Economy Materials Management Facilities as a National Development, and the Circular Economy (Scotland) Act 2024 requires that in development of the circular economy strategy, Scottish Ministers must have regard to the desirability of the economy being one in which waste is managed in Scotland where it is appropriate to do so.

Data limitations

Waste arisings and material flows

The primary data sources for this work are the Scottish Environment Protection Agency (SEPA) Waste from All Sources (WFAS) database[8] and the SEPA Waste Sites and Capacity Tool[9]. These sources provide information on the quantity of material that arise within Scotland. However, the data do not always indicate the proportion of material that is available for reprocessing further down the supply chain, for example if transported to a different facility.

Material-specific information is based on European Waste Catalogue (EWC) codes. EWC codes do not capture all waste streams, particularly textile products and those that form part of the bioeconomy[10][11][12]. This means that there is a lack of data available for some material types. Where this is the case, information has been sourced from alternative data sources as far as possible.

Existing reprocessing infrastructure

Existing and planned reprocessing infrastructure are mapped based on information published by SEPA and Scottish Local Authorities. SEPA's publicly available tool: *Scotland's waste sites and capacity data tool*[13], provides data on the waste management sites in Scotland that are regulated by SEPA. The tool includes the numbers, types, locations and capacities of these sites, with data available up to

[8] Waste (from all sources) | Scottish Environment Protection Agency (SEPA)
[9] Waste Site Capacity | Scottish Environment Protection Agency (SEPA)
[10] Bioeconomy – parts of the economy that uses renewable biological resources from land and sea (farming, fish and forestry) and converts them into feeds, food, materials and energy.
[11] Accelerating the Circular Bioeconomy | Zero Waste Scotland
[12] For example, 'pot ale' from distilleries does not have an EWC code and so there is no data on the amount of material arising and its end of life use (cattle food, energy generation etc.).
[13] Waste Capacity | Scottish Environment Protection Agency (SEPA)

2023. Waste data[14] are also available via Scottish Waste Site returns, which displays a summary of wastes managed by individual facilities on a quarterly/annual basis. Where other data have been utilised sources have been referenced. SEPA has also previously published capacity gap reports with the last published in 2018 but running to 2025[15].

Planned and proposed reprocessing infrastructure

There is no centralised database with a list of all planned waste facilities in Scotland. To understand what waste reprocessing facilities are currently in the planning pipeline, a review of the planning portals for each of the 32 local authorities was undertaken. This provides the most systemic available approach to determining planning reprocessing infrastructure, on the basis of information that is formally available and therefore not subject to ongoing commercial sensitivity or other limitations.

This approach cannot provide a complete picture of all planned and proposed waste reprocessing infrastructure. Some facilities only need permitting consent for their operations, and some waste operations are exempt from requiring a waste management licence[16]. It also cannot include prospective reprocessing facilities for which a planning application has not yet been submitted. As with any planning application, situations can change and applications can be amended or withdrawn, making it difficult to state with certainty future pipeline capacity until a facility is being constructed.

Full information on each facility, including permitted capacity, planning status, and relevant dates are set out in Appendix 2.

[14] Waste data reporting | Scottish Environment Protection Agency (SEPA)
[15] Calculation Methodology for Waste Management Infrastructure Capacity Estimates | Scottish Environment Protection Agency (SEPA)
[16] Activities exempt from waste management licensing | Scottish Environment Protection Agency (SEPA)

2. The material value chain

Value of the reprocessing sector

Material reprocessing is an important step in our wider waste and resources system, and is essential to underpinning a circular economy. The waste and resources sector contributed over £750 million to the Scottish economy in 2021[17], and the full material value chain had an estimated value of £23.5 billion[18] across the whole of the UK, from the collection of materials from households and businesses, through to their final reprocessing into new products and resources. Recycling alone is estimated to be worth approximately £7 billion to the UK economy, particularly the recycling and reprocessing of metals.

The waste and resources sector in the UK employed approximately 147,000 people in 2021 in the collection, treatment and recovery of waste, with the majority working within front line collection services collecting waste and recycling from households and businesses. In Scotland, the wider recycling and reprocessing sector directly employs an estimated 12,000 people[19]. Staffing levels required for reprocessing facilities are dependent on size and level of automation. For instance, a small Material Recovery Facility (MRF) with basic sorting equipment can operate with 10-30 staff members, whereas a large facility may employ up to 200 staff.

These figures do not include those working across the wider circular economy, including in renewable energy, repair and reuse, enabling roles such as leasing, engineering and digital technology, and indirect jobs such as in education, logistics and the public sector. Taking these into account, Zero Waste Scotland estimate that there are over 207,000 jobs generated by the circular economy - nearly 1 in 10 jobs in Scotland[20].

Economy-wide material flows

An estimated 9.55 million tonnes of waste was generated in Scotland in 2023, the latest year for which data are available. Of this total, 5.92 million tonnes was recycled (62.2%)[21]. Across the 15 material types assessed in this report for which data are available, Scotland generated approximately 3,617 kt of material for

[17] Supporting documents - Scottish Annual Business Statistics 2022 - gov.scot
[18] UK Recycling and Waste Treatment Market Overview - Tolvik
[19] Nomis - Official Census and Labour Market Statistics
[20] The Future of Work: Baseline Employment Analysis and Skills Pathways for the Circular Economy in Scotland (SEPA)
[21] Waste From All Sources means that the waste reported is the total waste managed, whether it is waste from households, waste from construction and demolition activities, or waste from commerce and industry

reprocessing in 2023, covering both separately collected material, and material separated during the sorting process. An estimated 550 kt[22] of additional materials (just over half of what's thrown away) could be theoretically available from household residual waste if fully sorted for recycling at the kerbside, with a further 95 kt of material that could be recycled at Civic Amenity sites[23] (e.g. textiles). However, not all material collected can necessarily be recycled, for example if it is contaminated. Food waste is the largest component, with an estimated 330 kt disposed of within the residual waste. Other common items include drinks bottles, plastic pots, tubs and trays, paper and card and glass packaging.

Overall, 84% of material collected in Scotland for recycling was recycled in Scotland in 2023 (4,972 kt), with 16% (944 kt) recycled elsewhere. Scotland also imported 72 kt of material for recycling from elsewhere in 2023, 128 kt of material for energy recovery (mainly wood waste), and 220 kt of other waste (sorting residues) for incineration and disposal.

Across the 15 material types considered in this report, an estimated 3,198 kt (70%) was recycled, of which 2,279 kt (50%) was reprocessed in Scotland and 919 kt (20%) exported for reprocessing elsewhere. 376 kt (8%) underwent energy recovery (10% of material separated for recycling) and 43 kt (1%) was disposed via landfill. The remaining 21% of material assessed is estimated to be contained within residual waste, which is either landfilled or incinerated. Including all treatment types, 75% of material available for reprocessing was handled in Scotland, with the remaining 25% exported primarily to the rest of the UK or EU.

There is significant variability in both end of life outcome and reprocessing destination between material types (Figure 1). For organic wastes, construction waste, wood and glass, the majority of material arisings are either recycled in Scotland or subject to domestic energy recovery. However, for plastic, metals, paper and card the majority of material arisings are exported for recycling. There are also significant opportunities to increase the supply of material for reprocessing by diverting waste from disposal, particularly for organic wastes, plastics, paper and card.

[22] Zero Waste Scotland. The composition of household waste at the kerbside in 2021-23

[23] It is likely that a significant volume of materials are also available in Commercial & Industrial (C&I) and Construction & Demolition (C&D) residual waste, for which data are not currently available

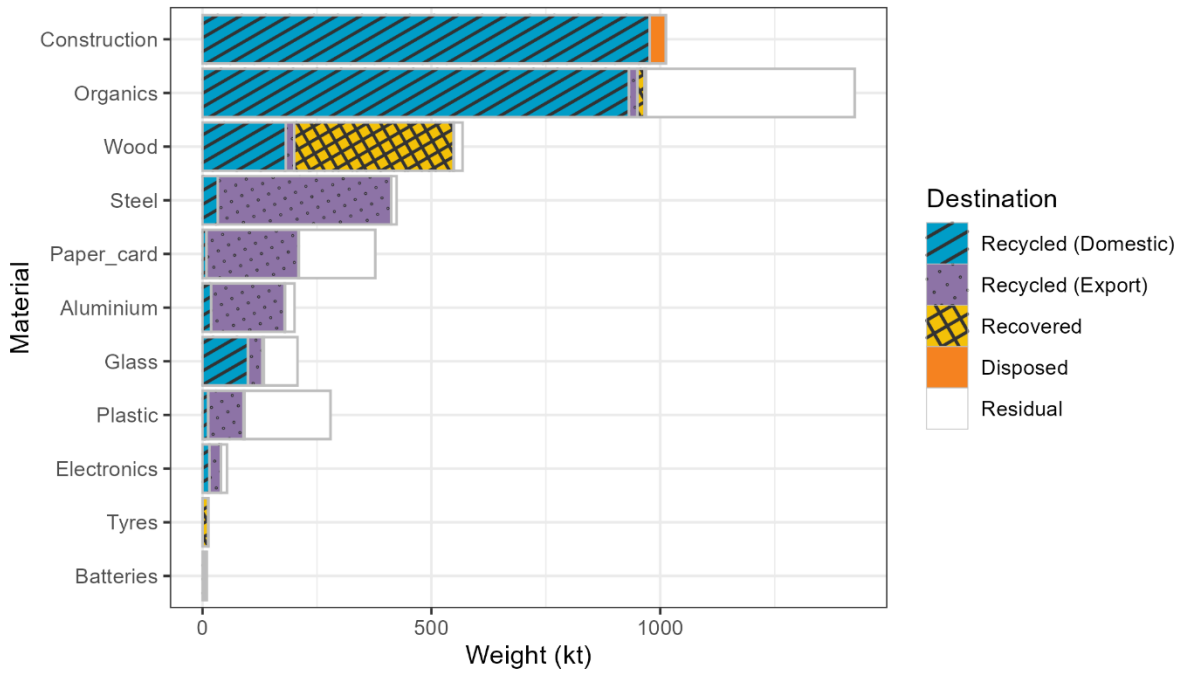

Figure 1: Material arisings and treatment destination for 11 of 15 material types considered in this report, for which end of life data are available. 50% of total material arisings within these categories were reprocessed in Scotland (blue hashed bars) and 20% exported for reprocessing outside of Scotland (purple bars). Of material separated for reprocessing, 10% was incinerated domestically for energy recovery (yellow hashed bars) and 1% disposed domestically via landfill (orange bars). Up to an additional estimated 953kt of material could be theoretically available for reprocessing if household residual waste was fully separated for recycling (white bars); this material is either incinerated or sent to landfill. Unsorted waste from Commercial & Industrial (C&I) and Construction & Demolition (C&D) are excluded, as data are not currently available.

A lack of domestic reprocessing does not necessarily indicate an opportunity for increased capacity. Reprocessing facilities can source input material from a range of sources, domestic and international, and require a minimum economy of scale which varies significantly for each material type. For example, organic waste facilities tend to be localised and can operate at relatively small scale, whereas steel reprocessing requires significant volumes of source material and operate at a UK-wide basis or beyond. For some material types, Scotland may have a comparative advantage, either due to the volume of available raw materials, access to clean and abundant energy sources, or specialist workforce and expertise.

This variation demonstrates that an understanding of the full material value chain is required to predict material flows and understand the policy drivers that create the right ‘pull and push’ factors to support domestic infrastructure.

3. Waste reprocessing infrastructure

Scotland's reprocessing landscape

The reprocessing sector in Scotland spans a wide range of processes and geographies. These can be highly material-specific and combine local authorities, centralised sites and emerging local enterprises. Individual sites may specialise in a single technology or process, through to sites that provide multiple transfer, sorting, processing and re-processing arrangements where a wide range of activities are undertaken to add value to the materials that flow through them.

Reprocessing activities range from those that repurpose material to provide raw materials or feedstock for the onwards supply chain, through to activities that directly manufacture an end product from reprocessed material. A material may need to go through multiple steps at multiple facilities before it can be reprocessed into a usable product. Each step in the chain from point of collection adds value in different ways. Examples include:

- **Sorting** household recycling into separate material streams to enhance quality by reducing contamination, sorting textiles into different grades for onward reuse, or sorting glass bottles into different colour streams to enhance manufacturing options.
- **Segregating** batteries into different chemistries for onward reprocessing.
- **Washing, grading and granulating** plastics to separate plastic types and grade for different markets.
- **Dismantling** items of waste electronic items such as fridges into constituent parts/materials for further reprocessing.

Market structure

Materials flow into and out of Scotland for various reasons, including due to existing contracts, the need for specialist facilities, and market economics. The fact material is not reprocessed domestically therefore does not necessarily indicate that infrastructure capacity is not available. Even where domestic capacity does exist, there may be economic or environmental reasons to export material for reprocessing elsewhere in the UK and beyond, which are not assessed in this report.

Reprocessing infrastructure development in Scotland is primarily based on a free-market system of private investment and ownership. However, due to the public nature of much waste service provision, some private facilities are dependent on public contracts and are occasionally owned or constructed with local authority partners. The Scottish Government has also supported investment in waste

reprocessing as part of its goal to improve national recycling outcomes, for example through the Recycling Improvement Fund, one of the biggest investments in a generation to modernise recycling in Scotland. The Recycling Improvement Fund has allocated over £66 million to invest in a range of improvements, including more frequent recycling collections, the extension of food and garden waste collections, and boosting Scotland's capacity to recycle plastic films.

Public sector organisations, particularly local authorities, are responsible for collecting materials from households and operating civic amenity sites such as Household Waste Recycling Centres (HWRCs). Some also choose to offer a business waste collection service. Public sector organisations generally favour a longer-term approach to contracts that balances the need to continually go to market with the delivery of best value for public spend. Some facility developers may seek to secure a public sector 'anchor contract' where a guaranteed long-term tonnage is secured. This can be a preferred approach to a merchant facility, which relies on shorter-term contracts.

Within this generalisation, the length of the contract may vary by material type, linked to how it is collected and processed. For example, for dry mixed recycling and food waste, local authorities tend to have long-term (3+ years) arrangements in place with Material Recovery Facilities or Anaerobic Digestion Facilities. In contrast, it is more common to see shorter term contracts (1+ years) in place for materials collected at Civic Amenity Sites such as metals or textiles, with these varying based on the material type and overall contract for the site. Local authorities developing their own facility would direct their materials to that facility, so materials would not be available to the open market for the lifetime of the facility. An example of this would be Glasgow City Council's MRF, which is due to open in 2026. The City Council received £21M[24] in funding from the Recycling Improvement Fund to implement a new twin-stream kerbside service and to support the construction of a new MRF which has a minimum 10 year operating life.

Private sector waste management organisations operate across Scotland and vary from large organisations to micro-businesses, and from those that provide a wide range of services to those that may specialise in a particular material type, customer, or location. Private sector organisations generally favour shorter-term contracts with a higher risk-higher return strategy. Timing of contracts is more clearly linked to price fluctuations, with some companies able to stockpile materials to gain optimum returns based on material sales, which can lead to greater inconsistency in material flows.

Geography and site location

[24] Glasgow City Council - Recycling Improvement Fund | Zero Waste Scotland

Geography will also play a key role in material availability. Scotland has a complex geography, with large centres of population, island and rural populations, and dispersed industry on land, at the coast, and at sea. The ideal site for a reprocessing facility is likely to be close to material arisings or offtake options to reduce transport movements, though other factors like energy availability will play an important role for some materials. This means that reprocessing infrastructure for material commonly collected from households or businesses tend to be close to centres of population, while reprocessing infrastructure for organics and the bioeconomy are often located in more rural areas (see Figures 2-3).

Circular Economy Materials Management Facilities are identified as a National Development within Scotland National Planning Framework 4, meaning that they are priority for delivery (see Chapter 4). However, any new proposals are subject to careful assessment to ensure they provide sustainable low carbon solutions, include appropriate controls, manage any emissions and mitigate localised impacts including on neighbouring communities and the wider environment. Specifically, NPF4's Zero Waste policy principle sets out the range of factors to be considered for waste infrastructure and facilities development proposals.

Existing reprocessing facilities

For the 15 materials assessed in this report, SEPA site returns data for 2023 list 169 existing waste reprocessing facilities that treat material of Scottish origin on site. This includes sites which clean, sort or treat material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product). Facilities are mapped by material type in Figure 2, and by activity in Figure 3. These facilities do not include the full range of sites which can potentially handle these materials, such as those that are licensed to receive and transfer material. SEPA Waste Site Capacity tool lists 1,016 sites which are licensed for these activities, omitting sites which carry out only landfill or incineration.

Waste reprocessing infrastructure is concentrated in Scotland's central belt, though sites are dispersed across the whole of Scotland, particularly transfer stations and sites handling organic wastes. Reprocessing site information is limited for the following materials, though with some activity still taking place: textiles (items are sorted and graded), mattresses (metal recovery), renewable energy installations (wind turbine blade de-construction), and construction materials (secondary aggregate production). There are no facilities in Scotland that reprocess fibre-based composites, according to 2023 SEPA data, although these items are sorted and baled at some Materials Recycling Facilities within Scotland. Any reprocessing facilities for these materials are therefore excluded, though it is possible that sites are not captured in data if they do not require a permit or due to differences in

classification. Material-specific maps are provided in Chapters 6-21 where this information is available.

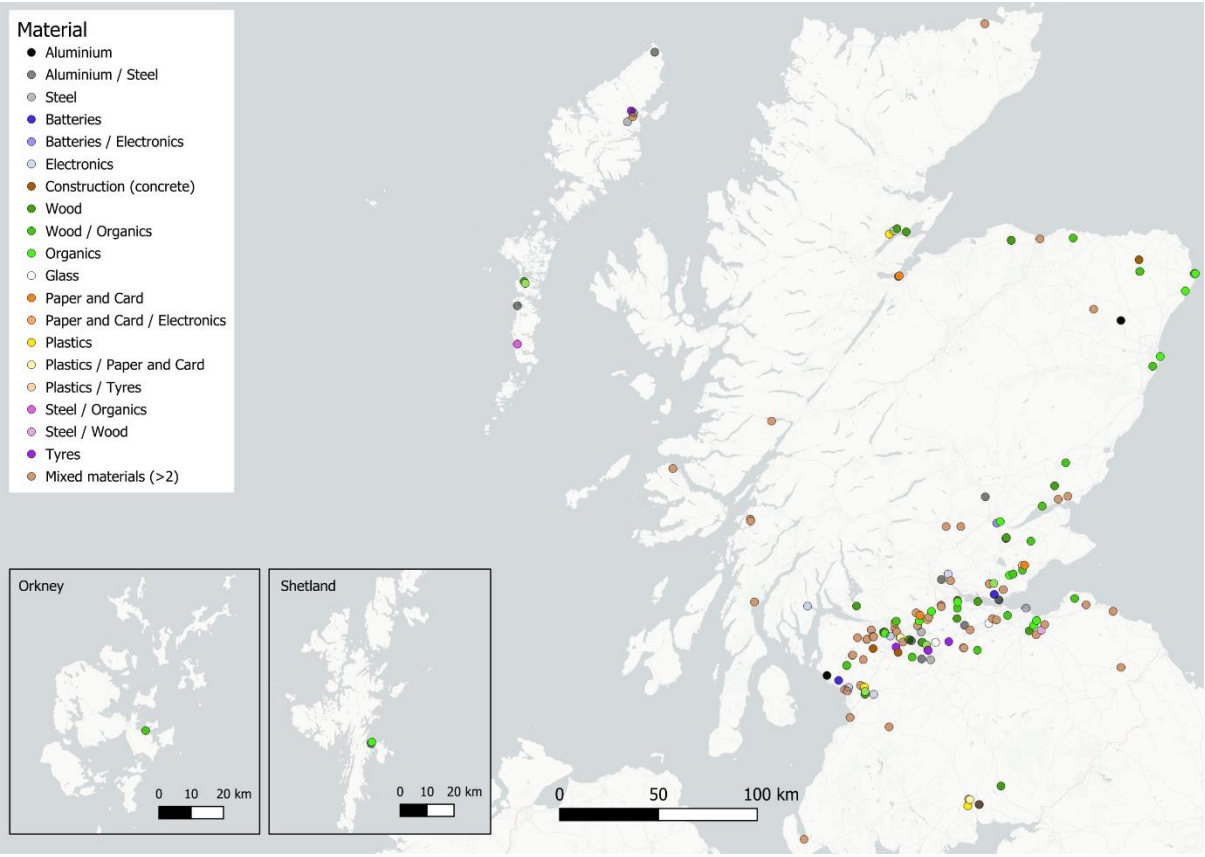

Figure 2: Existing waste reprocessing facilities in Scotland, by material type. Only sites which recorded "treatment on site" are included. Data is based on SEPA Site Returns for the latest available year (2023), which is not available for all material types. Basemap from © OpenStreetMap contributors, tiles © CARTO.

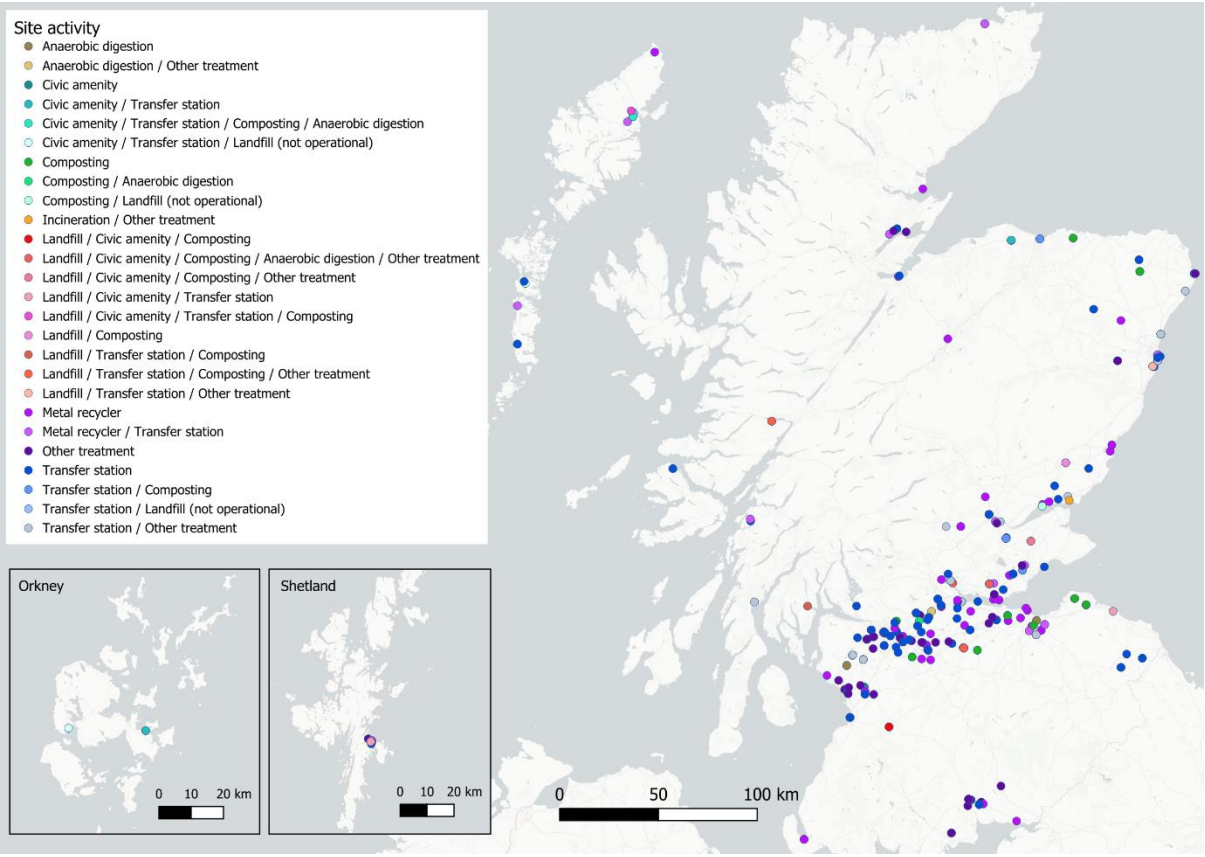

Figure 3: Existing waste reprocessing facilities in Scotland, by facility type. Only sites which recorded "treatment on site" are included. Data is based on SEPA Site Returns for the latest available year (2023), which is not available for all material types.

Planned and proposed waste reprocessing infrastructure

Scotland has 14 applications for waste reprocessing facilities in the planning pipeline, including those recently consented that treat material on site, across the 15 materials assessed by this report (Figure 4). Facility types include anaerobic digestion and composting facilities (organic waste), aluminium reprocessing, tyres and rubber processing, facilities for processing construction and demolition waste, as well as MRFs and transfer stations. However, a planning application in process does not necessarily indicate that the facility will proceed, even if consented. Applications can take a number of years to successfully pass through planning for a wide range of reasons including the changing circumstances of the developer (funding and viability) and local concerns (increased traffic movements, odour concerns or visual impact). Although a separate processes, there is also an interdependency with environmental authorisations. A facility can be rejected for an environmental authorisation even if planning consent has been granted.

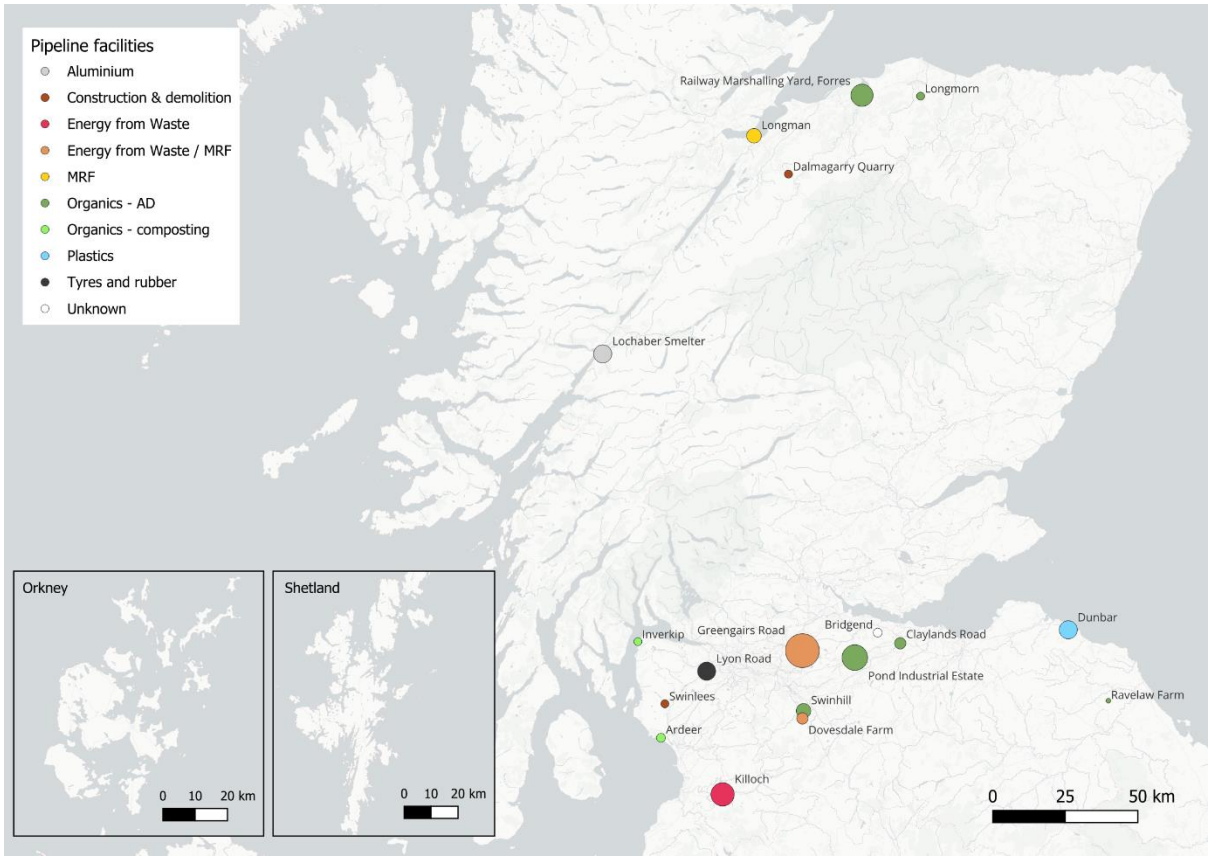

Figure 4: Waste reprocessing facilities in Scotland in the planning pipeline, by material type. Planned facilities are based on information available in the planning portals for each of the 32 local authorities in Scotland. Circle size is proportionate to planned material capacity.

In terms of broader permit of applications for new sites, in the 2024/25 financial year, SEPA received 13 applications for new waste facilities at Waste Management Licence (WML) and Pollution Prevention and Control (PPC) Permit[25] level, 428 new 'complex' exemption applications, and 121 new waste carrier applications. There were also a number of variations and renewals.

From the information provided there are no new reprocessing facilities currently in the public planning pipeline for steel, paper & card, glass, wood, fibre-based composite packaging, textiles, batteries or electronic waste. However, applications could cover mixed materials so these materials could be included within a mixed material stream.

This report does not provide specific information on potential new waste reprocessing infrastructure in Scotland where facilities are not currently captured in the public planning system, as to do so risks disclosing commercially sensitive

[25] Pollution prevention and control | Scottish Environment Protection Agency (SEPA)

information. Nevertheless, the Scottish Government and Enterprise Agencies regularly engage with a range of business interests regarding opportunities to invest in Scotland's circular economy, materials value chain and domestic reprocessing infrastructure. We are aware of potential future opportunities, particularly in plastics reprocessing, the bio-economy, and electronics and battery reprocessing. In particular, the Scottish Government is closely engaged in identifying and progressing commercially and technologically viable proposals for the Grangemouth refinery site, following publication of the 'Project Willow' feasibility study that set out options to secure its long-term industrial future (see Chapter 4).

4. Policy landscape

The Scottish Government seeks to enable the appropriate development of domestic waste reprocessing infrastructure by ensuring a supportive policy landscape that incentivises Circular Economy outcomes, while recognising the complexity of the material value chain.

The materials reprocessing policy landscape in Scotland is considered across three dimensions that seek to maximise the value of material resources and keep them in productive use for as long as possible:

- Policies that support a stable **supply** of materials for reprocessing, by capturing and diverting materials from disposal that would otherwise become waste.
- Policies that stimulate **demand** for reprocessed materials and products, and in doing so reducing reliance on imported raw materials and the carbon and biodiversity impacts associated with virgin material extraction.
- Policies that support **investment** in material reprocessing, including the associated planning and infrastructure requirements, and potential financial seeding for emerging technologies.

It is rare to achieve a 100% capture or reprocessing rate for any material, but recycling rates upwards of 90% are achieved for certain products or materials such as drinks containers across Europe. Looking at the economy as a whole, over 98% of Scotland's material use stems from virgin sources, with only 1.3% of the resources Scotland uses cycled back into the economy[26]. This compares to 7.5% for the UK as a whole, and 24.5% for the Netherlands[27]. Availability and ease of access to collection infrastructure, knowledge of what can be recycled, an ability/desire to recycle, and the cost of collection all play a role in increasing capture rates and consequently increasing the amount of material available for recycling.

The Circular Economy Act sets out the legislative framework to support Scotland's transition to a zero waste and circular economy. The Act requires that Scottish Ministers publish a circular economy strategy, which is currently in development. The Act also requires that Scottish Ministers Develop circular economy targets which are planned from 2027.

Scotland's circular economy and waste route map to 2030[28] sets out the Scottish Government's existing and planned policies measures to move towards a more circular economy. Measures that contribute to the development of appropriate domestic infrastructure in Scotland are summarised in the rest of this chapter.

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[26] Circularity Gap Report | Zero Waste Scotland
[27] Circularity Gap Reporting Initiative - Home
[28] Scotland's circular economy and waste route map to 2030 - gov.scot

Supply of material for reprocessing

Recycling is part of everyday life in Scotland, in large part due to the range of policies that have already been put in place to drive the separation and collection of recyclable materials within Scotland's waste stream, and the success of the waste and resources industry in supporting their customers to recycle.

Scotland's household recycling rate is currently 43.5%[29], and more than doubled between 2004 and 2011. However, local authority household recycling rates vary significantly, from 20.7% to 58.2% in 2023. SEPA estimates that commercial and industrial recycling rates are around 53%, while commercial and industrial waste has steadily reduced with a 29% decrease between 2011 and 2023[30].

Improvements in Scotland's household recycling rate have stalled in recent years, with large quantities of recyclable materials still in the residual waste stream and sent for disposal, meaning that the value of that material is lost. For Scottish households, just over half of what we throw away at the kerbside could theoretically be recycled through existing systems[31].

Conversely, just under a fifth of material put out for recycling by householders is non-recyclable[32]. This contamination reduces the quality of material available for reprocessing, increasing cost and reducing the value of the final project. In some cases whole loads of material cannot be recycled and must instead be incinerated or landfilled due to contamination.

The Scottish Government has a wide range of existing and planned policies to drive the collection of materials for recycling and reprocessing. However, any policies that seek to increase the amount of material available for reprocessing should ensure that they divert material from becoming waste, and not from outcomes higher up the waste hierarchy, for example by recycling material that could otherwise be repaired or reused.

Local authority recycling

The Environmental Protection Act 1990 was amended by Scotland's 2012 Waste (Scotland) Regulations [33] to place requirements on Local Authorities to provide a comprehensive recycling service to their householders. In partnership with the Convention of Scottish Local Authorities (COSLA), the Scottish Government developed the voluntary Scottish Charter for Household Recycling and associated

[29] Scottish Household Waste 2022 - SEPA
[30] Waste from all sources 2023 - SEPA
[31] The composition of household waste at the kerbside in 2021-23 - Zero Waste Scotland
[32] Recyclate Quality - SEPA
[33] The Waste (Scotland) Regulations 2012

Code of Practice[34] which sets out a minimum level of service and seeks to deliver more consistent recycling collections across Scotland.

The Circular Economy Act provides for a transition from a voluntary to a statutory approach to Scotland's Household Recycling Code of Practice. We are currently working with local government and wider waste sector stakeholders to co-design a new Code of Practice to create modern, efficient, and affordable waste and recycling service standards. Putting the Code on a statutory footing will provide a clear strategic direction for household recycling, accelerating improvements to both the quality and quantity of recycling, providing more consistency in service across Scotland.

In co-designing the new Code of Practice, we will review existing service structure, function and performance and consider new service demands and material flow changes. This includes consultation on the current rural exemption and separation requirements for textiles in line with EU standards, reviewing current practices with respect to separate collection of food waste and biowaste (such as garden waste), and requiring kerbside collection of plastic film and flexible packaging from 31 March 2027. The co-design process will also consider householders' duty of care and current waste and recycling service charging. The process is already underway and aims to conclude with a new statutory Code of Practice available for consultation by the end of 2026.

The Circular Economy Act also requires Scottish Ministers to set statutory local recycling targets (e.g. recycling, preparation for reuse and composting) for local authorities to help drive further improvements in recycling performance for household waste services from 2030. The Scottish Government and COSLA have agreed to develop an action-focussed Improvement Programme to support setting and meeting targets.

The above measures will be supported by a review of funding mechanisms available to local authorities for waste and recycling services. This builds on more than £1 billion of funding made available through the Strategic Waste Fund between 2008 and 2022 to assist local authorities in the implementation of the Zero Waste Plan, and the £70m Recycling Improvement Fund[35] introduced by the Scottish Government in 2021 to enable local authorities to improve recycling services across Scotland. Investments have supported the segregation and capture of increased quantities and quality of material for recycling, and investment in reprocessing infrastructure including the reuse and recycling of mattresses and the collection and recycling of plastic film.

Finally, policy measures elsewhere in the UK could increase the supply of some materials for reprocessing in Scotland, dependent on available domestic capacity

[34] Charter for Household Recycling - Zero Waste Scotland
[35] RIF Longitudinal Evaluation

and any relative advantage compared to processing those materials elsewhere in the UK. For example, “Simpler Recycling” in England[36] is expected to increase collections of existing materials such as food waste, as well as mandating new services such as flexible plastics collections. If there is insufficient capacity to process these materials in England, then this could result in an increased supply to existing facilities in Scotland, or support the business case for new investment, particularly in specialist treatment facilities.

Commercial recycling

Scotland's 2012 Waste (Scotland) Regulations[37] place requirements on commercial premises to separate certain materials for collection and recycling. Those measures have helped to drive a significant increase in commercial recycling. Working alongside SEPA and other delivery partners, we are working to undertake a targeted review of compliance with current commercial recycling requirements in Scotland to consider whether current requirements and their enforcement are achieving the intended aims, reporting in 2026.

Working with Zero Waste Scotland, SEPA, and the commercial waste and resources sector we will seek to conduct a national compositional study of residual waste from commercial premises to identify priority materials, products and sectors for waste prevention and recycling interventions. This will help us account for current and future waste composition, including the impact of policies such as Extended Producer Responsibility and the Deposit Return Scheme.

The review and compositional analysis will feed into a co-design process to develop further interventions to maximise commercial waste prevention, reuse, and recycling. Potential measures may include targeted communications and engagement, further fiscal measures to incentivise recycling or waste prevention, procurement advice and guidance. The co-design may also identify a need for further legislation or updated statutory guidance.

Producer responsibility

Certain products, including packaging, waste electronics and electrical equipment (WEEE), batteries and accumulators, and end of life vehicles (ELVs), are covered by extended producer responsibility (EPR) schemes. EPR requires that producers of those products are responsible for contributing towards their management at end of life and achieving certain recycling targets, in line with the polluter pays principle.

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[36] Simpler recycling: workplace recycling in England - GOV.UK
[37] The Waste (Scotland) Regulations 2012

The Scottish Government, in partnership with the other nations of the UK, introduced extended producer responsibility (EPR) for packaging in 2025. Packaging EPR transfers the full net cost of providing an efficient and effective household packaging waste service from taxpayers and councils to packaging producers. Packaging EPR will provide approximately £150m of funding to Scottish local authorities in 2025/26, which will fund collection systems for household packaging waste and underpin sustainable service provision.

Packaging EPR also incentivises businesses to reduce excess packaging, design and use packaging that is easily recyclable, and encourage use of reusable packaging. Packaging EPR aims to ensure that at least 76% of packaging is recycled by 2030, with individual targets mandated in Regulations for each material type[38]. Packaging EPR fees for producers must be modulated depending on environmental sustainability. PackUK, the scheme administrator, has confirmed that modulation will be on the basis of recyclability in the first three years of the scheme. In future years packaging EPR will also require recyclability labelling of products to improve consumer information on what can be recycled and how to do so.

Producers are required to evidence recycling through the purchase of Packaging Recovery Notes (PRNs) or Packaging Waste Export Recovery Notes (PERNs). The PRN/PERN system was originally introduced under the 1997 Producer Responsibility Obligations (Packaging Waste) Regulations as a way for producers to demonstrate that they have met their statutory recycling obligations each year and continues to apply under packaging EPR. PRNs and PERNs are issued by accredited recycling processors or exporters for each tonne of eligible packaging waste recycled. The Scottish Government plans to conduct a consultation on reform to the PRN/PERN system in partnership with the other governments of the UK, to consider measures to strengthen obligations and support domestic reprocessing.

Single use drinks containers between 150ml and 3l, made from PET plastic or metal are exempt from packaging EPR, and instead will be part of Scotland's Deposit Return Scheme[39] (DRS). DRS requires an increase recycling rates for single use drinks containers from the current rate of approximately 65%[2] to at least 90%. The separate collection of drinks containers will also lead to a substantial increase in the quality of material collected and available for reprocessing. Scottish DRS Regulations were laid in 2020[40]and establish the framework for an industry-led DRS in Scotland. The Scottish Parliament has designated UK Deposit Management Organisation Ltd. as scheme administrator to operate the scheme. We are working closely with the UK Government and the Department of Agriculture,

[38] See The Producer Responsibility Obligations (Packaging and Packaging Waste) Regulations 2024 Schedule 5
[39] Deposit return scheme - Managing waste - gov.scot
[40] As amended by The Deposit and Return Scheme for Scotland Amendment Regulations 2022, The Deposit and Return Scheme for Scotland Amendment Regulations 2023, The Deposit and Return Scheme for Scotland (Miscellaneous Amendment) Regulations 2023 and The Deposit and Return Scheme for Scotland Amendment Regulations 2025

Environment and Rural Affairs in Northern Ireland to ensure the successful rollout of interoperable schemes across Scotland, England, and Northern Ireland in October 2027. We will also continue to work closely with the Welsh Government as they develop their plans for a separate DRS[41].

The Scottish Government, alongside the other nations of the UK, has committed to reforming existing EPR Regulations for waste electronics, batteries, and end of life vehicles. In 2023 the four nations published a consultation and call for evidence on reforms to the Waste Electrical and Electronic Equipment (WEEE) Regulations 2013, which are intended to drive up levels of separately collected WEEE for re-use and recycling. The consultation set out proposals to expand collection infrastructure for household WEEE, reform take-back obligations for retailers, and expand obligations on online marketplaces and producers of vapes. WEEE EPR Regulations have since been amended to create new obligations on online marketplaces and producers of vapes, and the four nations continue to consider all proposals set out in the consultation, including ensuring that they keep pace with the growth in new technologies and renewable energy installations such as solar panels as we transition to a clean energy economy. The four nations are also considering policy measures to reform existing batteries and end of life vehicle regulations, taking into account the impact of the EU batteries Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023, and the shift towards electrification of the economy.

Diversion from landfill and incineration

In 2011 42.8% of Scotland's waste was sent to landfill; by 2023 this had reduced to 19%, with a further 20.2% sent for incineration. This major shift away from landfill has been driven by a long-running policy focus to divert material from disposal. As we accelerate our move to a circular economy, we will produce less waste and increase the volume of materials recovered for recycling and reprocessing. There may always be a requirement to manage some materials as waste, and so we are also developing a Residual Waste Plan to 2045 to help minimise the environmental impact of waste and ensure that we have appropriate management capacity in place for those materials that cannot be avoided, reused, or recycled.

Any material disposed as waste at a landfill site in Scotland must pay Scottish Landfill Tax[42]. The value of the tax has continued to increase since its introduction in 1996, and has been a key factor in reducing the amount of waste sent to landfill and encouraging recovery of material. From 31 December 2025 we will introduce a ban on biodegradable municipal waste going to landfill to further divert material from

[41] Written Statement: Update on a Deposit Return Scheme that Delivers for Wales (10 July 2025) | GOV.WALES
[42] Scottish Landfill Tax - Taxes - gov.scot

landfill to recycling or other disposal, and in particular to reduce greenhouse gas emissions from landfilling biodegradable waste.

Following the 2022 independent review of incineration, the Scottish Government set out in National Planning Framework 4 that it will not support new developments of energy from waste facilities, except under limited circumstances. We are undertaking work to support development of an indicative capacity cap to ensure that we have an appropriate amount of capacity as the amount of residual waste continues to decline.

We are working with other nations in the UK on the expansion of the UK Emissions Trading Scheme (ETS) to include incineration and energy from waste[43]. Establishing a carbon price to burn fossil-based material aims to drive decarbonisation of energy from waste (EfW), and further incentivise alternative uses of this material. This will be supported by the development of a sector-led plan that will focusing on measures to end unnecessary incineration of high carbon-emitting materials.

Demand for reprocessed material

Demand for reprocessed material is largely assumed to be driven by market dynamics, rather than explicit policy requirements. Businesses may favour reprocessed material due to lower cost, greater availability, where consumer preference supports the use of recycled content, or to support their own sustainability targets. However, certain sectors may also avoid reprocessed materials where there are concerns over quality assurance or potential trade-offs against other properties such as durability.

There are currently relatively few policies in Scotland that aim to directly drive demand for reprocessed material, though the Scottish Government is currently investigating approaches to encourage recycled content through public sector procurement. Many demand-side policies such as product standards are reserved to the UK Government and therefore require a UK-wide approach. In some cases there may be a case for market intervention, for example to provide a level playing field for reprocessed material compared to virgin imports, or to support early-stage technologies. There is a growing interest in this area, both to increase supply chain resilience through reduced reliance on import of virgin materials, and to accelerate the transition to a net-zero, circular economy.

In 2022 the UK Government implemented a **Plastic Packaging Tax (PPT)** across the UK that applies to manufactured or imported plastic packaging components which contain less than 30% recycled plastic. In 2025 the rate of the tax was £223.69 per tonne. The tax intends to create an economic incentive for businesses to use recycled material in the production of plastic packaging, and to drive greater

[43] UK ETS scope expansion to waste: interim authority response

demand for recycled plastic. In 2024 the UK Government confirmed that businesses may use a mass balance approach to evidence recycled content in chemically recycled plastic for PPT, and the Scottish Government is engaging with the UK Government on a wider review of the effectiveness of the tax.

The European Union is considering or has adopted various measures to drive demand for reprocessed material, including for critical raw materials[44], packaging materials[45] and batteries[46]. This could impact reprocessing markets in Scotland if reprocessing facilities in Europe seek to retain or import materials for reprocessing to improve economies of scale. The Scottish Government seeks to align with the EU where it is meaningful to do so and in a manner that seeks to contribute towards maintaining and advancing environmental standards, and we will continue to engage with the UK Government and other nations of the UK on the implications of EU policy for Scotland.

Any policies that seek to increase demand for reprocessed material should consider alternative input sources and the cost or availability of technologies to provide that material. The use of reprocessed material may impact upon product quality, durability and recyclability. There is also a risk that expanding demand for reprocessed material could create dependencies within the supply chain that undermine efforts to reduce the total amount of material becoming waste or manage material higher in the waste hierarchy.

Reprocessing infrastructure investment

Scotland's domestic waste reprocessing infrastructure is primarily driven by private investment, which depends on a competitive market and a stable and supportive policy landscape. The public sector, notably local authorities and the Scottish Government have also provided some direct investment, for example through the **Recycling Improvement Fund** (see above). In addition, Scotland's Enterprise Agencies offer support to businesses in all parts of Scotland, as well as international investors, to take advantage of new market opportunities. This includes working with businesses to secure investment, access supply chains or networks, identify the right skills or workforce, and locate at appropriate sites.

Any policies that seek to expand domestic reprocessing must consider alternative waste management routes. Domestic reprocessing of waste is not always the most economically viable or environmentally sustainable option. There may be alternative treatment or reprocessing options elsewhere in the UK, where economies of scale cannot be achieved in Scotland. Technologies may be immature or have high energy

[44] Critical Raw Materials Act - European Commission
[45] Packaging waste - European Commission
[46] Batteries - European Commission

costs. Use of reprocessed material may not be economically viable for some materials based on quality and contamination. There is also a risk that expanding reprocessing capacity could create dependencies that undermine efforts to reduce the total amount of material becoming waste or manage material higher up in the waste hierarchy.

Circular Economy Investment Fund

The Circular Economy Investment Fund (CEIF), jointly funded by the Scottish Government and the European Regional Development Fund (ERDF), was open for applications from 2016 until 2022. In total, four businesses classed as recycling services were funded by the CEIF to the value of £1,075,214, attracting private investment of £1,537,927 and adding an annual reprocessing capacity of 15,794 across three different material streams. Two projects focused on plastic reprocessing, one on large WEEE and one on mattresses deconstruction for material recovery.

Investment in Grangemouth refinery site

In 2024 the UK Government and Scottish Government funded the ‘Project Willow’ feasibility study into the long-term industrial future for the Petroineos Grangemouth refinery site. The project identified nine initial viable “project sets” within the categories of wastes, bio-feedstock, and support for offshore wind which are suited to deployment at Grangemouth. Of these nine, six relate directly to materials reprocessing:

- Hydrothermal upgrading – breaking down hard-to-recycle plastics to produce pyrolysis oil
- Chemical plastics recycling – using chemicals to break down plastics and return them to a virgin state
- Acetone–butanol–ethanol (ABE) biorefining – bacterial fermentation of carbohydrate-rich waste material
- Second generation bioethanol – breaking down and fermenting Scottish timber into bioethanol
- Anaerobic digestion – fermentation of organic waste and biogas upgrading to produce biomethane
- Hydrogenated esters and fatty acids (HEFA) – converting Scottish cover crops into sustainable aviation fuel (SAF) and renewable diesel (RD) using low-carbon hydrogen

Proposals associated with these project sets will require significant public and private sector investment to be brought forward. As such, the Scottish Government has made £25 million available through the Grangemouth Just Transition Fund to support

immediate opportunities arising from Project Willow and the UK Government has also made £200 million from the National Wealth Fund available to support investible propositions.

Scottish Enterprise is triaging enquiries that have been submitted following the conclusion of Project Willow, with the agency reporting to the Grangemouth Investor Taskforce on a monthly basis. Scottish Enterprise are focussed on identifying and progressing the most commercially and technologically viable proposals that are the best fit for the site and which require public sector support to bring them to fruition. Given the existing expertise and infrastructure at the site, actions to attract reprocessing investment to Grangemouth, in tandem with the broader policies outlined above to drive domestic reprocessing, have the potential to position the area as a global leader in materials reprocessing, green energy and sustainable manufacturing.

Onshore wind sector deal and Green Industrial Strategy

The Scottish Government's 2023 Onshore Wind Sector Deal[47] sets out the opportunities associated with maximising the reuse of materials and minimising waste in the wind sector supply chain presents, particularly as more sites become ready for decommissioning. Our Green Industrial Strategy further sets out our ambition for Scotland to be a world leader in the reuse, refurbishment, remanufacturing and recycling of wind turbine components and wider assets, which in turn will create jobs and export opportunities[48].

The Sector Deal committed the onshore wind industry to delivering at least one specialist blade treatment facility in Scotland by 2030. As part of this commitment, Zero Waste Scotland and Scottish Enterprise have provided support to Reblade, based in Dumfries, the UK's first dedicated wind turbine decommissioning service. This includes a £60,000 grant for operational costs and product development as part of the Circular Economy Development Grant. The company has developed innovative processes and blade-handling protocols aimed at maximising circular outcomes for decommissioned blades. Efforts focus on repurposing blades into practical structures such as bus shelters and bike sheds.

National Planning Framework 4

The Scottish Government's National Planning Framework (NPF4) sets out our Sustainable Places National Spatial Strategy: that Scotland's future places will be net zero, nature-positive places that are designed to reduce emissions and adapt to

[47] Onshore wind sector deal - gov.scot
[48] Green Industrial Strategy

the impacts of climate change, whilst protecting, recovering and restoring our environment. NPF4 identifies Circular Economy Materials Management Facilities as one of eighteen ‘National Developments’, in order to maximise Scotland’s potential to retain the energy and emissions values within materials already in the economy. These are significant developments of national importance that will help to deliver our spatial strategy, and are therefore a focus for delivery. Circular Economy Materials Management Facilities cover facilities for managing secondary materials and recycling facilities, with a particular focus on construction and demolition industries and the decommissioning industry.

NPF4 also establishes Zero Waste as a Policy Principle, to encourage, promote and facilitate development that is consistent with the waste hierarchy. It requires that Local Development Plans should identify appropriate locations for new waste management infrastructure to support the circular economy and meet identified needs in a way that moves waste as high up the waste hierarchy as possible, as well as the consideration that must be given to local communities and the natural and historic environment.

5. Challenges and opportunities

Common challenges and barriers

If we are to achieve our circular economy ambitions, we require sufficient reprocessing infrastructure to manage the volume of materials flowing through our economy. However, material reprocessing everywhere faces a set of common challenges[49].

The high cost of some processes may mean that they are unable to compete with low-cost virgin alternatives. In recent years, domestic costs have increased due to the high price of energy and labour in the UK compared to other countries, driving some closures or relocations. Commercial viability depends upon securing a stable supply of materials in order to achieve required economies of scale and minimise the impact of price fluctuations. Finally, the value of some reprocessed material can currently be too low to justify investment, particularly where there is contamination in the collection and sorting process or material inputs have high environmental exposure (for example, fishing gear).

While there are common challenges, barriers to investment also vary significantly by material type (Table 1). For some material types, notably textiles and organic wastes, there is a high volume of material arisings, but current consumer behaviours and collection and sorting processes mean that a large proportion is disposed as residual waste. For other materials such as plastics there is a growing availability of material for reprocessing, but the current contractual landscape can mean that material tonnages are tied to existing facilities or long-term contracts (particularly for household plastic packaging) and so do not support new infrastructure investment.

Finally, new reprocessing infrastructure requires significant financial investment. The evolving landscape of waste composition and recycling markets can make long-term planning challenging. This can be further compounded by consumer behaviours – both purchasing habits and recycling practices – that influence waste composition. Investment and development can be slowed by changing requirements under environmental regulations, planning and permitting permissions, and access to key utilities including grid connections. Securing upfront capital and accessing the necessary investment therefore relies on a supportive and stable policy environment, especially for innovative new technologies.

[49] UK Critical Minerals Recycling and Midstream Processing Capability Assessment

Table 1: Potential barriers to investment in domestic waste infrastructure across the 15 materials considered in this report.

Material stream	Potential barriers to infrastructure development
Plastics	Limited advanced sorting (Plastic Recycling Facilities) and recycling capacity, reliance on export markets, energy costs, contamination issues, access to and aggregation of material (type and tonnage) and material data, limited demand for reprocessed material, competition from virgin plastics.
Aluminium and Steel	High energy costs for reprocessing, dependence on scrap collection efficiency, competition with global markets
Paper and Card	Fluctuations in demand for recycled fibre, contamination from mixed waste streams, processing infrastructure gaps in Scotland
Glass	Energy costs, challenges in colour sorting, transportation costs, challenges of capturing non-container glass
Wood	Lack of dedicated reprocessing facilities, contamination from treated wood, inconsistent collection systems between public and private sector
Fibre-based composites (drink cartons)	Complex material composition requiring specialised recycling technology, limited domestic sorting and processing capacity, low tonnage availability in Scotland
Electronic Waste	Complex material separation, hazardous components, reliance on export markets for processing, immature collection infrastructure for smaller domestic products
Batteries	Hazardous material handling requirements, fire risks during storage, energy and insurance costs, limited domestic recycling capacity, collection inefficiencies
Renewable energy installations	High costs to reprocess material, low value and limited demand for recyclate, transportation costs and logistics, small current size of the market
Organic Waste	Infrastructure gaps for anaerobic digestion and composting, contamination risks, regulatory hurdles
Textiles	Limited collection and sorting infrastructure, low demand for reprocessed material, data limitations
Mattresses	Bulky nature complicates logistics and increases costs. Challenges associated with material separation and markets for some of the materials recovered
Construction Materials (Concrete)	High transportation costs, contamination from mixed demolition waste
Tyres	Limited end markets for recycled rubber within Scotland, transportation costs, regulatory restrictions on disposal

Opportunities to support domestic reprocessing infrastructure and investment

The materials reprocessing sector is expected to grow to keep pace with the material needs of the Scottish and global economy, particularly those materials that underpin our transition to net zero. The circular economy policy landscape has also sought to drive the separation and recycling of material to maximise the value of our resources. Finally, there will be a growing need to manage new material streams in the near future, for example as the first generation of electric vehicles and Scotland's renewable energy infrastructure reach end of life at scale.

For some materials, the capacity of Scotland's domestic reprocessing infrastructure has not kept pace with material arisings, with the majority of plastic, metals, paper and card, electronic waste and batteries managed through exports. The data considered in this report point to several potential opportunities to expand reprocessing infrastructure, though this will be dependent on the wider market across the UK and beyond. A key role of the Scottish Government is to ensure there is a clear and stable policy framework to support economic investment, alongside a viable route to market and access to the relevant sites, skills and infrastructure. This may also include derisking early-stage technologies in some cases. Action to address the challenges highlighted here will help to unlock investment in our circular economy and support a just transition, with the potential to position Scotland as a global leader in reprocessing for some materials.

Strategic infrastructure capacity

Domestic reprocessing helps to ensure that maximum value is extracted from material resources, and adds to long-term resilience of supply chains by reducing reliance on imports. This is particularly true of strategically important materials that form the cornerstone of the transition to net zero and Scotland's renewable energy infrastructure.

Our Green Industrial Strategy (GIS) seeks to ensure that Scotland realises the maximum possible economic benefit from the opportunities created by the global transition to net zero[50]. We cannot achieve the pace and scale of change required to seize this opportunity without the critical resources that underpin this transition, and the GIS highlights material reprocessing as central to achieving its goals. This is not unique to Scotland; the UK Government's Critical Raw Materials Strategy acknowledges that critical minerals are essential to the new, Green Industrial Revolution and seeks to accelerate a circular economy of critical minerals in the

[50] Green Industrial Strategy

UK[51], while the EU's Critical Raw Materials Act seeks to strengthen all stages of the European critical raw materials value chain, including enhancing circularity. While the data underpinning this report cannot directly identity critical raw materials as part of the waste stream, they do point to a lack of domestic reprocessing capacity for metals and waste types that contain these materials, including electronics, batteries, and turbine blades. In some cases these materials arise in small quantities and can be difficult to capture in economy-wide material flows, yet their value and importance offer a strategic opportunity to better understand where they arise, and how to recapture their material value for future manufacturing and economic application.

Battery technologies are essential to electric vehicles (EVs) and renewable energy storage, with global demand for batteries increasing rapidly and set to increase 14 times by 2030[4]. Batteries contain numerous critical raw materials that can be recycled at the end of their life, and as demand grows there will be increased need to ensure these are not lost from the supply chain via disposal or export. Improper storage and disposal of batteries can also have a number of damaging environmental impacts. Scotland currently exports approximately 78% of existing battery waste for reprocessing elsewhere, with supply expected to grow. However, the battery reprocessing sector faces a number of well documented challenges, including high energy costs, fires at waste battery storage facilities, insurance costs, and the complexity and cost of reprocessing processes. There is therefore a strategic case for greater investment in batteries reprocessing infrastructure, technologies that can minimise risks, and associated supporting policies, and the Scottish Government is already prioritising this as an area of focus with the other governments of the UK.

Finally, Scotland has led the way in transforming our energy generation to renewable sources. We have seen an almost a four-fold increase in renewable generation since 2010, with much of this growth in onshore wind energy[52]. By 2050, 26 million tonnes of material is expected to be generated as waste for consented offshore wind installations, with up to a further 1.4 million tonnes from onshore wind. Wind turbines comprise a range of materials including steel, copper and rare earth elements. Zero Waste Scotland estimate that there is potentially up to 1.56 tonnes of critical raw materials (CRMs) contained within a 2MW turbine[53]. Maximising the capture of these materials at end of life – as well as avoiding the environmental and economic costs of disposal or exporting heavy material elsewhere – has therefore become a key focus of Scotland's onshore and offshore policy, and presents a significant opportunity once decommissioning commences at scale.

[51] The UK's Modern Industrial Strategy
[52] Renewable Electricity Capacity - Energy Statistics for Scotland - Q1 2024 - gov.scot
[53] Publication forthcoming

Quantity and quality of supply

We continue to dispose of a high proportion of some material types, particularly plastics, organic waste, and textiles. Scotland's Circular Economy and Waste Route Map include various policies that particularly target these materials, including mandatory kerbside collections of flexible plastics from 2027. However, this will hinge on accessibility, uptake and participation by households. Expanding reprocessing infrastructure for plastic film and flexibles ahead of the introduction of soft plastic collections is a priority given limited existing capacity across the UK. Supporting expansion of this reprocessing infrastructure ahead of 2027 is a focus of both the Scottish and UK Governments, and underpinned by consideration of PRN reforms and a review of the plastic packaging tax.

Scotland's bioeconomy produces more than 10 million tonnes of organic surplus every year, which could be used as valuable feedstocks for bio-based processes such as food and feed ingredients and bio-based materials[54]. Previous research in this space has found that more circular approaches to Scotland's beer, whiskey and fish sector by-products alone could generate £500-800m each year, representing a significant opportunity to add value to waste and by-products. As well as diverting higher volumes of organic wastes from residual more can also be done to extract the highest value possible, for example as animal feedstock or as inputs to green chemicals and biofuel, as demonstrated by Celtic Renewables[55].

Food waste recycling also presents one of the largest opportunities to improve household recycling performance and quality in Scotland, and is critical if we are to further reduce the impact of waste on our climate. Participation in food and garden waste collections in areas with those services can be variable, meaning that the increases required to reduce the carbon emissions associated with organic waste will require a commensurate increase in processing capacity.

Finally, our commitment to prioritise textile waste in the forthcoming Product Stewardship Plan provides the opportunity to consider interventions across the whole supply chain that can drive the recyclability and collection of textile waste, including considering the potential to align with forthcoming EU requirements for Extended Producer Responsibility, if appropriate.

Access to material

[54] Accelerating the Circular Bioeconomy | Zero Waste Scotland
[55] Celtic Renewables | Leading the green chemical revolution

Many materials, even if collected in large quantities, can be unavailable to new reprocessing facilities due to existing contract arrangements. This can hold back investment in new reprocessing infrastructure, particularly for emerging technologies. Action to aggregate input materials and support access can therefore support new reprocessing opportunities, particularly for new market entrants and emerging technologies. Zero Waste Scotland has previously supported work on a material brokerage service for local authorities, with the aim of generating economies of scale enabling higher levels of contract interest and price. Similar approaches to pooling material tonnages for contract have been used in Wales and within parts of the NHS. Brokerage services work well when there is strong market engagement prior to the service or framework development.

Assessment of the potential to support multiple local authorities to collaborate or partner to deliver services may deliver potential efficiencies and reduce complexity for reprocessors seeking to access material, though could risk locking up a greater proportion of material in long-term contracts. Finally, producer responsibility policies such as the deposit return scheme for single use drinks containers, can transfer material ownership to product producers, potentially offering new opportunities to access material for reprocessing.

Demand for reprocessed material

Reprocessors must compete with suppliers of virgin materials on largely global markets. While there will be other drivers that support demand for reprocessed materials, cost is assumed to be the key component underpinning demand for reprocessed products. For some materials, for example aluminium or lead-acid batteries, market dynamics favour the use of recycled materials, leading to strong market demand. However, suppliers particularly of high grade plastics and textiles face price volatility and competition from imported virgin or lower recycled content materials.

We see a strategic and environmental case to stimulate demand for recycled content or other reprocessed material and strengthen domestic reprocessing. Demand-side policies are largely reserved to the UK Government and impact businesses in all parts of the UK, and so this is an area that the Scottish Government is prioritising for UK-wide action, including engagement through the UK Government's Circular Economy Taskforce. This could be further supported by a better understanding of current and future domestic raw material dependencies, and opportunities to meet demand with reprocessed material, particularly for critical raw materials and non-virgin polymers.

EU Alignment

Circular Economy policy development is further advanced in the EU for many of the materials considered by this report. The EU has also updated rules on where in the recovery process quality materials can lose their waste status, improving quality assurance and boosting the market for secondary raw materials. There is a risk that Scotland's environmental standards fall behind those of the rest of Europe, and that divergence results in new regulatory or technical barriers to trade for Scottish businesses. Consultation feedback and engagement with businesses has already indicated that there is appetite from some businesses to keep pace with the EU to maintain competitiveness, and the Scottish Government will seek to align with the EU where it is meaningful to do so and in a manner that seeks to contribute towards maintaining and advancing environmental standards.

Data availability

This report highlights some of the challenges associated with accessing high quality and up-to-date data for waste material flows. This is also strongly reflected in our engagement with industry and enterprise agencies. Publicly available data gathered from industry suffers from a time lag which can create uncertainty for both investment decisions and for the development of policy. Updates to waste classifications in Scotland have also been viewed by industry as too slow and failing to keep pace with new developments. Where better data sources do exist, they can be fragmented or difficult for potential investors to access. Material and product development can also happen faster than reporting or legislative cycles. Some of these issues may be addressed by the forthcoming Digital Waste Tracking Service[56], which will make data available in a more timely manner and inform better decision making. However, wider changes to waste data and classifications will require action across the UK.

Increasingly other nations and the EU are seeking to improve data flows and enhance traceability. In conjunction with recycled or local content standards and improve quality assurance, this can enhance local supply and diversify the supply chain. These traceability elements if mirrored in Scotland could drive innovations in data collection, and open up new markets to reprocessed Scottish products.

Additional opportunities to improve data availability include:

- Gaining a clearer understanding of what data will not be available through Digital Waste Tracking, particular for waste source that do not have EWC codes.
- Improving our understanding of commercial and industrial waste composition, including through our national compositional study of residual waste from commercial premises, particularly industries producing higher volumes of

[56] Digital waste tracking service - GOV.UK

critical raw materials (for example, oil and gas decommissioning, manufacturing).
- Understanding the potential of artificial intelligence innovations to provide more timely and granular data, including end-destination information.
- Identification of opportunities to leverage data sharing across material streams and sectors.

Sector engagement

This report provides a baseline of the material value chain and the existing and planned reprocessing infrastructure in Scotland, based on publicly available data. Ongoing sectoral engagement is essential to build deeper insights into the barriers and opportunities for material reprocessing in Scotland and to maximise material value. It also helps to understand market readiness of existing facilities to accommodate changes in policy, allowing smooth transition, supporting compliance, and highlighting future policy needs.

Strategic partnerships between government, industry, and investors have proved successful at accelerating infrastructure development and local job creation. These underpin our Infrastructure Investment Plan, forthcoming Circular Economy Strategy, and the work underway to identify material reprocessing opportunities at Grangemouth. We are also engaged in cross-border partnerships to optimise material flows into and out of Scotland that maximise our infrastructure assets, local expertise and abundant clean energy. We will continue to embrace new opportunities on the back of the findings in this report that will help ensure that our circular economy is built for growth, creates green jobs, and underpins supply chain resilience and security.

Material Chapters

The following chapters set out material-specific analysis for fifteen materials in Scotland which comprise the majority of waste arisings in Scotland. An overview of material specific waste arisings and reprocessing capacity in Scotland is provided based on published SEPA data, alongside discussion of any potential capacity gap.

6. Plastic

Plastic waste arisings

Scotland produced an estimated 278 kt of plastic waste in 2023[57]. Approximately 90 kt of this material was recycled, with 49 kt collected separately and 41 kt separated through processing of other waste, such as at Material Recovery Facilities (MRFs - see chapter 21). Up to an additional 188 kt of plastic could be available for reprocessing if household residual waste was sorted fully for recycling, of which 87 kt is dense plastic and 101 kt is plastic film and flexibles[58]. This estimate excludes unsorted plastic waste present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available, which could significantly increase the total tonnage of plastic waste.

Reprocessing capacity

Of the 90 kt of Scotland's plastic waste that was recycled in 2023, approximately 12.2 kt was recycled in Scotland and around 77.5 kt exported for recycling elsewhere. While there was variation in the proportion of domestic recycling over the preceding decade, the overall amount of material recycled in Scotland has shown an upward trend. The tonnage recycled within Scotland increased by 200-300% between 2016 and 2023, but the majority of plastic waste arising in Scotland, and management in the annual variation of those arisings, remains managed by export (Figure 5).

Infrastructure capacity for plastics includes both sites which clean, sort or treat material for further processing, and sites which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product). It is not possible to ascertain specific treatment activities undertaken by each facility from SEPA Waste Sites and Capacity Tool data.

There were a total of 211 licensed sites in Scotland that handled waste plastic in 2023. This includes sites which specialise only in processing plastics, and sites which manage plastics as part of wider sorting and processing activities, such as civic amenity sites and MRFs.

[57] Waste arisings are based on 2023 data. See Appendix 1 for methodology and the EWC codes used in analysis
[58] Compositional data from the Zero Waste Scotland Household Waste Composition Analysis Report[58] has been used to provide an estimated tonnage of plastic within this waste stream arising from households.

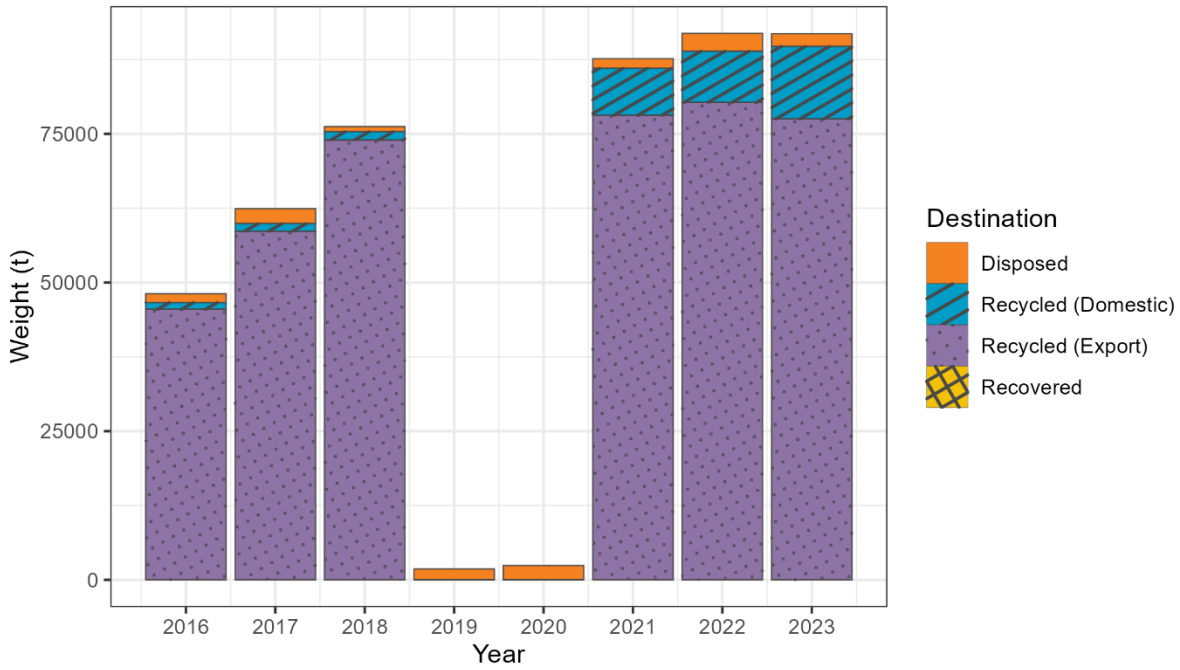


Figure 5: Destination of plastic waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber-attack). The overall available (separately collected or sorted) amount of this material has increased over time. The majority of plastic material available is exported for recycling.

A total of 44 licensed sites reported the treatment of plastics to SEPA in 2023[59] (Figure 6). Treatment may include sorting and baling for recycling elsewhere and also the production of plastic flake or pellets ready to be extruded into new products. In 2023, 10 of the 44 sites noted above were accredited sites under the producer responsibility scheme for packaging.

The above reprocessing tonnages do not include plastics collected mixed with other recycling. In 2023 Materials Recovery Facility (MRF) output for plastics was 26 kt tonnes as detailed in Chapter 21.

[59] See list in Appendix 4

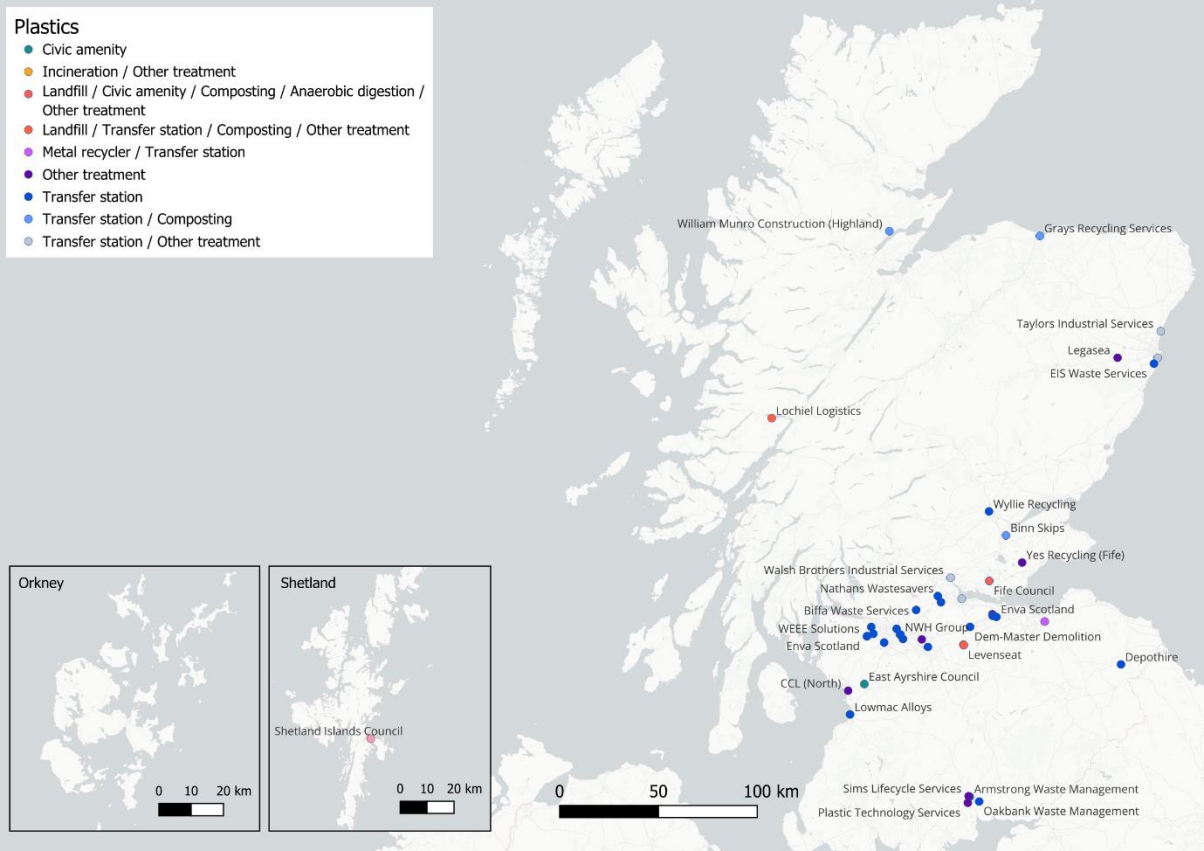


Figure 6: Sites reporting the treatment of plastic waste in Scotland to SEPA in 2023, by facility type.

Gap analysis

There is likely to be a significant domestic capacity gap for reprocessing plastic waste generated in Scotland. The exact size of the capacity gap cannot be assessed on this data, as material could be exported for other reasons beyond reprocessing capacity. However, approximately 78 kt of plastic waste is currently exported for processing outside of Scotland. An estimated additional 188 kt of plastics is likely to be present in residual waste from households. Whilst there appears to be sufficient sorting and transfer capacity for plastic wastes in Scotland, plastic reprocessing infrastructure in Scotland processes approximately 14% of the 90 kt of plastic waste available for recycling. Expanding reprocessing infrastructure for plastic film and flexibles ahead of the introduction of soft plastic collection in 2027 is a particular priority given limited existing capacity in Scotland and across the UK.

7. Aluminium

Aluminium waste arisings

Scotland produced an estimated 201 kt of aluminium waste in 2023[60]. Approximately 180 kt of this material was recycled, with 129 kt collected separately and 51 kt separated through processing of other waste, such as at Material Recovery Facilities (MRFs - see chapter 21). Up to an additional 21 kt of aluminium could be available for reprocessing if household residual waste was sorted fully for recycling, of which 7.5 kt is aluminium drinks containers and 13.7 kt is other aluminium packaging[61]. This estimate excludes unsorted aluminium waste present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available, which could significantly increase the total tonnage of aluminium waste.

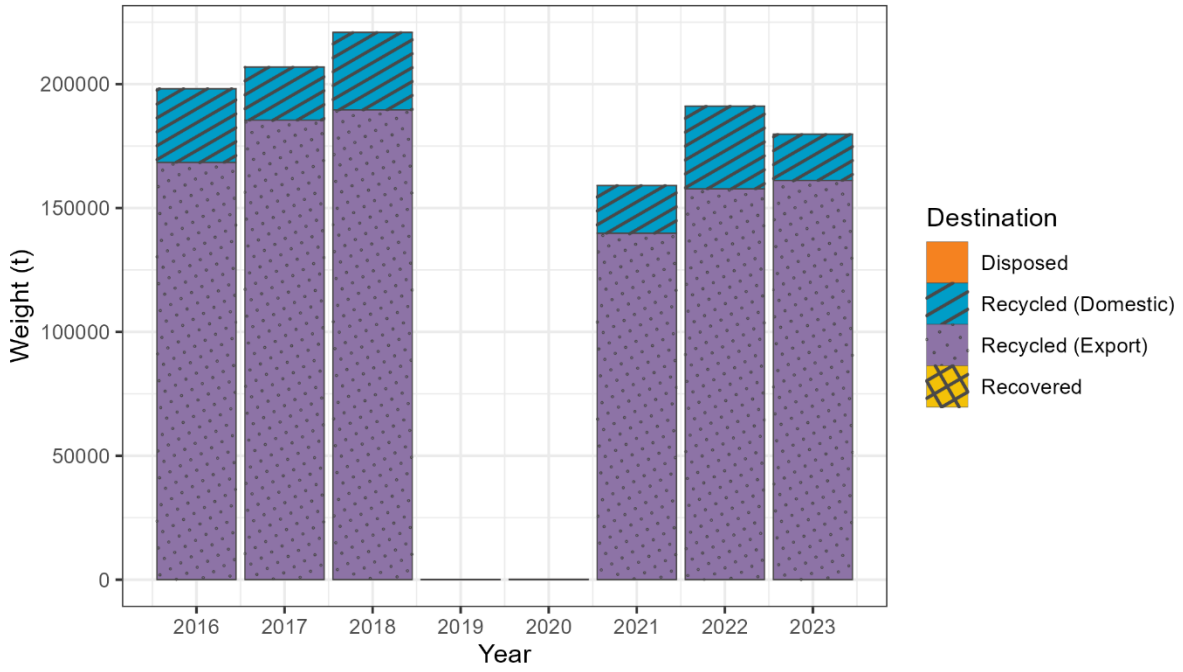


Figure 7: Destination of aluminium waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber attack). The overall available (separately collected or sorted) amount of this material has slightly decreased over time. The majority of aluminium material available is exported for recycling.

[60] Waste arisings are based on 2023 data. For details on the methodology and list of EWC codes used in analysis, see Appendix 1.

[61] Compositional data from the Zero Waste Scotland Household Waste Composition Analysis Report[61] has been used to provide an estimated tonnage of aluminium within this waste stream arising from households.

Reprocessing capacity

Of the 180 kt of Scotland's aluminium waste that was recycled in 2023, approximately 19 kt was recycled in Scotland and around 161 kt exported for recycling elsewhere. There was significant variation in both the amount of waste arising and the amount processed in Scotland over the preceding decade. The majority (90%) of aluminium waste arising in Scotland is managed by export (Figure 7).

Infrastructure capacity for aluminium must be considered jointly between those sites which clean, sort or treat material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

A total of 376 licensed sites in Scotland handled waste aluminium or mixed metals or metal packaging that may contain aluminium in Scotland in 2023. These include sites which specialise in metals and others which manage metals as part of a wider operation, such as a civic amenity sites and MRFs.

A total of 54 licensed sites reported the treatment of aluminium or mixed metals or metal packaging that may contain aluminium to SEPA in 2023[62] (Figure 8). Treatment may include cutting or sorting as well as shredding to produce manufacture ready scrap suitable for export. There are no accredited reprocessors for aluminium in Scotland under the producer responsibility scheme for packaging. However, Scotland is home to the UK's last remaining aluminium smelter in Lochaber, which plans to introduce a billet and recycling facility equipped with re-melt furnaces that can utilise pre- and post-consumer scrap in 2026/27[63].

[62] See Appendix 4

[63] Alvance The Future | ALVANCE British Aluminium

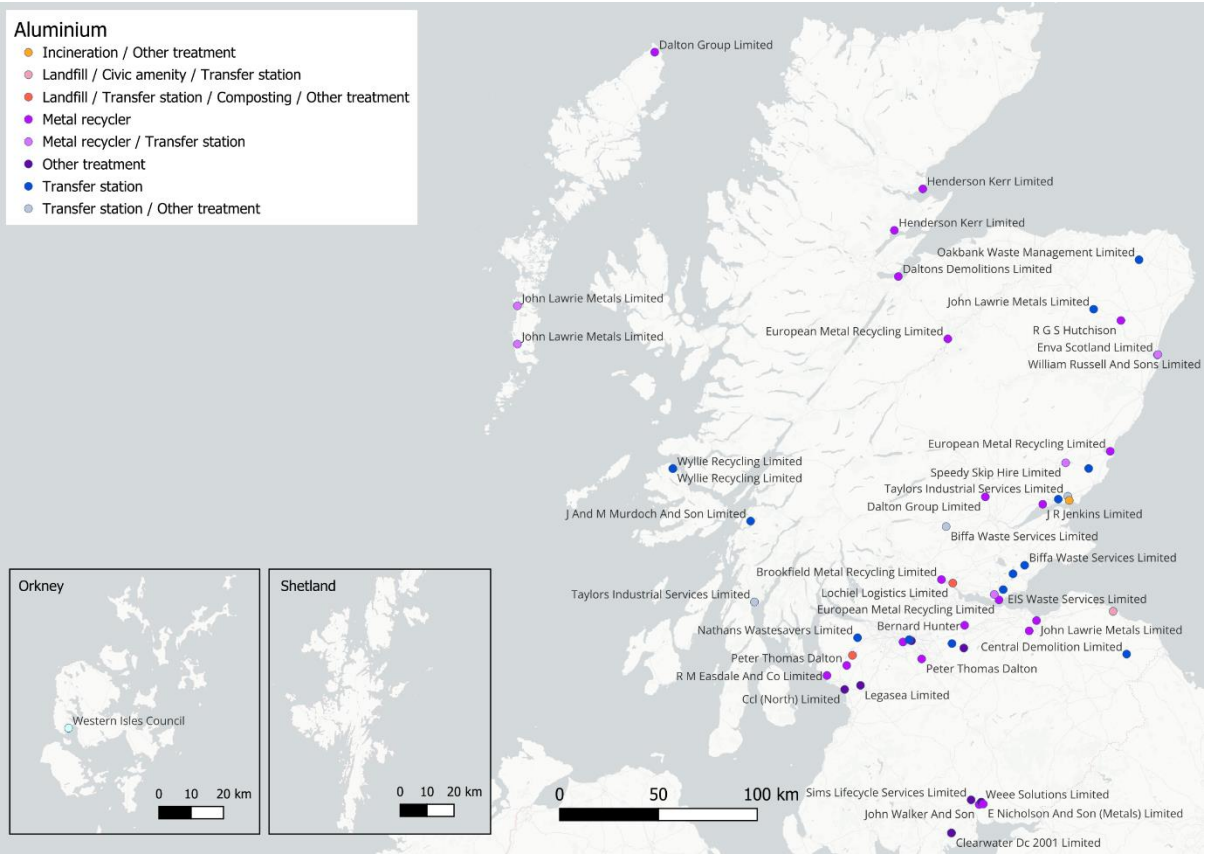


Figure 8: Sites reporting the treatment of aluminium or mixed metals or metal packaging that may contain aluminium to SEPA in 2023, by facility type.

Gap analysis

There is likely to be a significant domestic capacity gap for reprocessing aluminium waste generated in Scotland. The exact size of the capacity gap cannot be assessed on this data, as material could be exported for other reasons beyond reprocessing capacity. However, aluminium waste arisings and recycled tonnages indicate that approximately 161 kt of aluminium waste is currently exported for processing outside of Scotland. An estimated additional 21 kt of aluminium is likely to be present in residual waste from households, with a further unknown quantity of aluminium arising from the C&I and C&D sectors. Whilst there appears to be sufficient sorting and transfer capacity for aluminium wastes in Scotland, aluminium reprocessing infrastructure in Scotland processes approximately 10% of the 180 kt of aluminium waste available for recycling.

8. Steel

Steel waste arisings

Scotland produced an estimated 424 kt of steel waste in 2023, excluding unsorted steel waste present in residual waste/'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D) which could significantly increase this tonnage. If this wider scrap steel from other sources is accounted for, ZWS estimates that between 620 and 930 kt of steel scrap is generated in Scotland each year[64]. Up to an additional 12 kt of steel could be available for reprocessing if household residual waste was sorted fully for recycling, of which 0.5 kt is steel drinks containers and 11 kt is other ferrous packaging.

Approximately 412 kt of this material was recycled, with 93 kt collected separately, and 319 kt separated through the processing of other waste in Scotland such as at Material Recovery Facilities (MRFs), and other industrial processes such as the shredding end-of-life vehicles and managing oil and gas decommissioning.

Reprocessing capacity

Of the 412 kt of Scotland's steel waste that was recycled in 2023, approximately 33 kt was recycled in Scotland and around 379 kt exported for recycling elsewhere. The total amount processed remained fairly consistent from 2016-2018, with a slight decrease in 2021 and 2022 and a larger decrease in 2023. The tonnage recycled within Scotland has remained fairly consistent over the period 2016 to 2023, but the majority of steel recycling (92%) is managed by export (Figure 9). Of material exported, an estimated 41% is exported directly to Europe and 56% exported to the rest of the UK. Steel exported to the UK may be recycled within UK steel mills or further exported to a range of destinations.

[64] How should Scotland manage its scrap steel? | Zero Waste Scotland

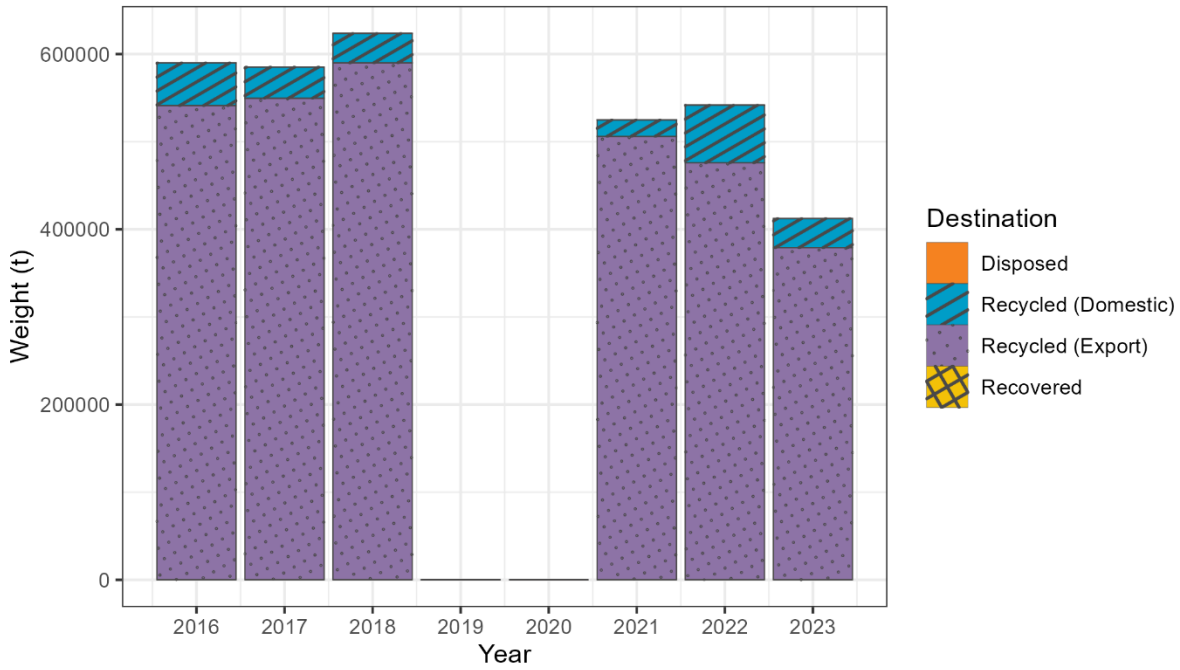


Figure 9: Destination of steel waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber attack). The overall available (separately collected or sorted) amount of this material has slightly decreased over time. The majority of steel waste is exported for recycling.

A total of 410 licensed sites in Scotland handled waste steel or mixed metals or metal packaging that may contain steel in Scotland in 2023. These include sites which specialise in metals and others which manage metals as part of a wider operation, such as a civic amenity sites and MRFs.

A total of 67 licensed sites reported the treatment of such metals to SEPA in 2023[65] (Figure 10). Treatment may include cutting or sorting as well as shredding to produce furnace ready scrap suitable for export. There are no accredited reprocessors for steel in Scotland under the producer responsibility scheme for packaging.

[65] See Appendix 4 - Sites treating materials, Scotland, 2022.

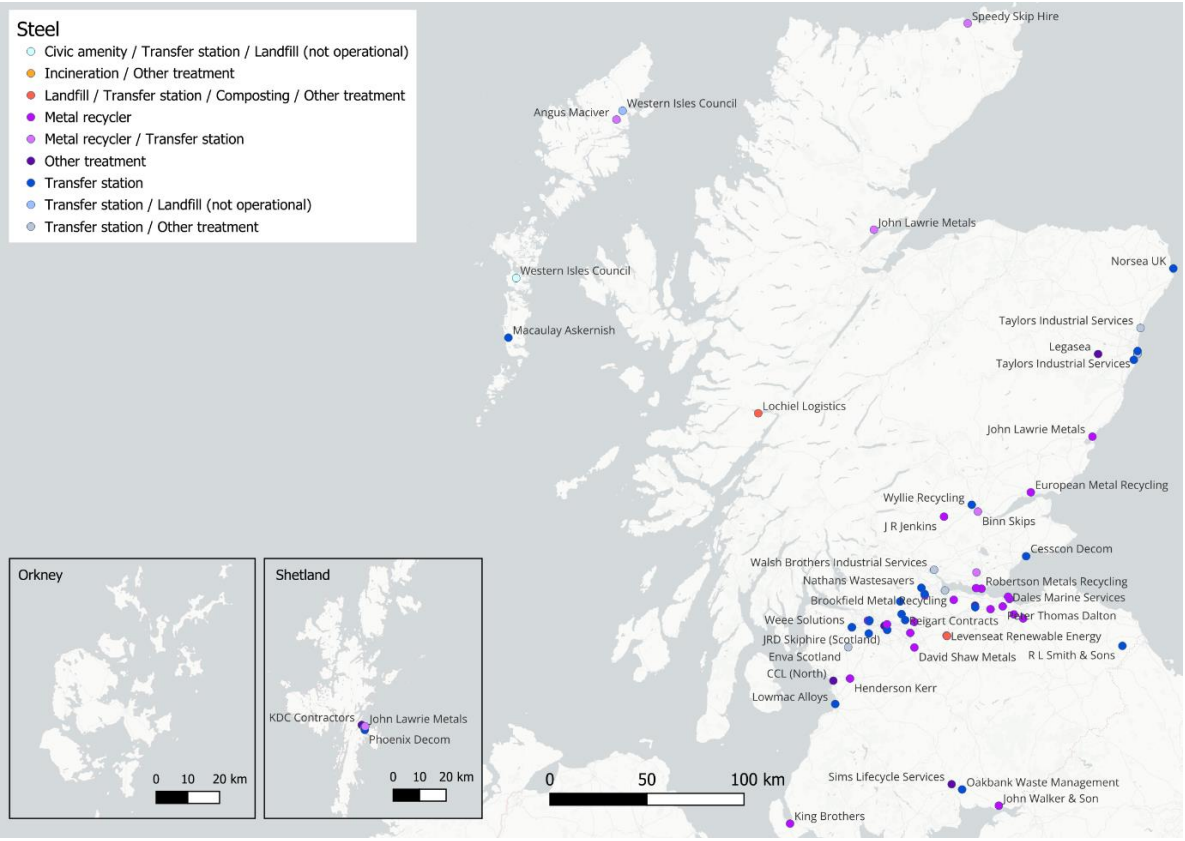


Figure 10: Sites reporting the treatment of waste steel or mixed metals or metal packaging that may contain steel to SEPA in 2023, by facility type.

Gap analysis

There is a domestic capacity gap for reprocessing steel waste generated in Scotland. The exact size of the capacity gap cannot be assessed on this data, as material could be exported for other reasons beyond reprocessing capacity. However, steel waste arisings and recycled tonnages indicate that approximately 379 kt of steel waste is currently exported for processing outside of Scotland, and steel reprocessing infrastructure in Scotland processes approximately 8% of the 412 kt of steel waste available for recycling. An estimated additional 12 kt of steel is likely to be present in residual waste from households. While the exact quantity of steel waste arising from the C&I and C&D sectors is unknown, previous analysis estimate that this could be in the region of 100 – 400 kt per year.

A domestic capacity gap for steel does not necessarily suggest there is a business case for expanding domestic reprocessing, for example an Electric Arc Furnace (EAF) plant for scrap steel. Previous analysis by Natural Capital Analysis suggests that there is unlikely to be an economic case for new steel reprocessing in Scotland[66]. There is already a high recycling rate for steel scrap, including well

[66] Natural Capital Analysis, Screening of Support Proposal for Recycling Infrastructure in Scotland, 2021

established UK-wide and European supply chains, and steel reprocessing requires significant economies of scale to be viable.

9. Paper and Card

Paper and card waste arisings

Scotland produced an estimated 377 kt of paper and card waste in 2023. Approximately 210 kt of this material was recycled, with 130 kt collected separately and 80 kt separated through processing of other waste, such as at Material Recovery Facilities (MRFs - see chapter 21). Up to an additional 167 kt of paper and card could be available for reprocessing if household residual waste was sorted fully for recycling, the composition of which is set out in Table 2. This estimate excludes unsorted paper and card waste present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available, which could significantly increase the total tonnage.

Table 2: Paper & card waste potentially within 'Household and similar wastes', rounded to the nearest 100 t.

Waste Category	Waste Type	Tonnes (2023)
Household and similar wastes	Newspaper, magazines and directories	10,000
	Other recyclable paper	11,900
	Recyclable paper packaging	5,800
	Non-recyclable paper	81,000
	Thin (Grey) Card Packaging	27,700
	Thick (Brown) corrugated cardboard packaging	9,800
	Cartons and other card/plastic laminate packaging	4,900
	Other card	900
	Heavily contaminated card & other composite card	15,400
	Total	**167,000**

Reprocessing capacity

Of the 210 kt of Scotland's paper and card waste that was recycled in 2023, 96% was exported for recycling elsewhere, with an estimated 8.4 kt reprocessing in Scotland. The amount of paper & card waste arising has varied without a clear trend on arisings since 2016 (Figure 11), but appears to have generally been lower since 2021.

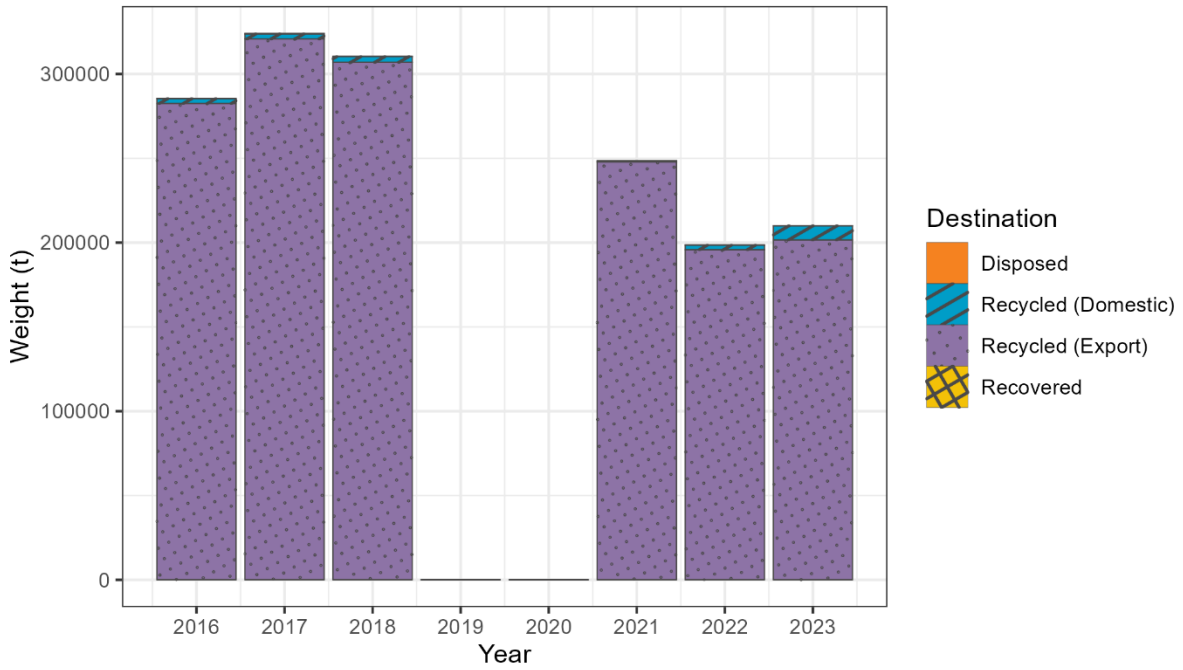


Figure 11: Destination of paper & card waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber attack). The overall available (separately collected or sorted) amount of this material has slightly decreased over time. The majority of this material is exported for recycling.

Infrastructure capacity for paper & card must be considered jointly between those sites which clean, sort or treat material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

A total of 281 licensed sites handled waste paper and cardboard waste in Scotland in 2023. These include sites which specialise in paper and cardboard and others which manage paper and cardboard as part of a wider operation, such as a civic amenity sites and MRFs.

A total of 46 licensed sites reported the treatment of paper and cardboard to SEPA in 2023 (Figure 12). Treatment may include sorting and baling to produce a material suitable for recycling elsewhere. Whilst there are currently two paper mills operating in Scotland (UPM Caledonian in Irvine and Fourstones in Leslie), it is understood that they are currently not using recycled stock. There are no accredited reprocessors for paper packaging in Scotland under the producer responsibility scheme for packaging.

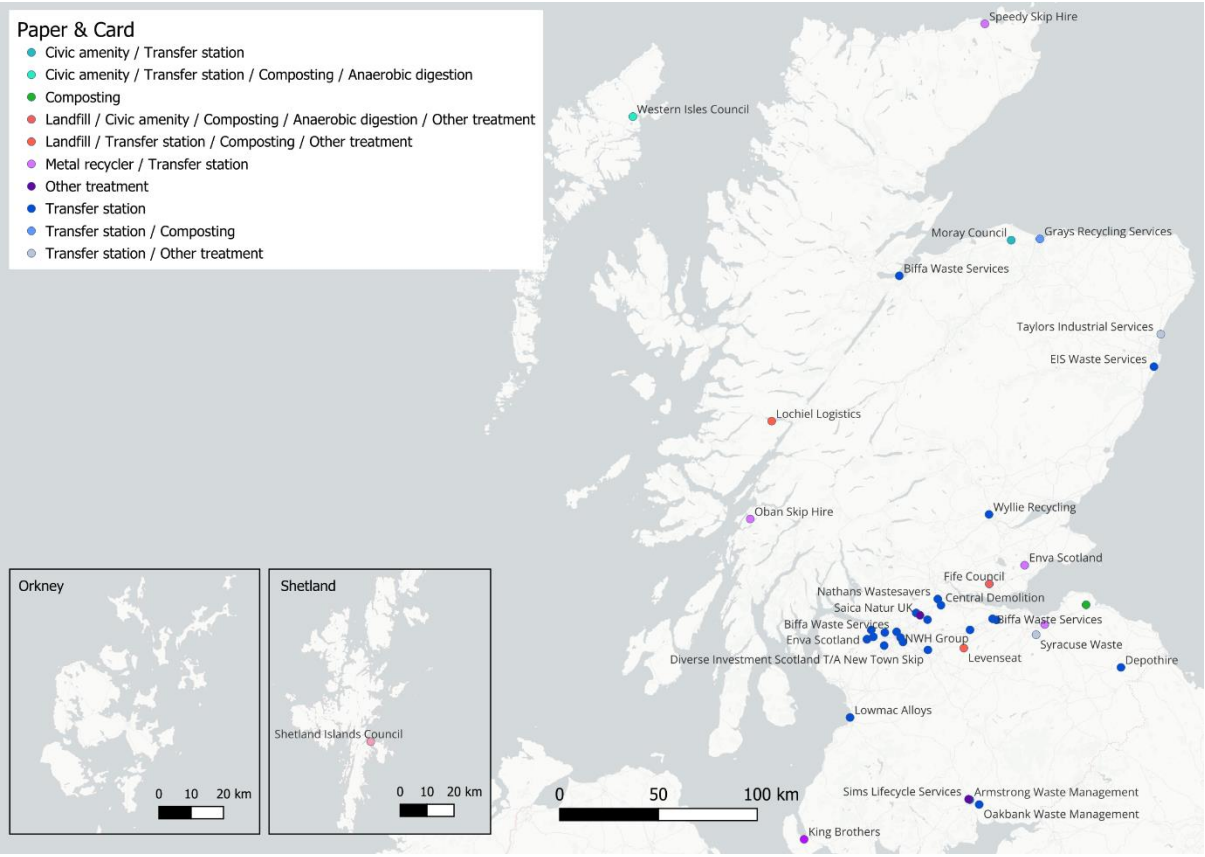


Figure 12: Sites reporting the treatment of paper and cardboard in 2023, by facility type.

Gap analysis

There is a domestic capacity gap for reprocessing paper and card waste generated in Scotland. The exact size of the capacity gap cannot be assessed on this data, as material could be exported for other reasons beyond reprocessing capacity. Paper and card waste arisings and recycled tonnages indicate that approximately 202 kt of paper and card waste is currently exported for processing outside of Scotland. An estimated additional 167 kt of paper and card is likely to be present in residual waste from households, with a further unknown quantity of paper and card arising from the C&I and C&D sectors. Whilst there appears to be sufficient sorting and transfer capacity for paper and card wastes in Scotland, almost all paper and card collected in Scotland for recycling is exported for reprocessing.

Forecast demands for paper and card are subject to varying trends. Traditional sources of paper, for example newspaper, are in decline. However, there has been an increase in the use of paper and card based packaging associated with the rise of home deliveries and a move away from plastic packaging, which could be accelerated by packaging extended producer responsibility. Previous analysis by

Natural Capital Analysis suggests that there is unlikely to be an economic case for new paper and card reprocessing in Scotland[67].

[67] Natural Capital Analysis, Screening of Support Proposal for Recycling Infrastructure in Scotland, 2021

10. Glass

Glass arisings

Scotland produced an estimated minimum of 207 kt of glass waste in 2023. Approximately 131 kt of this material was recycled, with 112 kt collected separately and 19 kt separated through processing of other waste, such as at Material Recovery Facilities (MRFs - see chapter 21). Up to an additional 74 kt could be available from household residual waste if sorted properly for recycling. This estimate excludes unsorted glass waste present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available.

Reprocessing capacity

Of the 131 kt of glass waste recycled in Scotland in 2023, 99 kt was recycled in Scotland and around 32 kt exported for recycling elsewhere. This follows a similar trend since 2016 with the majority of glass being recycled in Scotland. The annual reduction in glass waste is partly due to "light-weighting" of glass packaging and changes in the choice of packaging material used by manufacturers (Figure 13).

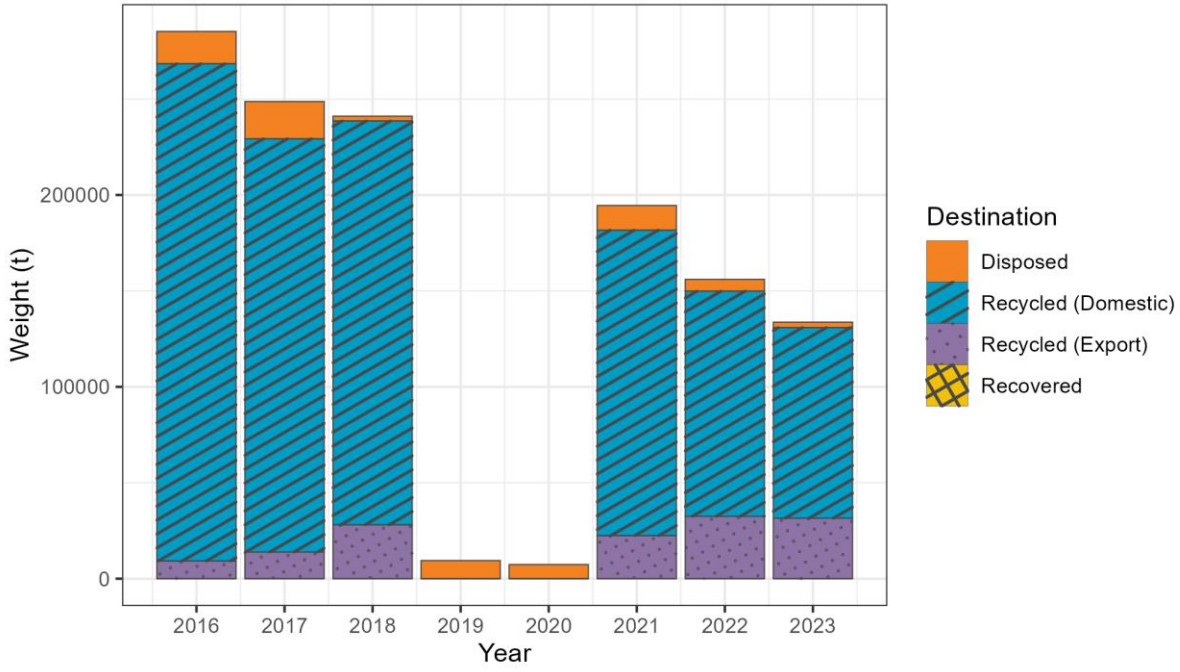


Figure 13: Destination of glass waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber attack). The overall available (separately collected or sorted) amount of this material has decreased over time. The majority of this material is recycled in Scotland.

Infrastructure capacity for glass must be considered jointly between those sites which sort material for further processing and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

In 2023, 211 licensed sites handled glass waste in Scotland, which may include sorting, crushing or the production of aggregates or glass cullet for remelt. 19 sites reported the treatment of glass waste, including those making new products such as aggregates, cullet or new glass products such as filter media and glass bottles (Figure 14).

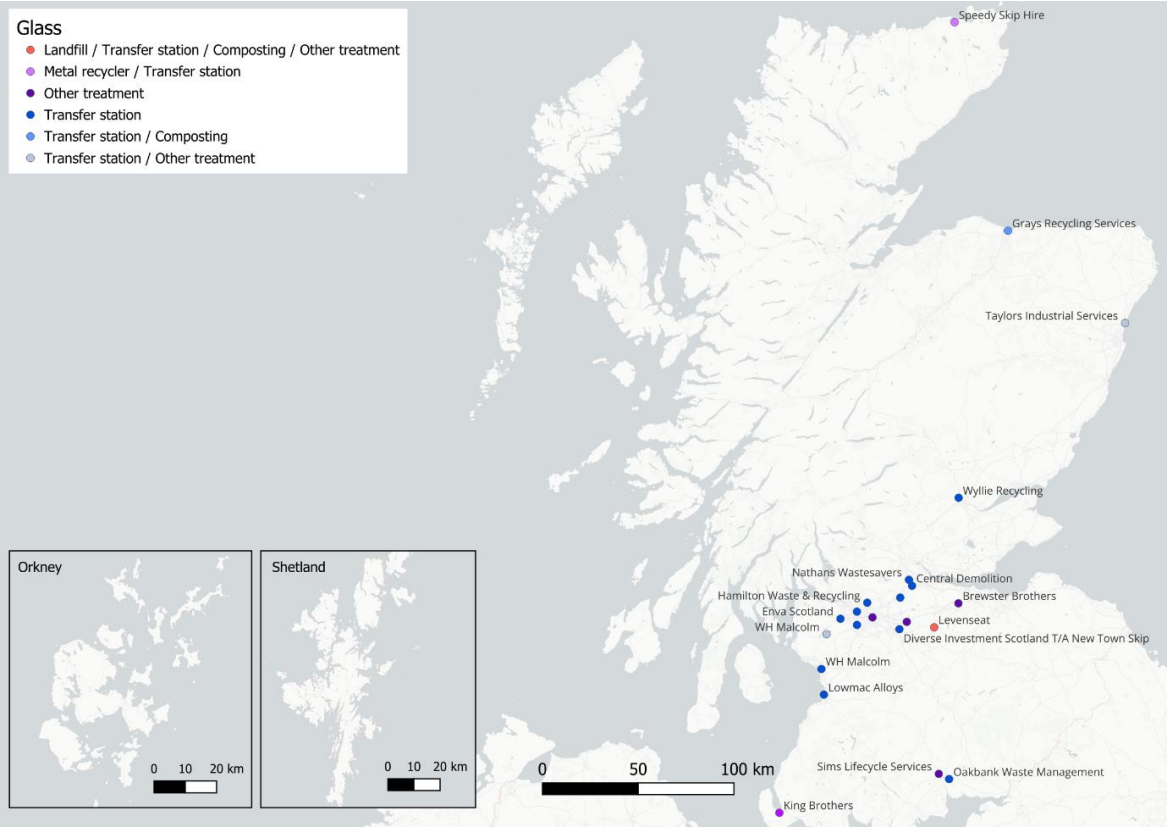


Figure 14: Sites handling glass waste in Scotland in 2023, by facility type.

Gap analysis

There does not appear to be a domestic capacity gap for glass reprocessing in Scotland. There is sufficient sorting and transfer capacity for glass wastes, as well as recycling infrastructure capable of treating the majority (74%) of glass waste available for recycling in Scotland. Nevertheless, 32 kt of glass waste (24% of available material) was exported for recycling outside of Scotland in 2023; this analysis is unable to comment on why glass is exported for recycling, given the available recycling capacity in Scotland.

There is opportunity to divert up to an estimated 74 kt of glass waste from disposal for reprocessing, though it is also possible that the observed downward trend in glass arisings will continue and whether additional capacity will be needed in future years. Since the majority of glass waste is already reprocessed in Scotland, it is not

possible to tell whether existing sites are at capacity, or could take on additional material if supply increased.

11. Wood

Wood waste arisings

Scotland produced an estimated 568 kt of wood waste in 2023[68]. Approximately 548 kt of this material was either recycled (200 kt) or sent for energy recovery (348 kt), with 238 kt collected separately and 310 kt separated through processing of other waste, such as at Mixed Recycling Facilities for construction, commercial and bulky wastes (MRFs - see chapter 21). 99% of all wood packaging placed on the market is non-consumer, and 84% of non-consumer wood packaging is flat wooden pallets[69].

Up to an additional 19.5 kt of wood could be available for reprocessing if household residual waste was sorted fully for recycling, of which 3.2 kt is wooden packaging and 16.3 kt is non-packaging wood[70]. This estimate excludes unsorted wood waste present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available, which could significantly increase the total tonnage of wood waste. The data also do not differentiate between clean wood waste suitable for recycling or composting, and treated wood suitable for energy recovery.

Reprocessing capacity

Of the 200 kt of Scotland's wood waste that was collected for recycling in 2023, approximately 182 kt was recycled in Scotland and around 18 kt exported for recycling elsewhere. Approximately 348 kt of wood waste was sent for energy recovery in Scotland (incineration and biomass energy recovery) in 2023 (Figure 15). Scotland also imported 109 kt of wood wastes for energy recovery in 2023. The Wood Recycler's Association estimates that over 97% of waste wood is processed within the UK[71], which aligns with assessment in this report that the majority of Scottish wood waste arisings remain in Scotland.

[68] Waste arisings are based on 2023 data. See Appendix 1 for methodology and the EWC codes used in analysis
[69] PackFlow Refresh 2023: Wood (WRAP)
[70] Compositional data from the Zero Waste Scotland Household Waste Composition Analysis Report[70] has been used to provide an estimated tonnage of wood within this waste stream arising from households.
[71] Over 97% of UK waste wood processed in 2023 - Wood Recyclers Association

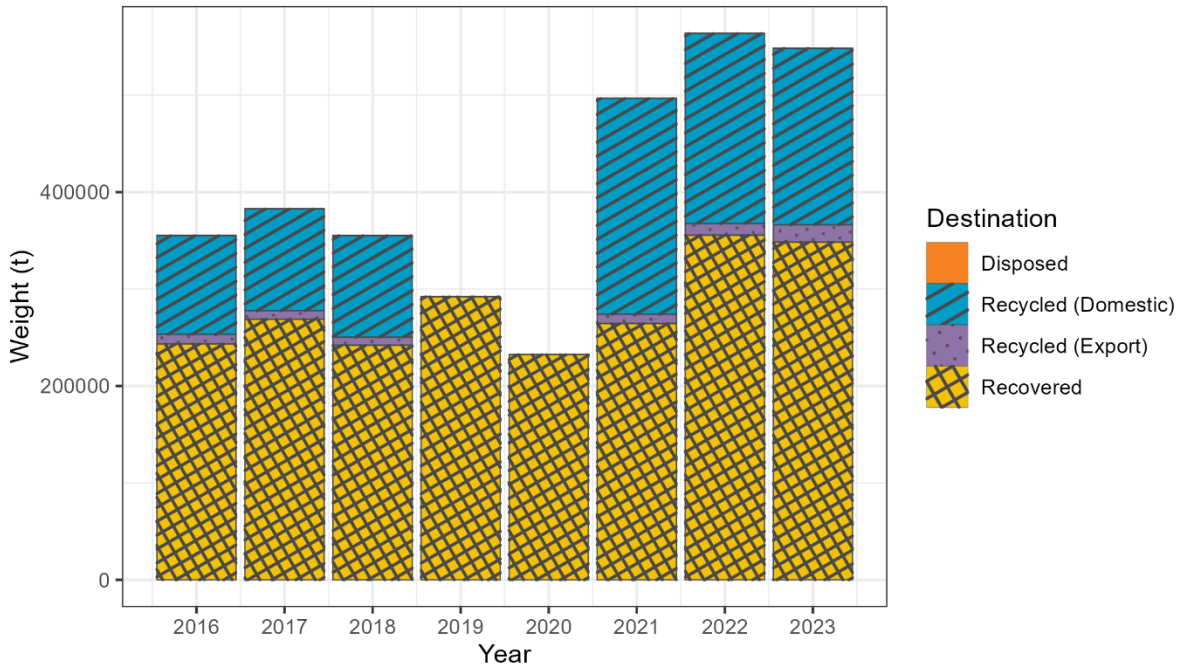


Figure 15: Destination of wood waste available for reprocessing in Scotland (source: SEPA WFAS; no recycled/disposed data for 2019/2020 due to cyber-attack). The overall available (separately collected or sorted) amount of this material has increased over time. The majority of this material is subject to domestic energy recovery or recycled in Scotland.

Infrastructure capacity for wood must be considered jointly between those sites which sort material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product). It has not been possible to ascertain from SEPA Waste Sites and Capacity Tool data the specific nature of treatment undertaken by each facility.

A total of 396 licensed sites in Scotland handled waste wood in 2023. These include sites which specialise in wood and others which manage wood as part of a wider operation, such as a civic amenity sites and construction and demolition wastes.

A total of 79 licensed sites reported the treatment of wood in 2023[72] (Figure 16). Treatment may include sorting, shredding and chipping in order to produce material suitable for animal bedding, panel board manufacture or energy recovery. If UK end markets are similar in Scotland, it would suggest around two thirds of collected wood is used in large-scale biomass energy production, one quarter used in panel board and most of the remainder as animal bedding and surfaces[73]. Although approximately one quarter of the tonnage treated is considered recycled, the specific

[72] See list in Appendix 4

[73] Over 97% of UK waste wood processed in 2023 - Wood Recyclers Association

nature of wood wastes could mean that it is not viable to reprocess the material for onwards use, and energy recovery is the most appropriate end of life destination. Wood waste arisings data do not differentiate between clean wood suitable for recycling or composting and treated wood suitable for energy recovery, and so it has not been possible to assess this in more detail.

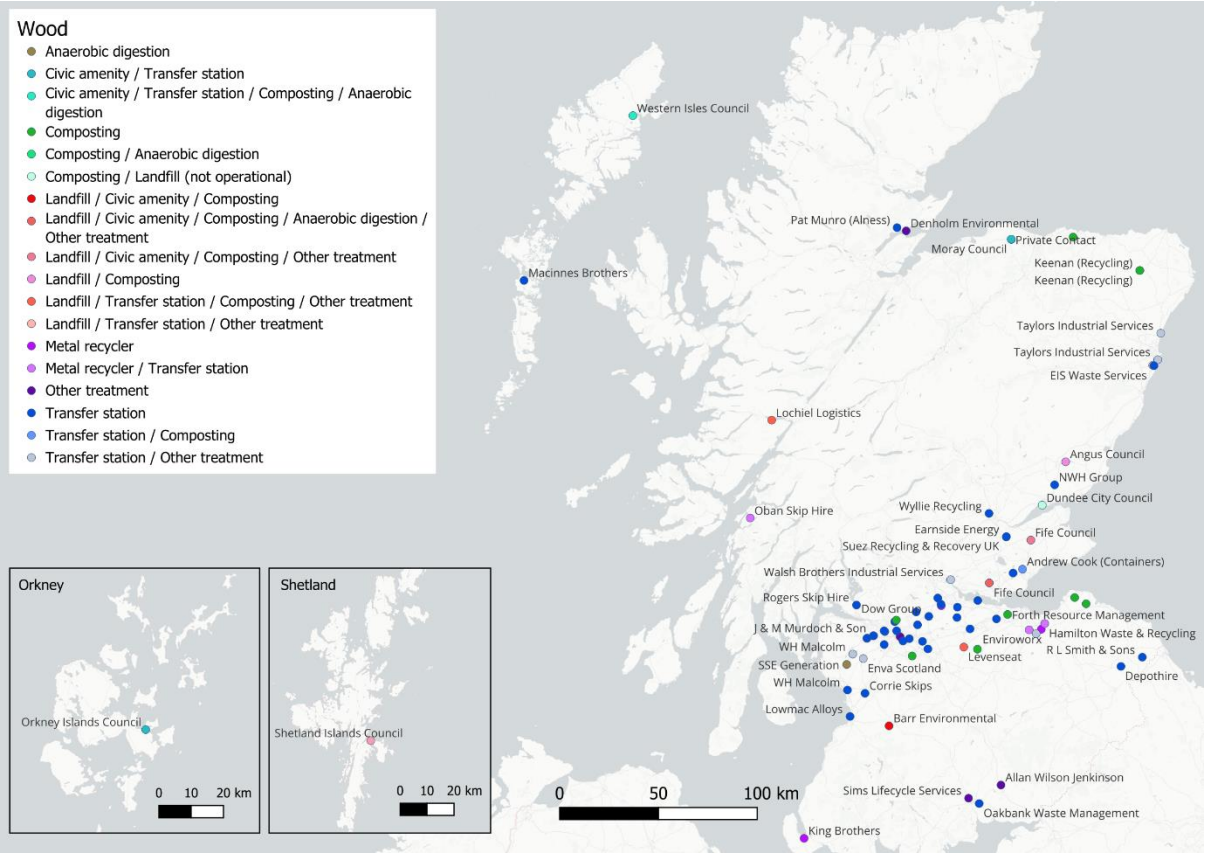


Figure 16: Sites reporting the treatment of wood in Scotland in 2023, by facility type.

Gap analysis

There does not appear to be a capacity gap for the processing of wood waste in Scotland. There is already significant sorting and transfer capacity for wood wastes, as well as treatment infrastructure of various types, in the region of 500 kt. Since the majority of wood waste is already reprocessed in Scotland, it is not possible to tell from available data whether existing sites are at capacity, or could take on additional material if supply increased.

12. Fibre based composite packaging

Fibre based composite packaging waste arisings.

Fibre-based composite packaging (FBC) is packaging primarily made of paper or paper fibres and laminated with plastic. Common examples include drinks cartons and disposable beverage cups. FBC arisings do not map onto the EWC-stat system and so assessment of this waste is limited. While EWC codes relevant to fibre based composite packaging were considered, only 14 tonnes of waste were reported as being handled under these specific EWC codes, of which 5 tonnes was recycled in Scotland.

Compositional data from the Zero Waste Scotland Household Waste Composition Analysis Report[74] suggest that there may be up to 8 kt of fibre-based composite waste in Scotland. This aligns with independent estimates for carton (4.8 kt[75]) and FBC beverage cup (3.5 kt[76]) waste in Scotland, which together comprise that majority of FBC waste arisings.

Reprocessing capacity

Due to the above data limitations, the tonnages identified as FBC are several orders of magnitude lower that those estimated to be present within residual waste streams. It is assumed that the majority of FBC waste arisings available for recycling in Scotland are exported for reprocessing, or potentially subject to recovery or disposal.

Infrastructure capacity for FBCs must be considered jointly between those sites which clean, sort or treat material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

Based on SEPA Waste Sites and Capacity Tool, 2 sites treated 14 tonnes of fibre-based composite waste from Scotland on site in 2023[77]. 5 tonnes of this was reported to be recycled, with the remainder subject to “other” treatment (Figure 17).

[74] Household Waste Composition Analysis | Zero Waste Scotland

[75] UK arisings of FBC cartons are estimated to be approximately 60 kt, which leads to an estimate of around 4.8 kt arising from Scotland alone, based on population size.

[76] ZWS estimates that 289 million FBC beverage cups were placed on the market in Scotland in 2021/22, with a total weight of approximately 3.5 kt

[77] See list in Appendix 4

It is likely that any unreported tonnages of FBC collected for recycling are exported for reprocessing. The only plant in the UK at that time which recycled this material was ACE UK, in England. Of all UK FBC arisings, around 29% (17.5 kt) are recycled[78], and around two-thirds of this activity takes place outside the UK.

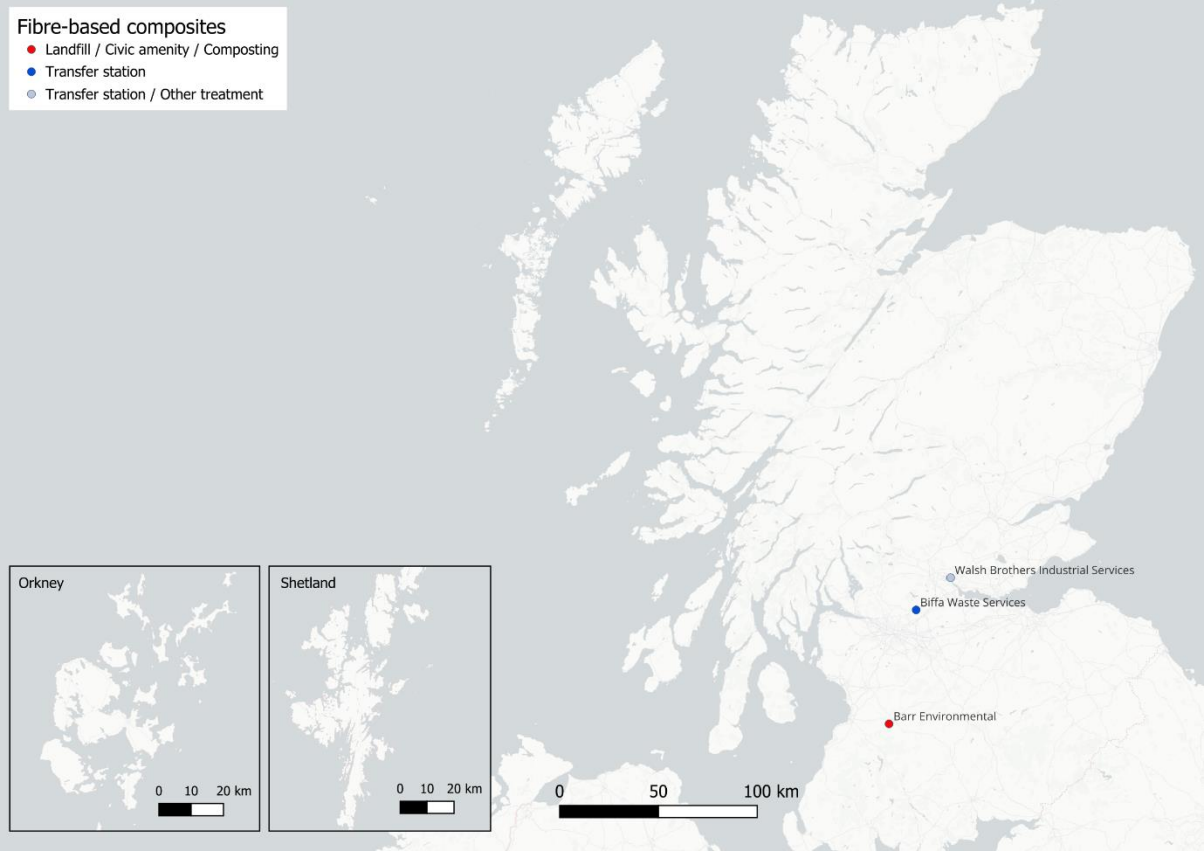


Figure 17: Sites reporting the treatment of fibre-based composites in Scotland in 2023, by facility type.

Gap analysis

It is not possible to assess the capacity gap for fibre-based composite packaging due to a lack of data to identify this material. However, as the only major reprocessing facility handling this material in the UK is based in England, it is assumed that there is a domestic capacity gap for reprocessing this material, though it is not known whether the size of this gap is sufficient for commercially viable domestic reprocessing of FBCs.

[78] Recycling of multilayer composite packaging: the beverage carton - Zero Waste Scotland

13. Electronic waste

Waste Electrical and Electronic Equipment (WEEE) arisings

Scotland produced an estimated 62 kt of electronic waste in 2023[79], of which approximately 40 kt of this material was recycled. Up to an additional 13.3 kt of electronic waste could be available for reprocessing if household residual waste was sorted fully for recycling, of which 10.7 kt is small domestic appliances and cables, 0.3 kt light bulbs and tubes, and 2.6 kt other WEEE and associated consumables. This estimate excludes electronics present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available.

Reprocessing capacity

Of the 40 kt of electronic waste recycled in 2023, approximately 15 kt was recycled in Scotland and around 25 kt exported for recycling elsewhere. The data does not show how the remaining 22 kt of electronic waste generated in Scotland is managed. There has been significant annual fluctuation in the tonnage of electronic waste managed since 2016 (Figure 18), partially caused by site closures due to fire.

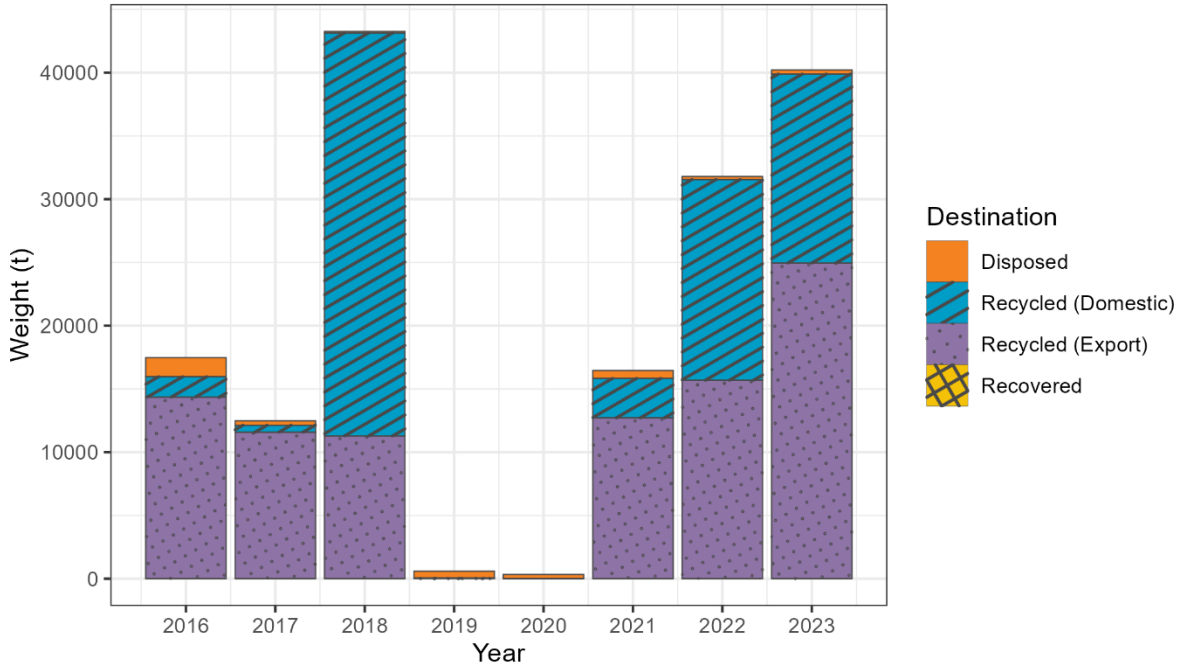


Figure 18: Destination of electronic waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber-attack). The overall available (separately collected or sorted) amount of this material

[79] Waste arisings are based on 2023 data. See Appendix 1 for methodology and the EWC codes used in analysis

has fluctuated over time. Just over one third of material was reprocessed in Scotland in 2023, with the rest exported.

Infrastructure capacity for electronic waste must be considered jointly between those sites which sort material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

A total of 18 sites accepted electronic waste from Scotland for treatment on site in 2023[80] (Figure 19). There are 21 companies listed as SEPA accredited reprocessors for WEEE with active registration, six of which are noted as carrying out recycling or physical treatment in the site returns[81] (and therefore included in the total number treating electronic waste above).

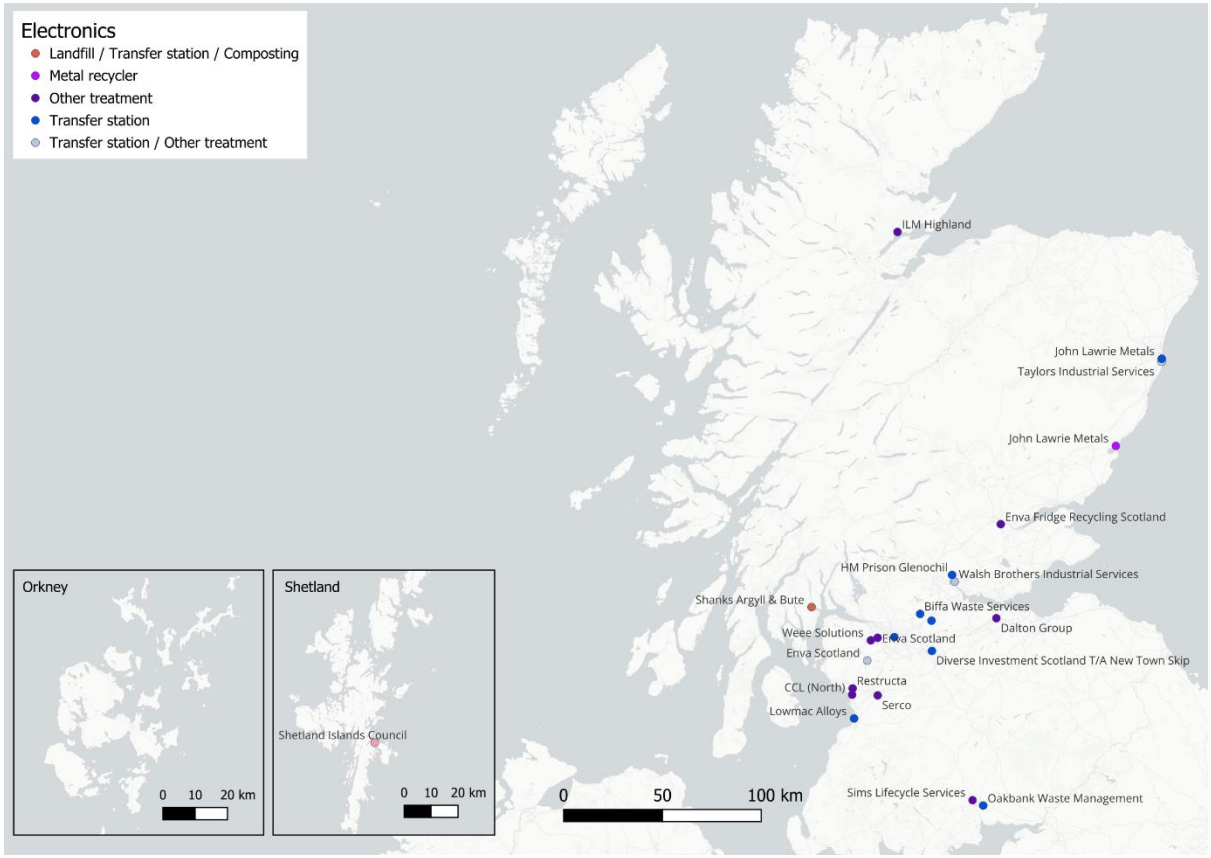


Figure 19: Sites accepting electronic waste from Scotland for treatment on site in 2023, by facility type.

[80] See list in Appendix 4

[81] See Appendix 3 – Accredited Reprocessors for a full list

Gap analysis

There is likely to be a domestic capacity gap for reprocessing electronic waste generated in Scotland. Recycling and physical treatment capacity in Scotland is estimated to be limited to around 20 kt, with 25 kt of electronic waste exported for recycling in 2023.

Waste electronics are expected to increase in quantity, both due to consumer demand and due to the roll-out of net zero infrastructure including electric vehicles and renewable energy systems such as solar panels (see Chapter 15)[11]. Electrical products contain a variety of critical raw materials including lithium, magnesium, copper and rare earth elements, which are highly valuable to the economy and can be subject to volatile international supply chains. The environmental risks associated with WEEE are also amplified if poorly managed.

These drivers, coupled with further reforms of the WEEE producer responsibility scheme under consideration by the four nations, are expected to increase in the tonnage of materials available for recycling and reuse and potentially strengthen demand for domestic reprocessing.

14. Batteries

Batteries waste arisings

Scotland produced an estimated 14 kt of battery waste in 2023[82], of which approximately 7.7 kt was recycled. Up to an additional 1.6 kt of waste batteries could be available for reprocessing if household residual waste was sorted fully for recycling. This estimate excludes batteries present in residual waste and 'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D), for which data are not currently available.

Reprocessing capacity

Of the 7.7 kt of waste batteries recycled in 2023, 1.6 kt was recycled in Scotland and 6 kt exported for recycling elsewhere. This varied significantly over the preceding decade, but both the total amount of material recycled, and the proportion reprocessed domestically showed a slight upward trend to 2022, before falling in 2023. The majority of battery arisings are still managed by export (Figure 20).

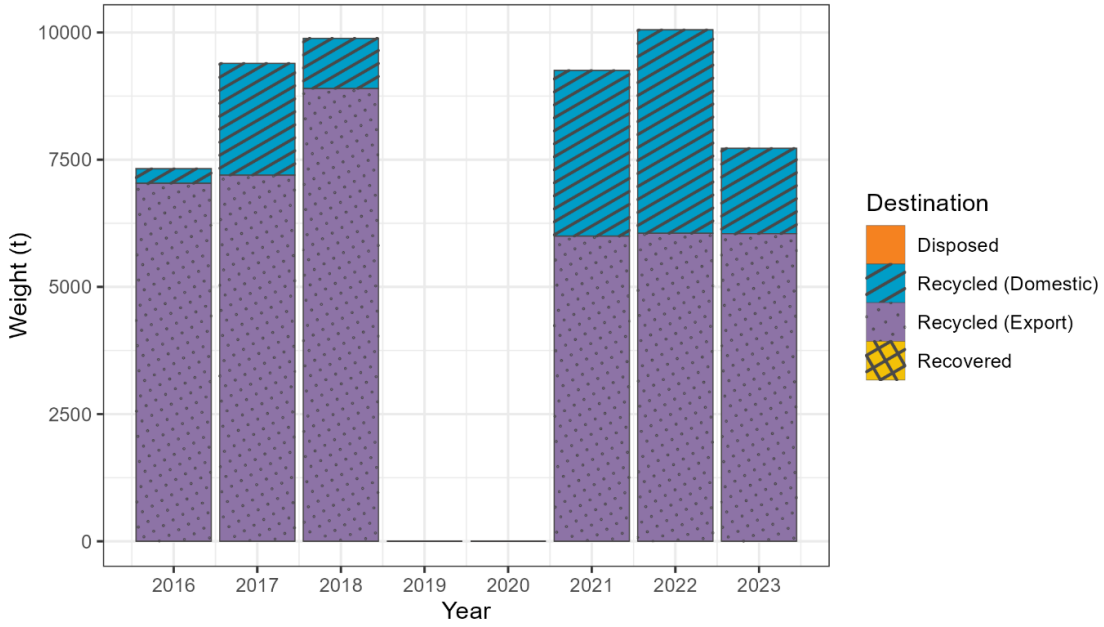


Figure 20: Destination of battery waste available for reprocessing in Scotland (source: SEPA WFAS; no data for 2019/2020 due to cyber attack). Overall sorted amounts of this material have increased over time, though fell in 2023. The majority of this material is exported for recycling.

[82] Waste arisings are based on 2023 data. See Appendix 1 for methodology and the EWC codes used in analysis.

Infrastructure capacity for batteries must be considered jointly between those sites which clean, sort or treat material for further processing , and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

A total of 11 sites treated battery waste from Scotland in 2023[83] (Figure 21). Most recycling was undertaken by WEEE Solutions Limited (Paisley) and most physical treatment was undertaken by Blancomet Scot Limited (Dunfermline) and Fenix Battery Recycling Limited (Kilwinning).

There are four companies listed as accredited reprocessors for batteries[84]. Two of these companies are included in the SEPA site returns table detailing batteries recycled and undergoing physical treatment. Not all reprocessors are subject to site returns, hence it has not been possible to ascertain tonnages recycled by them in this report.

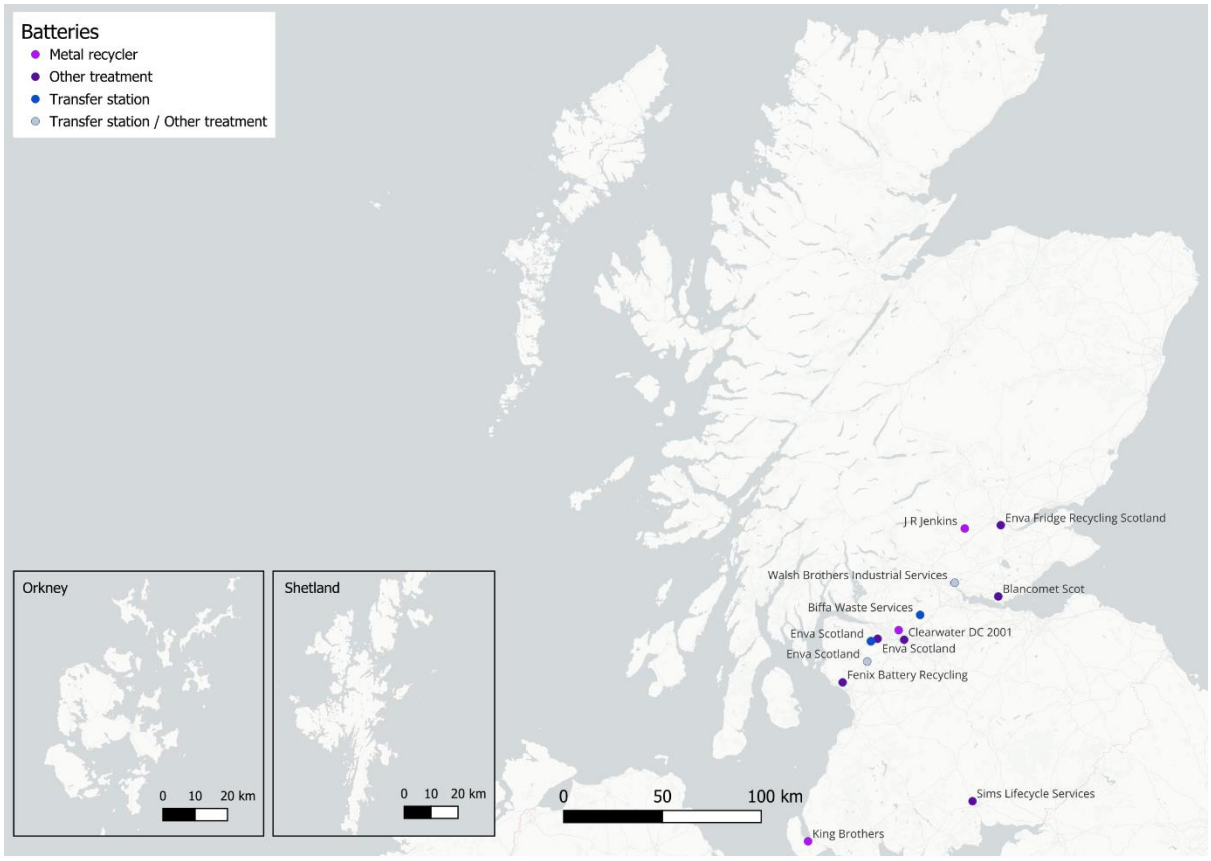


Figure 21 Sites treating battery waste from Scotland in 2023, by facility type.

[83] See list in Appendix 4
[84] See Appendix 3 for a full list

Gap analysis

There is very likely to be a domestic capacity gap for reprocessing waste batteries generated in Scotland. Whilst there appears to be sorting and transfer capacity for battery wastes, recycling infrastructure in Scotland appears to be insufficient to deal with domestic arisings, with over 6 kt of battery waste (78%) exported for recycling outside of Scotland.

This capacity gap covers battery arisings at 2023 levels, which are relatively small by tonnage relative to other material types. However, batteries contain high volumes of critical raw materials, meaning that the value of reprocessing this material is disproportionately greater than tonnage alone would suggest. Battery technologies are also essential to the UK's decarbonisation strategy, underpinning technologies in electric vehicles (EVs) and renewable energy storage, as well as continued increased use in portable electronics and other devices. Global demand for batteries is increasing rapidly and is set to increase 14 times by 2030[4], and the UK Battery Strategy (2023)[9] predicts that by 2040 nearly 200 GWh of capacity will be required to satisfy UK battery demand for cars, commercial vehicles, heavy goods vehicles, buses and grid storage. The capacity gap for battery waste is therefore expected to grow rapidly in coming years.

15. Renewable energy installations

For the purposes of this report, renewable energy installations are considered to include offshore and onshore wind turbines and solar panels. Grid connection and transmission, as well as other energy infrastructure such as heat infrastructure or decommissioning waste from oil and gas infrastructure and hydropower are excluded.

Net zero infrastructure does not map onto the EWC-stat system and therefore cannot be determined using the published SEPA WFAS data. EWC codes used in site returns data contain multiple different types of waste assigned to them and are not exclusive related to net zero infrastructure waste. Waste arisings are therefore taken from the following reports:

- Offshore Renewable Energy Catapult, July 2022: End of life materials mapping for offshore wind in Scotland. Report from Phase 1 of the ELMWind project.
- Zero Waste Scotland, July 2023: Energy infrastructure materials mapping
- Zero Waste Scotland, 2025: The future of onshore wind decommissioning in Scotland.

Onshore wind: waste arisings

Some onshore wind capacity installed in the 1990s began coming to the end of operational life in 2015, at which point around 40% were decommissioned and 60% had their life extended. Further assets are expected to reach end of life and require decommissioning / life extension from early 2030s with requirement building up to 2050. Zero Waste Scotland (2025) estimates that 4,956 - 5,656 onshore wind turbines will be decommissioned from 2025 to 2050, with total weight of materials of 1.2-1.4 million tonnes. The estimated timescales for decommissioning of onshore wind turbines are shown in Figure 22 and Figure 23 for low and high decommissioning forecast (Zero Waste Scotland, 2025).

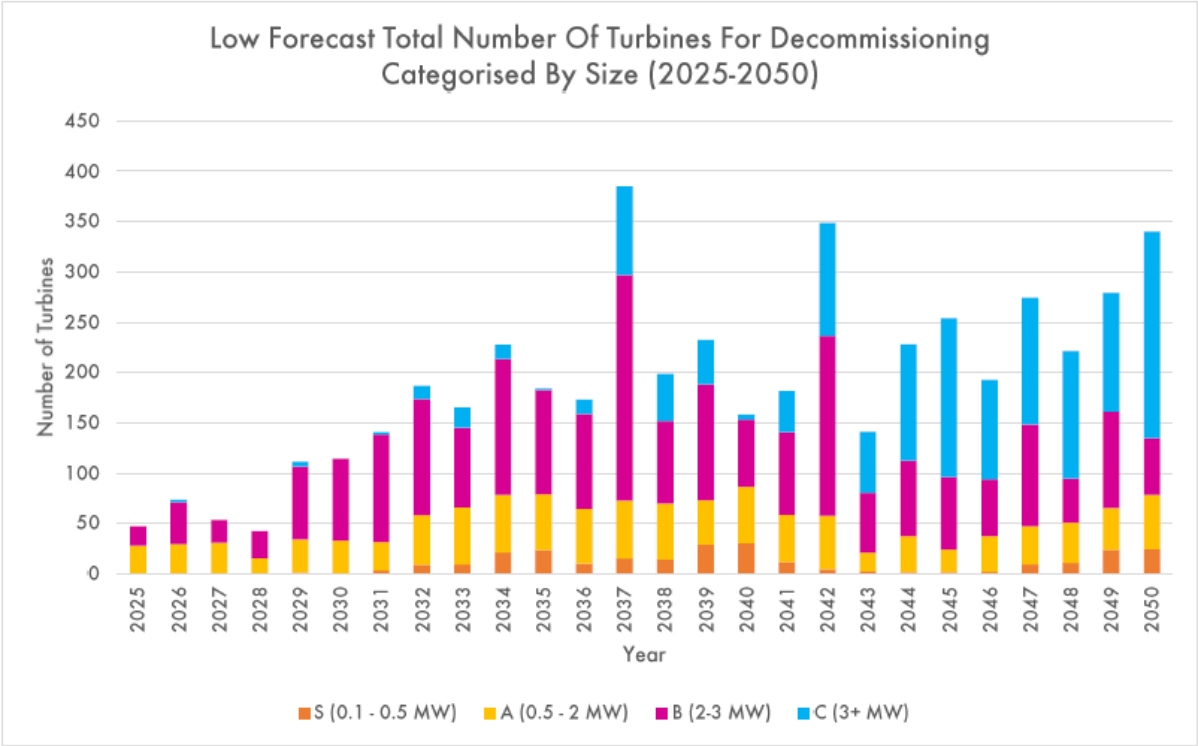


Figure 22: Decommissioned onshore wind turbine estimates by category for low decommissioning forecast (source: Zero Waste Scotland, 2025).

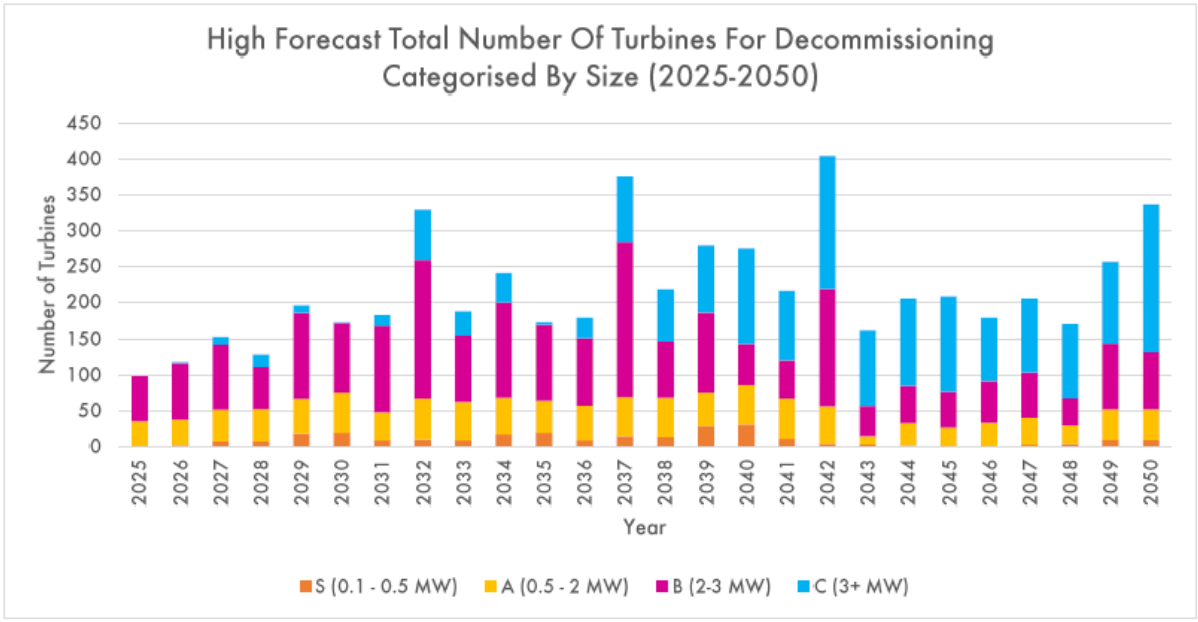


Figure 23: Decommissioned onshore wind turbine estimates by category for high decommissioning forecast (source: Zero Waste Scotland, 2025).

On average, concrete and aggregate used in the foundations make up 83% (by weight) of an onshore wind asset, followed by steel (14%), which is used as rebar in the bases, in the turbine tower and in components within the nacelle. Iron and steel are both major components in the gearbox. Copper is used in the generator and cabling, and rare earth elements such as neodymium and dysprosium are used in the generator. Blades are typically composed of lightweight composite materials including carbon fibre, fibreglass and aluminium. **Error! Reference source not found.**Table 3 sets out the total waste arisings of the highest volume materials from decommissioning for a low and high forecast; data are not available on rare earth elements which arise in smaller quantities but are of high value for reprocessing. Tonnages exclude bases which in most cases are unlikely to be removed as part of decommissioning due to the cost removal and low value of materials.

Table 3: Total weight of material forecast by 2050 (tonnes)

Forecast	Iron	Steel	Copper	Fibreglass	Resin	Silica	Total
Low forecast	120,533	959,877	20,241	53,083	79,625	13,560	**1.2 million**
High forecast	136,110	1,083,934	22,857	59,944	89,915	14,561	**1.4 million**

Reprocessing capacity

Life extension, refurbishment and reuse are the optimal treatment options for full turbines and components. Specialist refurbishment of wind turbine parts is available in Scotland, for example services provided by Renewable Parts located in Lochgilphead[85], but these activities are out of scope of this report. Whilst 85-90% of components are theoretically recyclable, approximately 60% of turbine blade waste including fibre reinforced plastic is currently landfilled, with the rest incinerated or recycled for lower value applications. There is existing infrastructure for some of the materials, such as steel and iron, but specialised reprocessing capacity is still under development for wind turbine blades made of fibre glass. Some blades are reused, including use as structural components in bridges, whilst other decommissioned blades have been put into storage until a solution can be found.

Any materials that are recycled or reused have predominantly been exported. However, a wider domestic market for refurbished wind components[86] is emerging as wind power generators seek to move away from the landfilling or incineration of turbine blades and parts (Zero Waste Scotland, 2023). ReBlade, based in Dumfries, is the UK's first dedicated wind turbine decommissioning service. The company has developed innovative processes and blade-handling protocols aimed at maximising

[85] Renewable Parts Ltd.
[86] SusWIND | National Composites Centre

circular outcomes for decommissioned blades. These efforts focus on repurposing blades into practical structures such as bus shelters and bike sheds.

Offshore wind: waste arisings

ORE Catapult (2022) estimate that by 2050 between 161 and 492 offshore turbines could be decommissioned in Scotland, generating approximately 1.5-2.4 million tonnes of materials, with steel being the largest contributor. This is likely to be an underestimate due to the rapid expansion of offshore installed capacity: by 2022 432 turbines were installed, with another 484 turbines having received authorised consent, each with a 25–30-year lifespan.

The first offshore turbines are expected to reach end of life in the 2030s, but decommissioning of offshore wind turbines at scale is not expected until the 2040s (see Figure 24). As an example, Robin Rigg[87] (58 turbines), Scotland's first offshore commercial wind farm began generation in 2010 and is estimated to reach end of life around 2035.

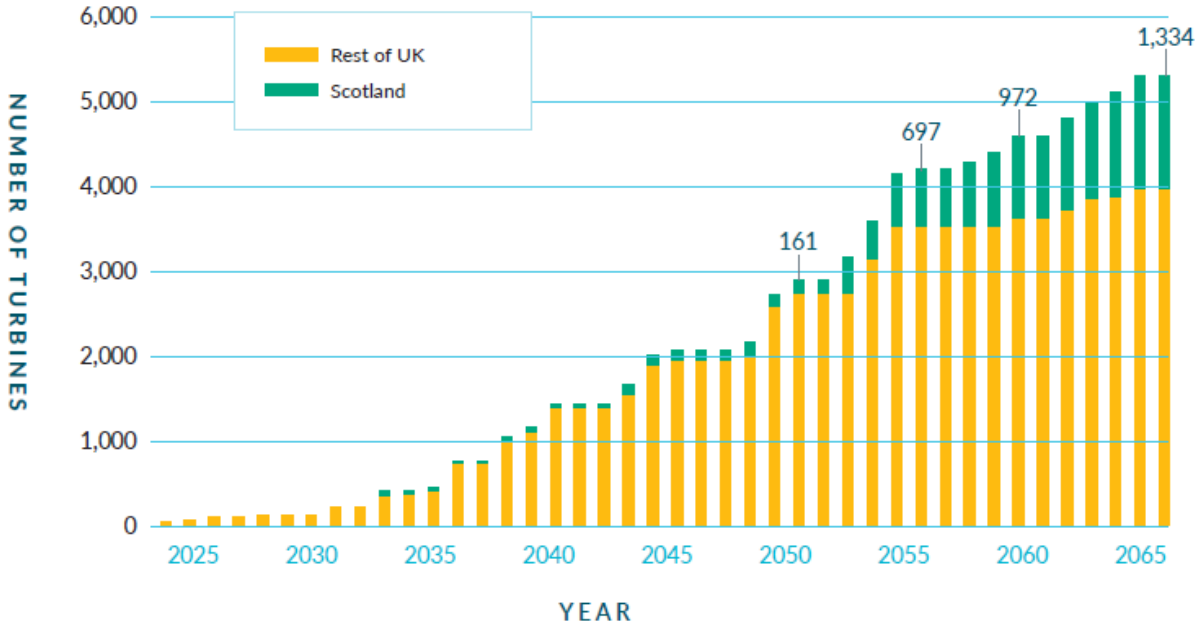


Figure 24: Decommissioning timeline of Scotland's offshore wind turbines (source: ORE Catapult, 2022).

A total of 26 million tonnes of material is expected to be generated as waste for consented installations, not including any future consents. Table 4 sets out estimates of material volumes for turbines installed prior to 2023 and the quantities of materials required for complete consented offshore turbines. Tonnages include foundations,

[87] Robin Rigg East and West offshore wind farm

although these may not be removed as part of decommissioning (ORE Catapult, 2022).

Table 4 – Estimated tonnages of materials currently installed and required up to 2050 for offshore wind turbines in Scotland.

Material	Total installed (kt)	Total required (kt)
Steel	1,040	14,630
Concrete	0	8,350
Synthetic mooring	0	115
Copper	7	70
Plastic-insulation	12	110
Lead	5	20
Optic fibre	0.6	3
Carbon fibre	7	140
Fibre glass	30	540
Ductile iron casting	80	1,540
Neodymium	5	90
Resin/adhesive	12	230
Total	**1,194.6**	**25,839**

Reprocessing capacity

Current expectations are that decommissioned offshore wind turbines may be sold as parts for recycling or exported for reuse, although this may not create and maximise the value chain that can benefit Scotland's socio-economic and environmental conditions (Zero Waste Scotland, 2023). There is an anticipated capacity gap between currently available reprocessing domestic infrastructure and expected demand. This may be addressed over the next decade as market conditions and material availability drive reprocessing opportunities, particularly if policies or market conditions support local demand for the use of reprocessed materials.

Solar panels: waste arisings

The UK produced an estimated 650 tonnes of solar photovoltaic (PV) waste in 2021 and is expected to generate 30 kt tonnes by 2030 and 1 Mt by 2050. Decommissioning at scale is not expected to begin until 2030s, as shown in Figure 25 (Zero Waste Scotland, 2023).

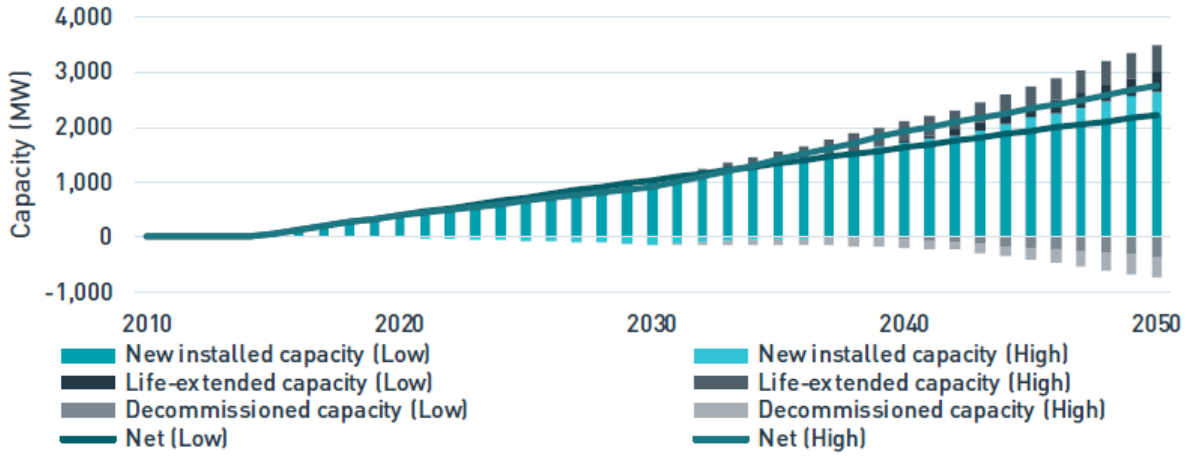


Figure 25: Solar capacity and decommissioning forecast to 2050. Forecast includes a high and low forecast new capacity, life extended capacity and decommissioned capacity (source: Zero Waste Scotland, 2023).

Utility solar frames are typically steel which account for approximately 42% of overall weight. Solar Photovoltaic (PV) cells (58% of total weight) consist of glass (75%), plastic (10%), aluminium (8%), silicon (5%) and other metals including gallium, germanium, selenium, tellurium, cadmium and indium (total ~1%). Inverters (<2% of total weight) are required to connect the panels into a solar array.

At end of life, silicon-based panels can be disassembled and reprocessed. 95% of glass can be reused, 85% of silicon can be reused and 80% of the modules can be reused for new panels once they have been stripped of their silicone. In total, 96% of materials can be recovered and reused. Solar panels are classified as waste electrical and electronic equipment (WEEE), so domestic reprocessing infrastructure is covered in Chapter 13. However, there is scope to better assess the opportunities for reprocessing of solar PV ahead of decommissioning at scale.

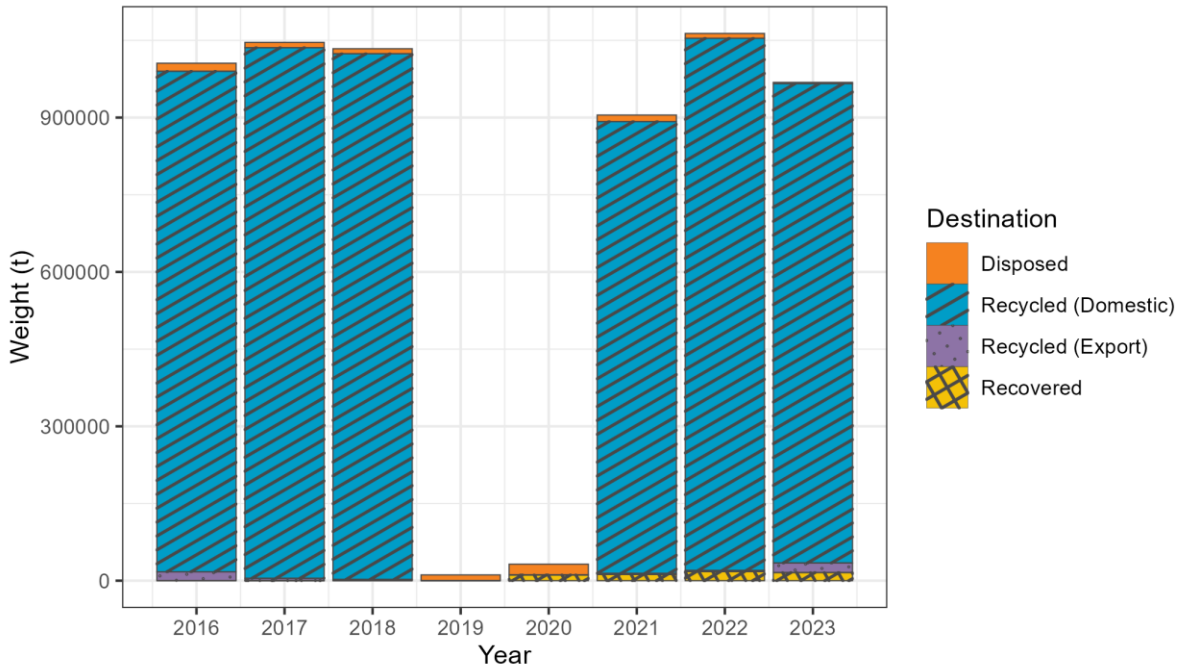
16. Organic waste

Organic waste arisings

Scotland produced an estimated 1,234 kt of organic waste in 2023[88], with an additional 456 kt available from household residual waste if sorted properly for recycling, totalling 1,690 kt. This excludes unsorted organics waste present in residual waste/'household and similar wastes' from Commercial & Industrial (C&I) and Construction & Demolition (C&D) which could significantly increase this tonnage.

Reprocessing capacity

931 kt of organics waste from Scotland was recycled in Scotland in 2023 and around 19 kt exported for recycling elsewhere (Figure 26). Some organic waste is managed on site without needing specialist reprocessing capacity or requiring further reporting. This is likely to contribute to a gap of 303 kt between overall waste generated figures, and end destination reported in site returns. A portion of reported organic waste may also be landfilled or incinerated, as technical and economic feasibility for reprocessing is dependent on material quality and suitability for different processes. The tonnage generated and recycled within Scotland has remained fairly constant between 2016 and 2023. The great majority of annual organics arisings are managed by domestic recycling.



[88] Assumed to be the sum of EWC-stat categories "Animal and mixed food waste" and "Vegetal waste"

Figure 26: Destination of organics waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber attack). Overall sorted amounts of this material have remained largely consistent over time. Almost all organic waste is reprocessed domestically.

In 2023, 339 licensed sites in Scotland handled organic wastes in Scotland. These include sites which specialise in organic waste and others which manage organic waste as part of a wider operation. 64 licensed sites reported the treatment of organic waste to SEPA in 2023 (Figure 27). A further 39 smaller scale composting and anaerobic digestion (AD) facilities operating under an 'exemption from licensing' reported treatment to SEPA in 2023. Treatment may include composting, anaerobic digestion or biodiesel manufacture. 20 composting sites in Scotland are certified to PAS100 standard for quality compost and 11 AD plants are certified to PAS110 standard.

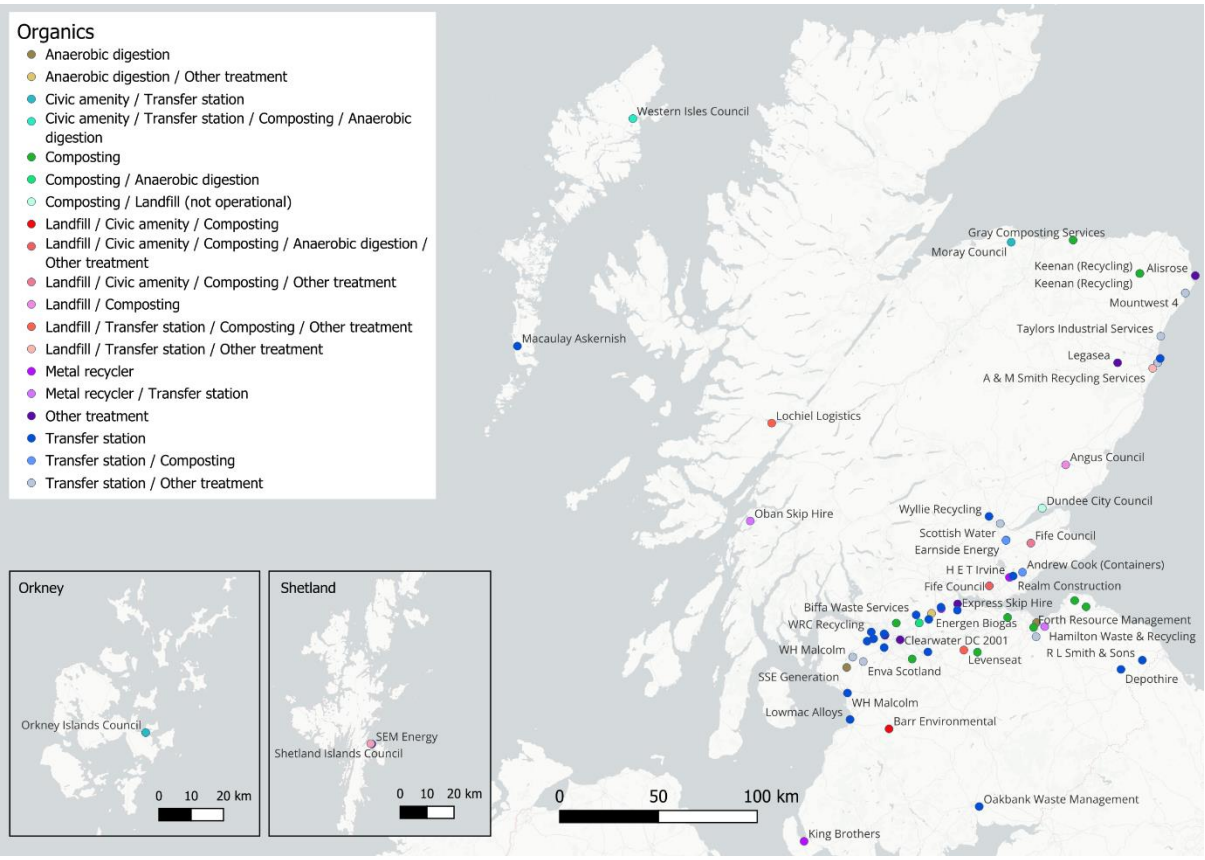


Figure 27: Sites reporting the treatment of organic waste to SEPA in 2023, by facility type.

Gap analysis

There may be a capacity gap for reprocessing of organics waste in Scotland. Only a small amount of organic waste is exported and the majority of reported organic material reprocessing takes place in Scotland. However, there is a gap between arisings and capacity of at least 303 kt. While this gap may be the result of managed on site without needing external reprocessing capacity, some may be landfilled or

incinerated due to low quality, economic viability of reprocessing, or lack of suitable capacity. It is also likely that additional capacity would be required if a greater proportion of the 456 kt of organic material contained in household residual waste streams was captured for recycling. Increasing the diversion of organic wastes from disposal, and particularly from landfill, is a priority for the Scottish Government due to the greenhouse gas emissions associated from decomposition, and underpins the forthcoming ban on the landfill of biodegradable municipal waste and other priority measures within Scotland's Circular Economy and Waste Routemap. Policies also seek to reduce the total amount of organic material becoming waste, particularly food waste.

17. Textiles

Textiles waste arisings

Scotland produced an estimated 131 kt of post-consumption textiles waste in 2023. Approximately 60 kt was disposed of through residual waste streams and were either incinerated (40 kt) or landfilled (20 kt)[89,90]. The remaining 71 kt was processed through recycling collections, or donated (e.g. to charity shops), or sold online (see Figure 28).

Overall, 58 kt moved from these various streams to textile traders and textile graders. From there, 46 kt were exported for reuse and 10 kt sent for recycling, including both domestic and export, with minimal amounts being sent to incineration or landfill.

The majority of textiles disposed of via textile collections are eventually reused, primarily abroad. Traders appear to use export rather than domestic reuse outlets, which suggests that the non-domestic reuse market may accept items of lesser quality or have different clothing requirements, or that the current domestic reuse market in Scotland is already at capacity.

Around one fifth of textiles accepted by traders are sent for recycling, though data are not available to assess the proportion processed and those exported.

[89] Unpublished data is based on estimates provided by Zero Waste Scotland, in their Textiles Flow into and within Scotland (to be published Autumn 2025).

[90] A comprehensive picture of textile waste is not available from SEPA WFAS data. Many organisations that reprocess textiles in Scotland do not hold waste management licences and do not report activities to SEPA.

The variety of routes for handling post-consumer textiles arising from Scotland results in an estimated 11% being reused in Scotland or the UK (predominantly Scotland), nearly half of these through charity shop sales. An estimated 35% of textiles is exported for reuse, and 8% sent for recycling – which may be in the UK or overseas, typically recycling into industrial rags or mattress fillings.

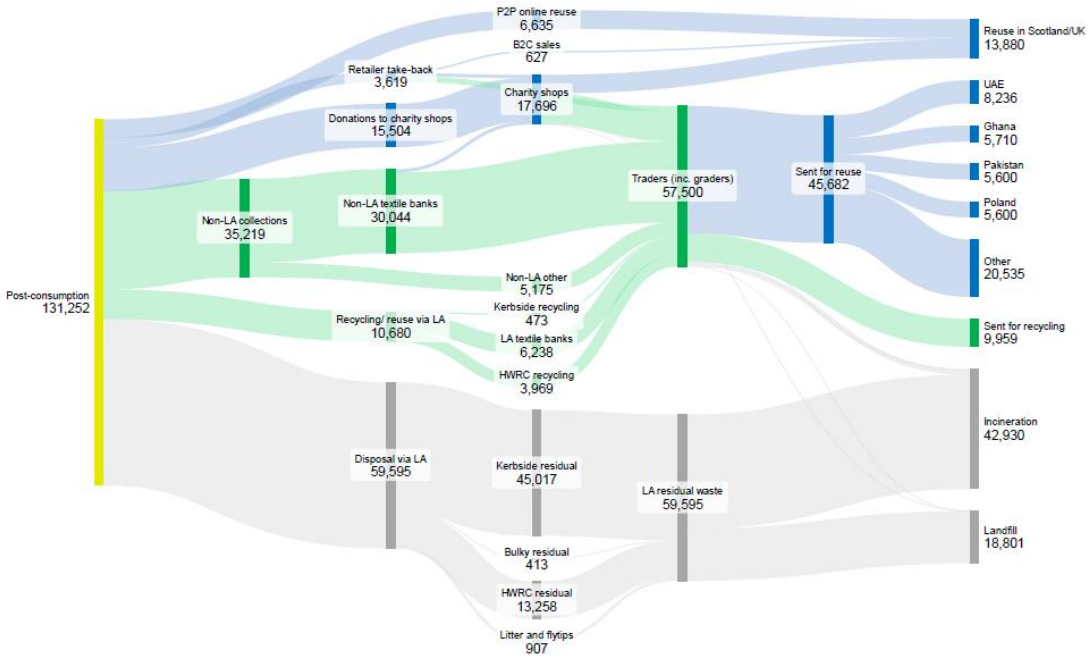


Figure 28: Flow of post-consumer textiles in and out of Scotland (tonnes estimate).

Reprocessing Capacity

Infrastructure capacity for textile waste must be considered jointly between those sites which clean, sort or treat material for further processing, and those which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product).

In addition to charity organisations which accept textiles donations for sorting and reselling, the key commercial sites trading and sorting textiles are Textile Recycling International (TRI) (formerly known as Nathan's Wastesavers Ltd), and Clyde Recycling, with the majority of their activity being driven by reuse markets abroad. Some sites do conduct recycling activities (see Figure 29), but these predominantly revolve around carpets and mattress fibres (Hamilton Waste & Recycling) and wiper production (overseen by Howard Wipers, a subsidiary of TRI). There is a notable absence of suitable chemical recycling infrastructure in Scotland, and consequently many manufacturers send waste textiles abroad for reprocessing.

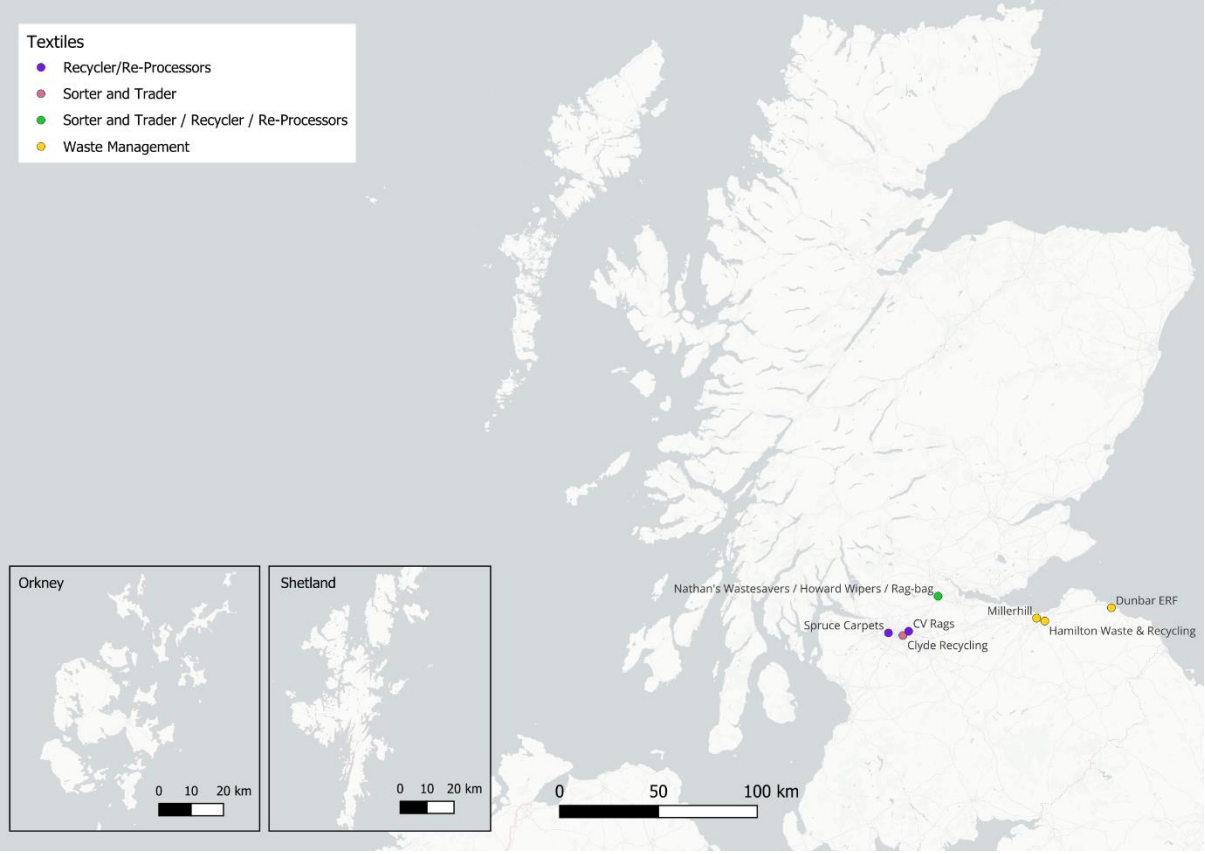


Figure 29: Sites known to handle textiles waste in Scotland in 2023, by facility type.

Gap analysis

Almost half of all post-consumption textiles generated in Scotland are disposed via residual waste streams, with textiles accounting for 32% of the carbon footprint of household waste[91]. While data limitations are set out above, we are not aware of any domestic textiles recycling infrastructure (e.g. fibre to fibre) in Scotland. Increasing the capture of textiles and textile wastes for reuse or recycling represents would likely significantly increase the supply material for reprocessing. However, it is not clear that there would be sufficient material arising in Scotland for domestic reprocessing to be viable, and a wider UK- or Europe-wide approach may be required, particularly in the absence of policies to drive up demand for reprocessed fibres, such a recycled content standards. This is an aim of new proposed circular economy polies in the EU, such as textile extended producer responsibility, and there are opportunities to consider such approaches in Scotland and the rest of the UK.

[91] The Carbon Footprint of Scotland's Household Waste, Zero Waste Scotland, 2023

18. Mattresses

Mattress waste arisings

Mattresses do not map onto the EWC system as relevant EWC codes used in site returns data are not exclusive related to mattress waste. Data on mattress waste arisings and reprocessing are therefore taken from the following reports:

- Mattress Recycling - Scottish Infrastructure Business Case Mattress Extended Producer Responsibility | Zero Waste Scotland
- How to reduce waste and carbon emissions caused by mattresses: A review of global Extended Producer Responsibility schemes (2020)
- NBF Recycling Reports - The National Bed Federation

Information is also used from monitoring of projects funded by the Scottish Government's Recycling Improvement Fund[92] (RIF), which is administered by Zero Waste Scotland.

Approximately 600,000 mattresses are disposed of in Scotland each year[93]. Of these, it is estimated that around 370,000 mattresses are collected at Household Waste Recycling Centres (HMRCs) and bulky collections, mainly from domestic sources. Some mattresses from domestic sources are also returned to retailers through take-back schemes.

Mattresses from non-domestic sources (e.g. hospitality, student accommodation, NHS, prisons) are disposed of through other routes and are generally considered to be of lesser quality for recycling (mixed textiles) and more likely to be contaminated.

Previous estimates indicate that less than 1 in 10 mattresses are sent for reuse or recycling in Scotland. The UK-wide rate for mattress recycling was estimated to be 24% in 2021[94]. Metals, polyester and flock contents can be recycled, while contaminated mixed fibres are typically sent for energy recovery.

Reprocessing capacity

There are two facilities in Scotland which accept mattresses for treatment: Hamilton Waste and Recycling Limited (active SEPA site permit) and Kingsize Mattress Recycling – Glasgow (simple exemption) (Figure 30).

[92] Recycling Improvement Fund (RIF) | Zero Waste Scotland
[93] NBF Recycling Reports - The National Bed Federation
[94] NBF Recycling Reports - The National Bed Federation

Due to the data limitations set out above, and particularly the lack of specific EWC codes for mattresses, it is not possible to determine what the current reprocessing tonnages are for these facilities through SEPA waste return data.

Figure 30: Sites accepting mattresses for treatment in Scotland.

Gap analysis

It is not possible to determine an accurate gap for mattress reprocessing in Scotland. While mattress recycling facilities exist in Scotland, significant quantities of mattresses are still disposed of through landfill and incineration. Further work is underway to explore mattress reuse and recycling opportunities as part of the forthcoming Product Stewardship Plan.

19. Tyres

Tyre waste arisings

Scotland produced an estimated 51 kt of tyre waste in 2023. However, SEPA WFAS only reports the processing destination for 13 kt of these arisings, of which almost all are incinerated for energy recovery. The majority of tyre waste in Scotland (26 kt) is recorded as “physical treatment” activity at transfer stations, meaning that the end destination for this material is not known based on the data. Waste tyres were banned from being landfilled in Scotland in 2004, by the EU Landfill Directive (1999/31/EU). There has been significant variation in the amount of tyres disposed of annually since 2016 (Figure 31).

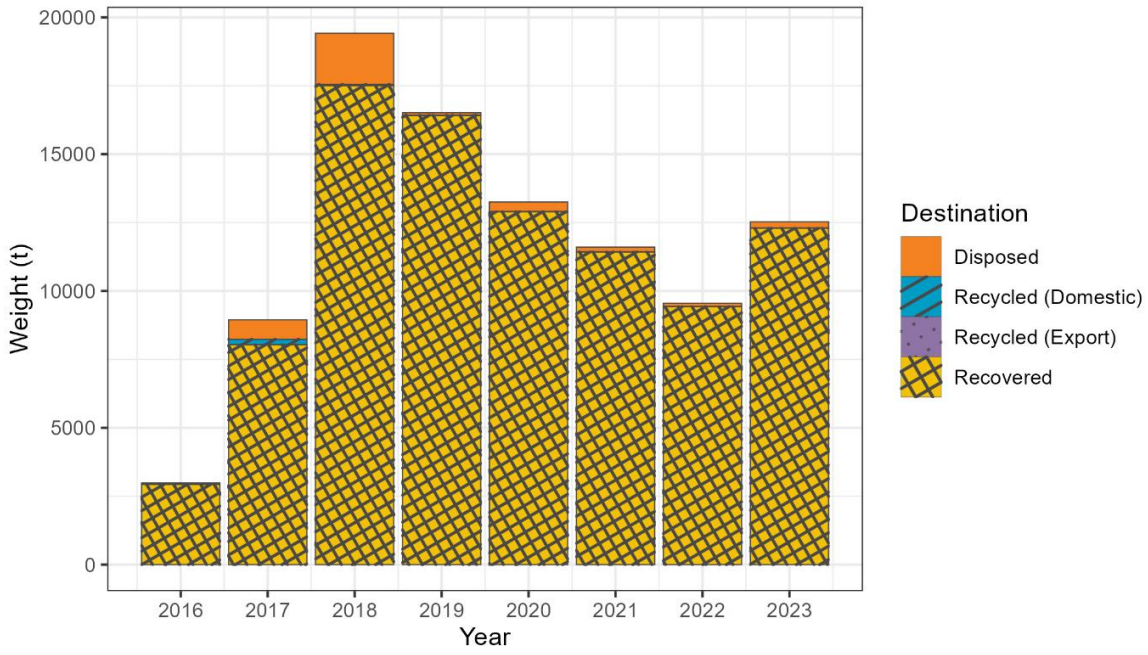


Figure 31: Destination of tyres waste available for reprocessing in Scotland, for which data are available (source: SEPA WFAS). The amount of tyre waste has slightly fallen since a peak in 2018. Almost all material is subject to domestic energy recovery in Scotland.

Reprocessing capacity

Infrastructure capacity for tyres includes both sites which sort material for further processing, and sites which offer final reprocessing (that is, recycling of material such that it no longer constitutes a waste product). It is not possible to ascertain specific treatment activities undertaken by each facility from SEPA Waste Sites and Capacity Tool data.

A total of 210 licensed sites handled tyre waste in Scotland in 2023, with 24 sites reporting the treatment of tyre waste[95] (Figure 32). Approximately one quarter of Scotland's waste tyres are currently used as a feedstock for energy or cement production. There are limited reprocessing facilities within Scotland for waste tyres[96], with the majority undergoing simple treatment such as baling, shredding or granulation ahead of export to England or overseas. Treatment may include shredding and baling for use in the production of recycled rubber products and material suitable for energy recovery or in cement manufacture.

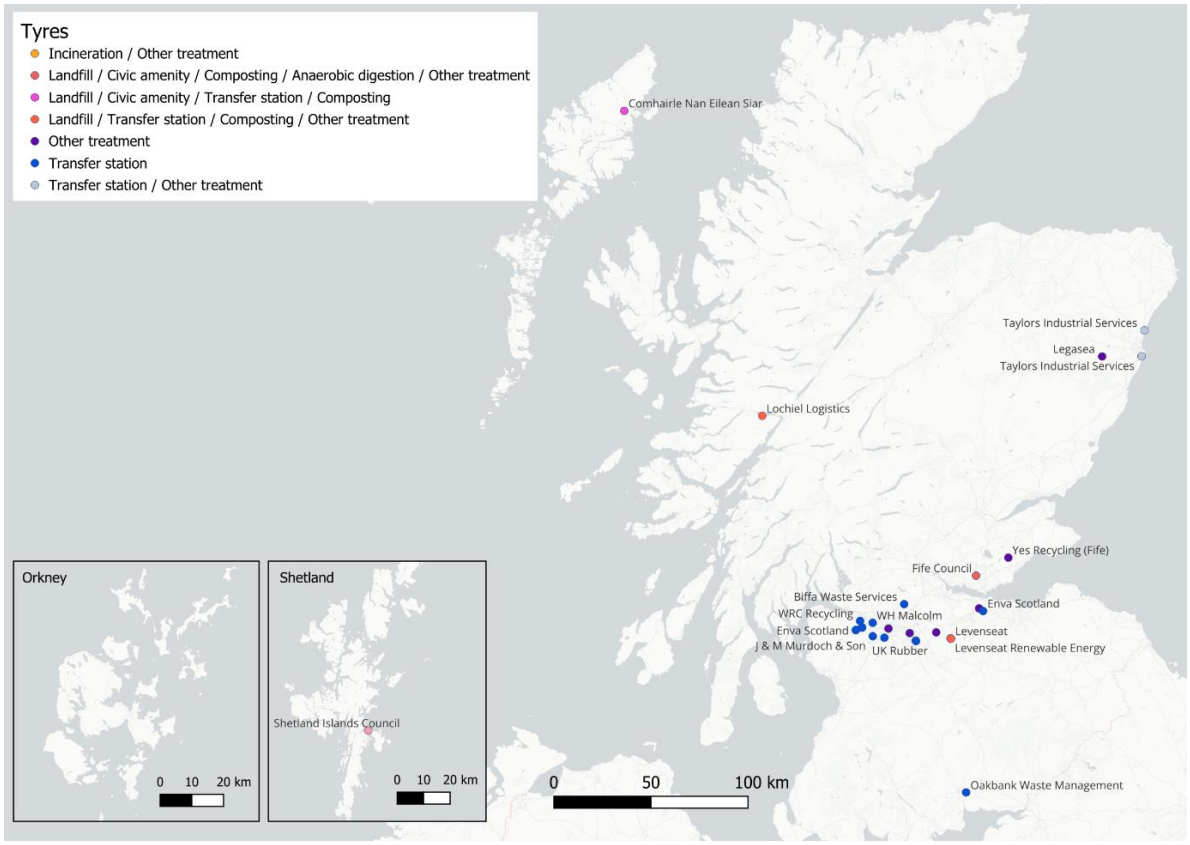


Figure 32: Sites reporting the treatment of tyre waste to SEPA in 2023, by facility type.

Gap analysis

There appears to be sufficient sorting and transfer capacity for tyres in Scotland, but the majority of waste tyres are subject to energy recovery rather than recycled.

The volume of tyres placed on the market and volume of end-of-life tyres is expected to continue growing modestly through to 2030. This projection is primarily based on a forecast increase in vehicle kilometres travelled across both passenger and commercial vehicle categories. The heavier weight of electric vehicles and their higher torque may also contribute to faster tyre wear, which could result in increased

[95] See list in Appendix 4

[96] Tyre sector plan | Scottish Environment Protection Agency (SEPA)

tyre replacement. The continuing long-term decline in truck tyre retreading in the absence of policy intervention may also increase end-of-life tyre volumes in this segment, as fewer casings are reused.

20. Construction materials (Concrete)

Concrete waste arisings

Concrete arisings are contained within the EWC-stat category “Minerals from construction and demolition”. This is not a precise match, as the category also contains other materials such as bricks, bitumen, and plasterboard. According to SEPA WFAS data, 1,405 kt of waste was separately collected in Scotland within this category in 2023. A specific breakdown of the composition of this waste category is not available.

Based on EWC codes alone, concrete waste arisings in Scotland are at least 73 kt, but this is expected to be significantly higher depending on the composition of materials processed at sites which are exempt from completing returns.

Reprocessing capacity

A total of 977 kt of mineral construction waste from Scotland was recycled in Scotland in 2023 and none exported for recycling elsewhere. This level has been fairly constant over the preceding years. A large majority of this material (nearly 97% in 2023) is recycled within Scotland (Figure 33), with the remainder disposed of within Scotland.

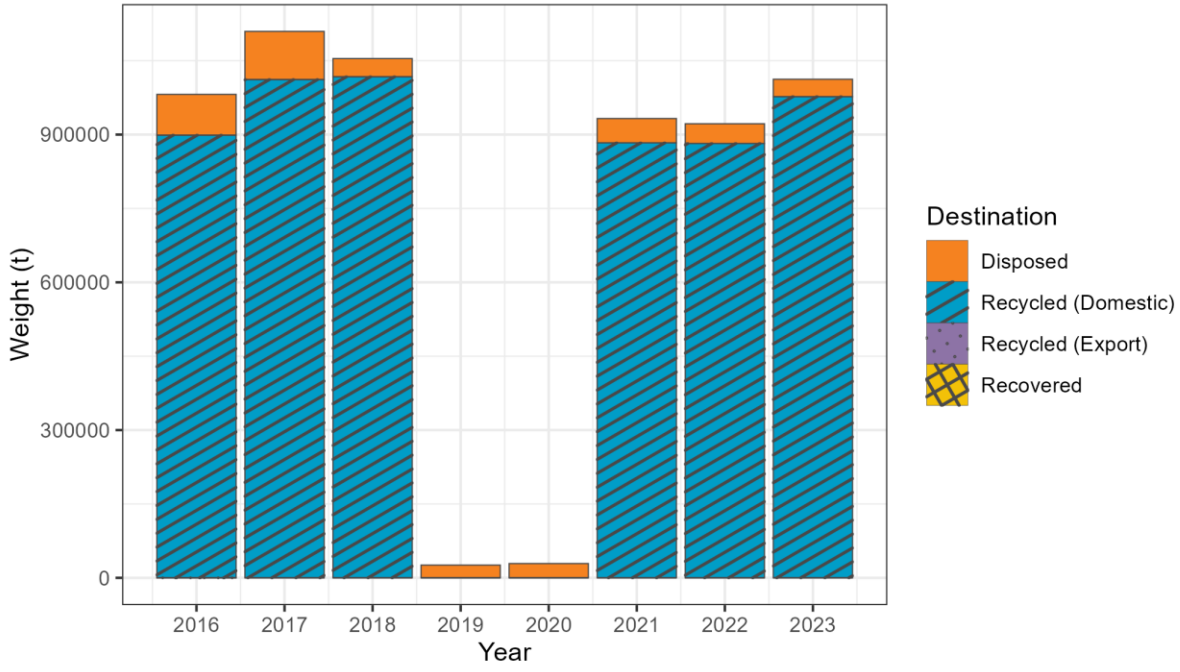


Figure 33: Destination of concrete waste available for reprocessing in Scotland (source: SEPA WFAS; no recycling data for 2019/2020 due to cyber-attack). The

amount of material has remaining relatively consistent over time, with the majority reprocessed in Scotland.

In 2023, 60 licensed sites handled waste concrete and mixtures including concrete in Scotland. 19 sites reported the treatment of concrete waste in 2023[97] (Figure 34). Treatment may include crushing and screening to produce recycled aggregate.

It should be noted that the above reprocessing tonnages do not include concrete collected mixed with other waste streams, which will be a significant contribution to overall tonnage.

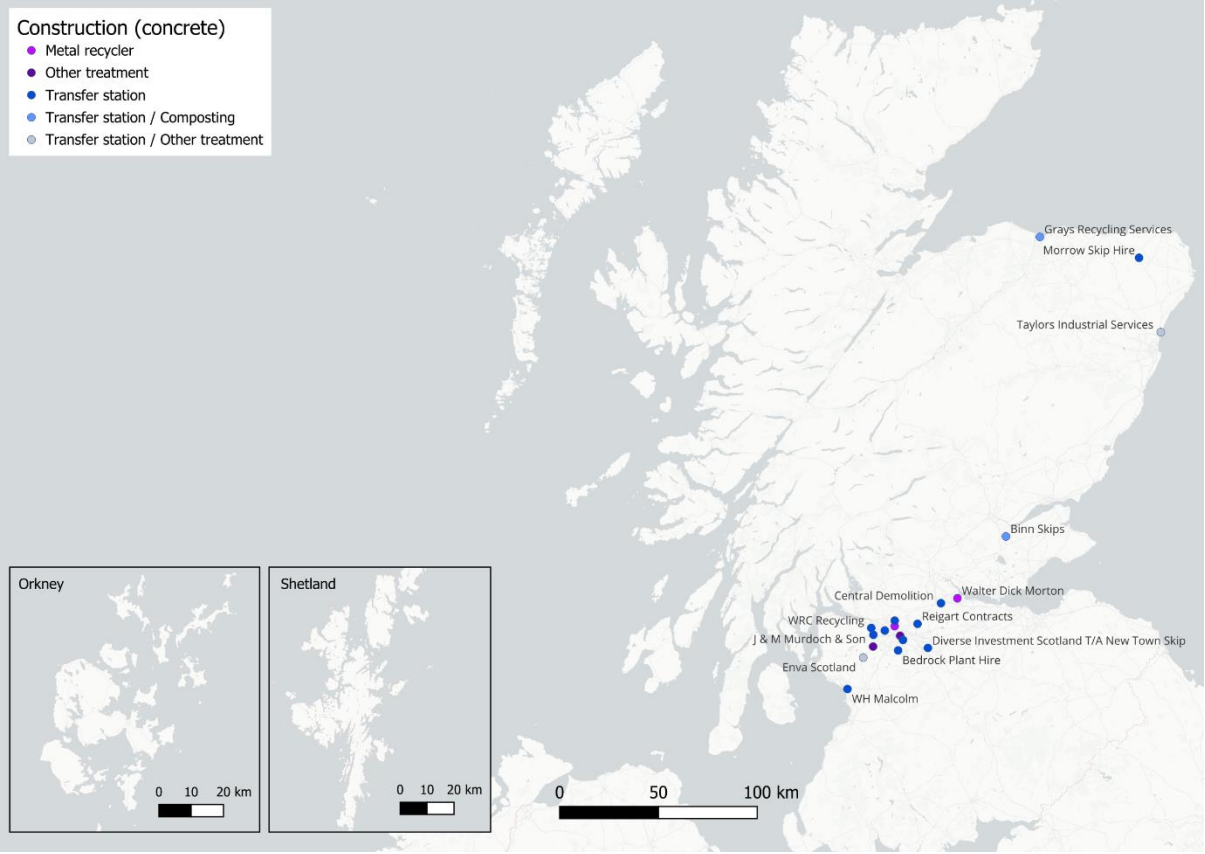


Figure 34: Sites reporting the treatment of concrete waste in 2023, by facility type.

Gap analysis

The majority of concrete waste generated in Scotland is currently recycled domestically. It appears that almost no mineral waste or concrete waste arising from construction and demolition is currently exported. Around 3% of overall mineral wastes are sent to landfill, suggesting that there is sufficient capacity to process and recycle these wastes domestically.

[97] See list in Appendix 4

21. Mixed Packaging Materials – (Material Recovery Facilities)

Material Recovery Facilities (MRFs) typically provide the first step of reprocessing for packaging materials by sorting mixed materials into single material streams, such as mixed recycling and mixed paper & card into their component parts (plastics, steel, aluminium, paper, card, glass and cartons). Some of them also refine material streams further, such as sorting mixed plastics into films, bottles and pots, tubs & trays, or specific plastic types.

The MRF tonnage for mixed recycling is not fully accounted for using the materials specific EWC codes specified in Appendix 1. Not considering the tonnage of mixed recycling sent to MRFs could therefore underestimate reprocessing capacity in Scotland, and the capacity available for specific materials. Where possible estimates of the material handled by MRFs are included in the above chapters.

MRFs in scope of the 2025 Code of Practice on sampling and reporting at materials facilities (and prior to 2025, those in scope of the previous Materials Recovery Code) are required to report on materials received at the MRFs through the SEPA Recyclate Quality Tool. MRFs are likely to be in scope if they receive 1,000 tonnes or more of dry recyclable waste per year, and separate it into a dry waste stream or streams.. Whilst this source excludes some of the smaller MRFs, it is considered to capture the majority of MRFs in Scotland.

MRF Locations

According SEPA Recyclate Quality Tool, there were 11 MRFs in 2023 treating 289 kt [98] of dry mixed recycling (DMR) (Figure 35).

- WML/E/0020002 BIFFA (Broxburn)
- WML/W/0000026 BIFFA (Glasgow)
- PPC/E/0020083 Cireco, Lochhead
- WML/W/0020110 Enva, Linwood
- WML/E/0020112 Falkirk Council
- WML/W/0020181 Glasgow City Council
- WML/W/0022002 J&M Murdoch Ltd
- PPC/E/0020001 Levenseat Ltd
- WML/W/0220257 Saica Natur (UK) Ltd
- WML/L/1117120 Sibelco Newhouse
- WML/L/5005403 Smurfit Kappa

[98] For comparison, in 2024 there were 12 operators reporting through the tool treating 332,120 tonnes of dry mixed recycling, with Wyllie Recycling in Perth reporting for the first time.

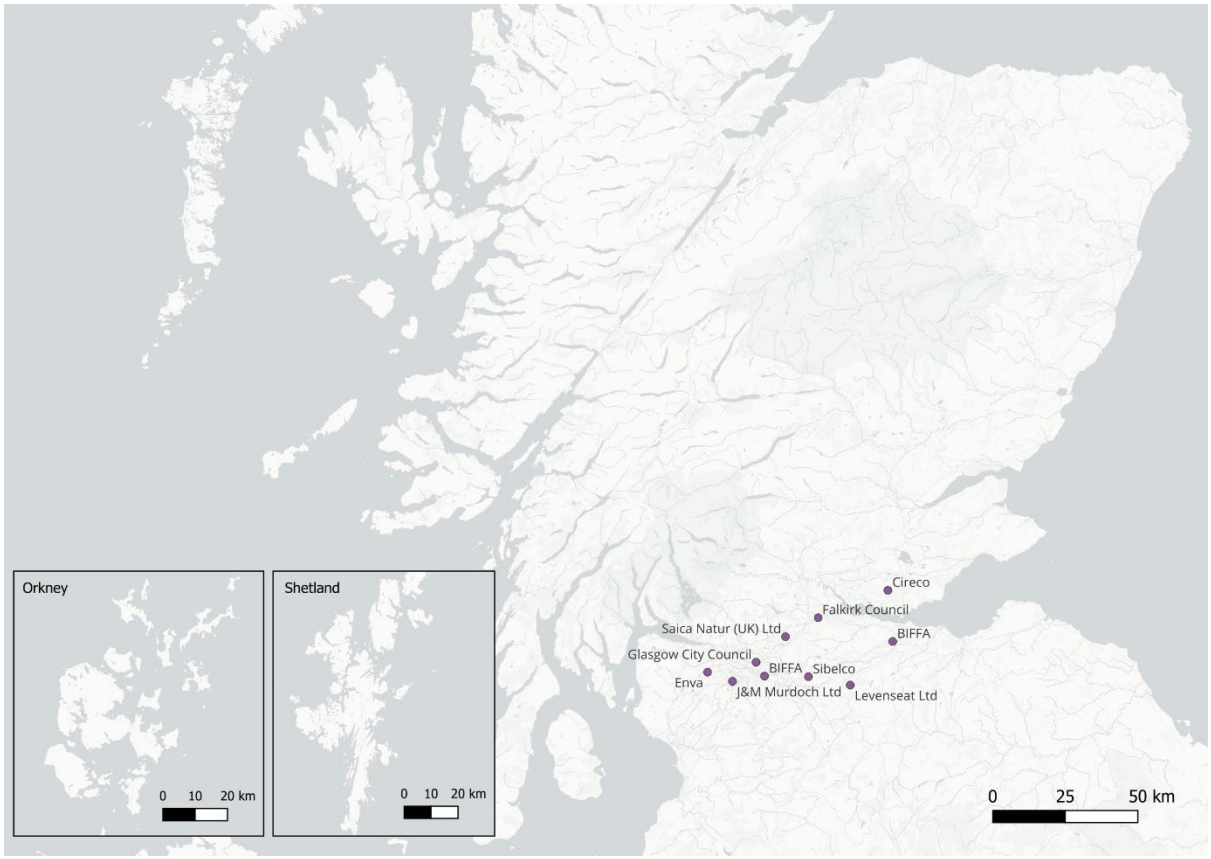


Figure 35: Location of material recovery facilities in Scotland in 2023, based on the SEPA Recyclate Quality Tool.

Some of the MRF tonnage is included in the EWC codes used for materials specific reprocessing tonnages elsewhere in the report and hence the MRF tonnage is not additional reprocessing capacity in its entirety.

SEPA Waste Sites and Capacity Data Tool shows that the 11 sites also received 171 kt[99] of 'Mixed packaging' (15 01 06) in 2022. Whilst this is likely to be included in the MRF tonnage above, this is excluded from the EWC codes used for material specific reprocessing tonnages. Therefore, it is estimated that there are an additional 171 kt tonnes per annum of MRF sorting capacity in Scotland, in addition to the material specific reprocessing capacity identified elsewhere in this report.

MRF Outputs

MRF outputs from the 11 MRFs reporting in 2023 were 146 kt, excluding glass processed as a product at Sibelco Green Solutions Plant as this is already accounted for in Chapter 10 (Glass). Table 5 shows the type and quantity of outputs generated by the MRFs.

[99] Including 2,008 tonnes of material from England

Table 5: – Scottish Material Recovery Facility outputs in 2023, by material category and grade (excludes glass processed as a product at Sibelco Green Solutions Plant).

Material Category	Material Grade	Total Quantity (tonnes	% of Total Quantity
Glass	Mixed	40,206	28%
Metal	Aluminium	5,376	4%
Metal	Mixed	245	<1%
Metal	Scrap	383	<1%
Metal	Steel	7,044	5%
Paper	Cardboard	33,912	23%
Paper	Mixed	30,541	21%
Paper	Newspapers and Magazines	2,108	1%
Plastic	Hard	12	<1%
Plastic	HDPE Bottles Clear	801	1%
Plastic	HDPE Bottles Coloured	115	<1%
Plastic	LDPE Film Clear	716	<1%
Plastic	Mixed	14,976	10%
Plastic	Mixed Bottles	8,585	6%
Plastic	Mixed Rigid	36	<1%
Plastic	PET Bottles Clear	112	<1%
Plastic	Polypropylene (PP)	16	<1%
Plastic	Pots, Tubs and Trays (PTT)	636	<1%
Total		**145,817**	**100%**

Appendix 1 – Methodology

Introduction

The primary data sources for this work are the SEPA Waste from All Sources (WFAS) database[100] and the SEPA Waste Sites and Capacity Tool[101].

SEPA Waste Sites and Capacity Tool offer the finest level of granularity for assessing specific materials, but they require careful processing to deal with double counting that could arise from the inclusion of waste which is transferred between sites, as well as due to potential errors in the way data has been recorded by individual sites.

High-level statistics derived from SEPA WFAS are already processed by SEPA in order to limit double counting of waste, and in many of the specific material cases the classifications used there could be applied directly.

Materials

The specific materials investigated in this work are:

- Plastic
- Aluminium
- Steel
- Paper and Card
- Glass
- Wood
- Fibre-based composites
- Electronic waste
- Batteries
- Renewable energy installations
- Organic waste
- Textiles
- Mattresses
- Construction materials (concrete)
- Tyres

The materials identified are those which arise in the greatest quantities within Scotland (excluding soils) and where the greatest amount of data and information on their associated reprocessing landscapes is available.

[100] Waste All Sources - SEPA
[101] Waste Site Capacity - SEPA

Waste arisings

Data on waste arisings were sourced from the SEPA Waste from all Sources (WFAS) dataset. SEPA WFAS provides data for 33 waste categories, matching the European Waste Classification Statistic (EWC-Stat) waste types. A direct or close match between materials and EWC-stat category was found in a majority of cases (10 materials; see Table A1). WFAS data was used to establish a tonnage of each material collected separately ('generated'), as well as arisings through other treatment of mixed materials.

As some materials are also contained within residual waste, Zero Waste Scotland Household Waste Composition Analysis Report[102] was used to provide an estimated tonnage of each material within residual waste from households where relevant which could be available for processing if separated properly for recycling. Due to lack of relevant waste composition data for residual waste from Commercial & Industrial (C&I) and Construction & Demolition (C&D) sectors, it was not possible to estimate the potential tonnage of priority materials in residual waste from these sources.

Fibre-based composites (drink cartons), mattresses, construction materials (concrete) and renewable energy installations do not align with EWC-Stat categories. For textile waste, whilst an EWC-Stat category exists, the information provided by the SEPA WFAS data against this category is incomplete and was therefore not used.

In order to determine waste arisings for fibre-based composites and construction materials, site returns data was used, based on matching of EWC codes and elimination of sites which did not carry out recycling/reprocessing (see below). The EWC code mapping for each of these materials is given in Table A1.

For mattresses, renewable energy installations and textiles, EWC codes cover multiple waste types and are not exclusive to these particular materials, and are therefore not best suited for determining arisings. In these cases, other published sources have been used to establish waste arisings as referenced in the relevant sections of the report.

[102] Household Waste Composition Analysis | Zero Waste Scotland

Table A1: Summary of EWC-stat, EWC codes and Other streams categories used to calculate arisings and capacity estimates for materials considered in this report. Starred (*) items indicate that caveats apply to the use of the stated method of calculation of arisings; these are detailed in the notes column. Starred (*) EWC codes indicate that the waste is considered hazardous.

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
Plastic	Plastic	Household and similar wastes	Dense Plastic, Plastic films and flexibles	02 01 04; 07 02 13; 12 01 05; 15 01 02;16 01 19; 17 02 03; 17 02 04*; 19 12 04; 20 01 39	Agricultural and Food Production: Waste plastics (except packaging); Organic Chemical Processes: Waste plastic; Shaping/Treatment Of Metals And Plastics: Plastics shavings and turnings; Packaging, Cloths, Filter Materials: Plastic packaging; Not Otherwise Specified: Plastic; C&D Waste and Asbestos: Plastic; C&D Waste and Asbestos: Glass, plastic and wood containing or contaminated with hazardous substances; Waste/Water Treatment and Water Industry: Plastic and rubber; Municipal And Similar Commercial Wastes: Plastics	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis[103]
Alu-minium	Metallic wastes, non-ferrous; Metallic wastes, mixed ferrous and non-ferrous	Household and similar wastes	Aluminium drink cans; Aluminium packaging	02 01 10; 12 01 03; 12 01 04; 15 01 04; 16 01 18; 17 04 02; 19 10 02;	Agricultural and Food Production: Waste metal; Shaping/Treatment of Metals and Plastics: Non-ferrous metal filings and turnings; Shaping/ Treatment of Metals	Other streams breakdown based on Zero Waste Scotland HH waste

[103] Household Waste Composition Analysis | Zero Waste Scotland

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
				19 12 03; 20 01 40	and Plastics: Non-ferrous metal dust and particles; Packaging, Cloths, Filter Materials: Metallic packaging; Not Otherwise Specified: Non-ferrous metal; C&D Waste and Asbestos: Aluminium; Waste/Water Treatment and Water Industry: Non-ferrous waste; Waste/Water Treatment and Water Industry: Non-ferrous metal; Municipal and Similar Commercial Wastes: Metals	composition analysis.
Steel	Metallic wastes, ferrous; Metallic wastes, mixed ferrous and non-ferrous	Household and similar wastes	Steel drink cans; Other ferrous packaging	02 01 10; 12 01 01; 12 01 02; 15 01 04; 16 01 17; 17 04 05; 17 04 09*; 19 01 02; 19 10 01; 19 12 02; 20 01 40	Agricultural And Food Production: waste metal; Shaping/Treatment Of Metals And Plastics: ferrous metal filings and turnings; Shaping/Treatment Of Metals And Plastics: ferrous metal dust and particles; Packaging, Cloths, Filter Materials: metallic packaging; Not Otherwise Specified: ferrous metal; C&D Waste And Asbestos: iron and steel; C&D Waste And Asbestos: metal waste contaminated with hazardous substances: Waste/Water Treatment And Water Industry: ferrous materials	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis.

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
					removed from bottom ash; Waste/Water Treatment And Water Industry: iron and steel waste; Waste/Water Treatment And Water Industry: ferrous metal; Municipal And Similar Commercial Wastes: metals	
Paper and Card	Paper and Card	Household and similar wastes	Newspaper, magazines and directories; Other recyclable paper; Recyclable paper packaging; Non-recyclable paper; Thin (Grey) Card Packaging; Thick (Brown) corrugated cardboard packaging; Cartons and other card/plastic laminate packaging; Other card; Heavily contaminated card & other composite card	15 01 01; 19 12 01; 20 01 01	Packaging, Cloths, Filter Materials: paper and cardboard packaging; Waste/Water Treatment And Water Industry: paper and cardboard; Municipal And Similar Commercial Wastes: paper and cardboard	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis
Glass	Glass wastes	Household and similar wastes	Drinks bottles; Other glass packaging; Non-packaging glass	10 11 03; 10 11 11*; 10 11 12; 15 01 07; 16 01 20; 17 02 02; 17 02 04*;	Thermal Process Waste (Inorganic): waste glass-based fibrous materials; Thermal Process Waste (Inorganic): waste glass in small particles and glass	Other streams breakdown based on Zero Waste Scotland HH waste

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
				19 12 05; 20 01 02	powder containing heavy metals (for example from cathode ray tubes); Thermal Process Waste (Inorganic): waste glass other than those mentioned in 10 11 11; Packaging, Cloths, Filter Materials: glass packaging; Not Otherwise Specified: glass; C&D Waste And Asbestos: glass; C&D Waste And Asbestos: glass, plastic and wood containing or contaminated with hazardous substances; Waste/Water Treatment And Water Industry: glass; Municipal And Similar Commercial Wastes: glass	composition analysis
Wood	Wood wastes	Household and similar wastes	Wooden packaging; Non-packaging wood	02 01 03; 02 01 07; 03 01 04*; 03 01 05; 03 03 01; 15 01 03; 15 01 10*; 17 02 01; 17 02 04*; 19 12 06*; 19 12 07; 20 01 37*; 20 01 38	Agricultural And Food Production: plant-tissue waste; Agricultural And Food Production: wastes from forestry; Wood And Paper Production: waste bark and cork; Wood And Paper Production: sawdust, shavings, cuttings, wood, particle board and veneer containing hazardous substances; Wood And Paper Production: sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis.

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
					04; Wood And Paper Production: waste bark and wood; Packaging, Cloths, Filter Materials: wooden packaging; Packaging, Cloths, Filter Materials: packaging containing residues of or contaminated by hazardous substances; C&D Waste And Asbestos: wood; C&D Waste And Asbestos: glass, plastic and wood containing or contaminated with hazardous substances; Waste/Water Treatment And Water Industry: wood containing hazardous substances; Waste/Water Treatment And Water Industry: wood other than that mentioned in 19 12 06; Municipal And Similar Commercial Wastes: wood containing hazardous substances; Municipal And Similar Commercial Wastes: wood other than that mentioned in 20 01 37; Municipal And Similar Commercial Wastes: biodegradable waste	
Fibre-based comp-osites	Composite packaging	Household and similar wastes	Cartons and other card/plastic laminate packaging	15 01 05	Packaging, Cloths, Filter Materials: composite packaging	Other streams breakdown based on Zero Waste

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
						Scotland HH waste composition analysis. Due to the small tonnage of the relevant EWC code coupled with the limitations in the public data available from SEPA on waste infrastructure capacity we are unable to provide a confident capacity figure exclusive to fibre-based composites waste.
Elec-tronic Waste	Discarded equipment (excluding discarded vehicles)	Household and similar wastes		16 02 09* 16 02 13* 16 02 14 16 02 15* 16 02 16 20 01 35* 20 01 36	Not Otherwise Specified: transformers and capacitors containing PCBs; Not Otherwise Specified: discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12; Not Otherwise Specified: discarded equipment other than those mentioned in 16 02 09 to 16 02 13; Not Otherwise Specified: hazardous components removed from discarded equipment; Not	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
					Otherwise Specified: components removed from discarded equipment other than those mentioned in 16 02 15; Municipal And Similar Commercial Wastes: discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components; Municipal And Similar Commercial Wastes: discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	
Batteries	Batteries and accumulators wastes	Household and similar wastes	Batteries	16 06 01*; 16 06 02*; 16 06 03*; 16 06 04; 16 06 05; 16 06 06*; 20 01 33*; 20 01 34	Not Otherwise Specified: lead batteries; Not Otherwise Specified: Ni-Cd batteries; Not Otherwise Specified: mercury-containing batteries; Not Otherwise Specified: alkaline batteries (except 16 06 03); Not Otherwise Specified: other batteries and accumulators; Not Otherwise Specified: separately collected electrolyte from batteries and accumulators; Municipal And Similar Commercial Wastes: batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
					batteries and accumulators containing these batteries; Municipal And Similar Commercial Wastes: batteries and accumulators other than those mentioned in 20 01 33	
Organic waste	Animal and mixed food waste; Vegetal wastes	Household and similar wastes	Mowing, cutting and pruning garden waste; Food (avoidable) - in packaging; Drinks (avoidable) - in packaging; Food and drink (avoidable) – loose; Inedible parts of food; Cooking oil	02 01 01; 02 01 02; 02 02 01; 02 02 02; 02 02 03; 02 02 04; 02 03 01; 02 03 04; 02 05 01; 02 06 01; 02 07 01; 02 07 04; 20 01 08; 20 02 01; 20 02 02	Agricultural And Food Production: sludges from washing and cleaning; Agricultural And Food Production: animal-tissue waste; Agricultural And Food Production: sludges from washing and cleaning; Agricultural And Food Production: animal-tissue waste; Agricultural And Food Production: materials unsuitable for consumption or processing; Agricultural And Food Production: sludges from on-site effluent treatment; Agricultural And Food Production: sludges from washing, cleaning, peeling, centrifuging and separation; Agricultural And Food Production: materials unsuitable for consumption or processing; Agricultural And Food Production: materials unsuitable for consumption or processing; Agricultural And	Other streams breakdown based on Zero Waste Scotland HH waste composition analysis

Material	EWC-stat categories	Other streams	Other streams type	EWC codes	EWC Description	Notes
					Food Production: materials unsuitable for consumption or processing; Agricultural And Food Production: wastes from washing, cleaning and mechanical reduction of raw materials; Agricultural And Food Production: materials unsuitable for consumption or processing; Municipal And Similar Commercial Wastes: biodegradable kitchen and canteen waste; Municipal And Similar Commercial Wastes: biodegradable waste; Municipal And Similar Commercial Wastes: soil and stones	
Tyres	Rubber wastes			16 01 03; 19 12 04	Not Otherwise Specified: end-of-life tyres; Waste/Water Treatment And Water Industry: plastic and rubber	EWC-stat "Rubber wastes"
Const-ruction materials (concrete)	Mineral waste from construction and demolition			10 13 14;17 01 01; 17 01 06*	Thermal Process Waste (Inorganic): waste concrete and concrete sludge; C&D Waste And Asbestos: concrete; C&D Waste And Asbestos: mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances	Material contained within 'mineral waste from construction and demolition' category. EWC codes included are not exclusively concrete waste.

Reprocessing capacity

For the 10 materials with a matching EWC-Stat waste type, SEPA WFAS data shows the destination of the waste: disposed, recovered, recycled (domestic) and recycled (export). For these materials, trends in arisings and destinations were investigated for the period from 2016 to 2023 (no data for 2019/2020 due to cyber-attack on SEPA), providing insights into the proportion of waste remaining in Scotland to be reprocessed.

To provide an overview of recycling and reprocessing infrastructure in Scotland, information on current infrastructure was sourced from the SEPA Waste Sites and Capacity Tool. This tool is updated annually, and provides data on facility types, geographical location, permitted capacities, waste types, tonnages, and methods of treatment for licensed sites required to submit data returns to SEPA.

For most all materials, with the exception of mattresses, renewable energy installations and textiles, site returns data was analysed to identify inputs of the specific EWC codes matching the material (see Table A1). Data contained in Table B (inputs – licenced sites) and Table D (outputs) was used to determine the number of sites handling each material (including transfers and storage). SEPA National Waste Team provided additional commentary and insight into the nature of operations by these sites.

The following data filtering process was then used to identify the number of sites which reported to SEPA that they had treated the material of interest on-site in 2023:

SEPA Site Returns -> Licenced Site Returns -> Table C (treated) -> Material EWC codes

SEPA provides the following definitions for methods by which this waste is managed:

- Management method: BT (Biological treatment), Correct use in Table C: All wastes undergoing biological treatment on-site, e.g. anaerobic digestion, bio-treatment of sludges.
- Management method: CT (Chemical treatment), Correct use in Table C: All wastes undergoing chemical treatment on-site, e.g. neutralisation, oil regeneration.
- Management method: CP (Composted), Correct use in Table C: All wastes undergoing composting on-site (including in-vessel and windrow).
- Management method: CS (Crushed and screened), Correct use in Table C: All wastes crushed and screened on-site, e.g. rubble and glass into aggregate.
- Management method: PT (Physical treatment), Correct use in Table C: All wastes undergoing primarily physical treatment on-site, examples include:
    - Manual/mechanical sorting of residual and comingled waste and mixed skips
    - Stripping down vehicles and de-polluting engines

    - Shredding/fragmentising metal waste
    - Mechanical biological treatment (MBT) of residual waste

    - Centrifugation, autoclaving and pyrolysis
- Management method: RC (Recycled), Correct use in Table C: All wastes that are recycled to a final product or end-of-waste criteria on-site.
- Management method: OT (Other treatment), Correct use in Table C: All wastes undergoing any other kind of treatment on-site not specified above.

All of these management methods are considered as treatment for the purposes of this report. SEPA National Waste Team provided additional commentary and insight into the nature of treatment at these sites. These sites are listed in Appendix 4.

Data on Accredited Reprocessors was also used in the analysis. For Packaging Waste (Plastic, Glass, Aluminium, Steel, Paper and Card, Wood and Fibre-based composite packaging) as well as Batteries and WEEE, accredited reprocessors recycle or recover waste packaging discarded by United Kingdom (UK) businesses and households. They sell electronic packaging recovery notes (PRNs) to packaging producers and reinvest the income into the recycling of packaging.

A register of accredited reprocessors is available on the National Waste Packaging Database and WEEE public registers and a list of the accredited reprocessors registered with Scottish registration is included in Appendix 3.

Capacity gap

The available information on waste arisings, destination of these wastes and the number of facilities actively treating this waste formed a picture of the overall domestic reprocessing landscape for each material, highlighting the materials for which significant amounts are recycled outside of Scotland. Although commentary has been provided, a specific capacity gap (indicating a potential need for reprocessing infrastructure in Scotland) for each material stream has not been calculated as materials flow out of Scotland for reprocessing for various reasons (e.g. existing contracts, economics, established end markets etc.), meaning that the fact material is not reprocessed in Scotland does not necessarily indicate that infrastructure capacity is not available. Extensive industry engagement would be required to develop sector specific understanding, which has not been included as part of this desktop-based report.

Appendix 2 – Planning information

Accessed July 2025. Proposed reprocessing facilities that are in planning or have been consented and are under construction.

Site Name: Drumshangie OCCS Greengairs Road EfW and Recycling Plant

Comments: The Drumgray ERC Planning Application was approved by North Lanarkshire Council in August 2020.

300,000 tpa EfW treating non-hazardous residual waste.

200,000 tpa mechanical pre-treatment facility recovering 10,000 tonnes of materials for recycling.

An extension to the existing Incinerator Bottom Ash Pad Area to store and process IBA.

Local Authority: North Lanarkshire

Site Activity (Material / operation): Energy from Waste MRF

Throughput (t/yr): EfW 300,000 MRF 50,000

Current Status: Consented

Site Name: Pond Industrial Estate AD Facility

Comments: 2009 (Feb) Planning Submitted for 200,000 tonne AD facility ref no: 0086/FUL/09.

2011 (March) Planning permission granted.

2023 Bank Renewables look to develop a battery storage 'flexible energy park' in the same location on the Ponds Industrial Estate with no mention of an anaerobic digestion plant.

2024 (Oct) This battery energy storage system is passed through council committee.

Local Authority: West Lothian

Site Activity (Material / Operation): Organics – AD

Throughput (t/yr): 200,000

Current Status: Planning

Site Name: Railway Marshalling Yard, Forres, Moray Anaerobic Digestion Plant

Comments: 2012 (May): Application received by LA 12/00821/SCO.

2012 (June): Status: Unknown. EIA opinion sourced and highlights a number of key issues about the proposed waste facility which require further investigation. Scoping opinion issued.

Local Authority: Moray

Site Activity (Material / Operation): Organics - AD

Throughput (t/yr): 150,000

Current Status: Planning

Site Name: Dunbar Landfill Site Plastics Recycling Facility

Comments: No news since Oct/Nov 2020 - consultation on redrafted plans (smaller no residual washing) - Polymer Recycling Facility

Planning app 20/00001/PAN - pre application request letter May 2020 most recent document. As major development this was required. Nothing more recent to indicate approval. Decision letter issued March but this was to advise proposed consultation activity was acceptable and confirm proposal of application notice required.

No sign of PPC permit application.

20/00005/PAN - Aug-20 submitted proposal of application notice (Status "Decided"). The site was initially proposed by Viridor however the Dunbar landfill site is no-longer owned or operated by Viridor following the sale of its landfill business to Valencia Waste Management in April 2022

Local Authority: East Dunbartonshire

Site Activity (Material / Operation): Plastics

Throughput (t/yr): 100,000

Current Status: Consented

Site Name: Lyon Road Waste Tyre and Rubber Recycling and Processing Plant

Comments: 21/1520/PP - to Scot Gov. 28/08/24 Ministers disagreed with Reporters decision (to refuse) Application Granted planning permission - granted subject to conditions.

Local Authority: Renfrewshire

Site Activity (Material / Operation): Tyre and Rubber

Throughput (t/yr): 100,000

Current Status: Planning

Site Name: Lochaber Smelter - Aluminium Recycling Facility

Comments: 22/09/2021 Plans approved by Cllrs & planning permission granted - Alvance Aluminium. Article on their website - Plan to break ground in 24/25 - bringing materials to market in 26/27.

Local Authority: Highland

Site Activity (Material / Operation): Aluminium

Throughput (t/yr): 100,000

Current Status: Planning

Site Name: Swinhill Anaerobic Digestion (Biomethane) Plant

Comments: 2023 (June): Application Received P/23/0733. South Lanarkshire council considers proposal does not require an EIA.

Local Authority: South Lanarkshire

Site Activity (Material / Operation): Organics – AD

Throughput (t/yr): 65,000

Current Status: Planning

Site Name: Longman Landfill Site Waste Material Recovery Facility

Comments: Transfer station was completed in 2023, no dirty MRF

19/00503/FUL - application permitted. MRF to process BMW, office, welfare etc. Publicity that it's a transfer station, no MRF - materials to Dunbar EFW.

Local Authority: Highland

Site Activity (Material / Operation): MRF (for reuse)

Throughput (t/yr): 65,000

Current Status: Constructing

Site Name: Claylands Road AD Facility

Comments: 2016 (May) Application granted permission with conditions to Muirhall Energy Ltd (Newbridge Biogas Ltd) 10/02552/FUL. Company looking to develop the site have lots of projects active at the moment however almost all focus on wind turbines.

Local Authority: City of Edinburgh

Site Activity (t/yr): 40,000

Current Status: Consented

Site Name: Auldhill Drive, Bridgend Recycling Facility

Comments: Planning submitted 0542/FUL/19 - Use of land as a recycling facility for inert materials up to 24.500 tonnes (partly in retrospect). Consented 2019.

Local Authority: West Lothian

Site Activity (Material / Operation): Not specified

Throughput (t/yr): 24,500

Current Status: Consented

Site Name: Dalmagarry Quarry - Inert Construction and Demolition Waste Recycling Facility

Comments: 22/02166/FUL - planning application still under consideration. NO update / decision provided. Materials demolition/ construction – sand

Local Authority: Highland

Site Activity (Material / Operation): Construction & Demolition

Throughput (t/yr): 20,000

Current Status: Planning

Site Name: Swinlees Quarry Inert Construction Materials Recycling Plant

Comments: 22/00699/PP - recycling inert construction using mobile plant and relocation of concrete plant operations. Approved subject to conditions 30/03/23

Local Authority: North Ayrshire

Site Activity (Material / Operations): Construction & Demolition

Throughput (t/yr): 20,000

Current Status: Planning

Site Name: Ravelaw Farm AD Plant

Comments: This site has multiple applications for anaerobic digestion plants from March 2014 (14/00763/FUL), July 2014 (14/00763/FUL) and July 2015 (15/00792/FUL).

The first application was 'Withdrawn', second application in Jul 2014 has a status of 'Decided'.

The second, July 2014 proposal planned to be a small scale AD plant with all feed material being sourced / grown on the farm. This will not include municipal waste. 8th Dec 2014: Councillors refused permission. Planning officials had recommended approval. The third application was approved Oct 2015 and stated work had to commence within 3 years. Photos logged showing that work commenced on site in

Oct 2018 however letters show disagreement between council and site as to whether it justifies as 'commencement of work or not'. Undetermined whether build continued.

Local Authority: Scottish Borders

Site Activity (Material / Operations): Organics – AD

Throughput (t/yr): 7,000

Current Status: Planning

Site Name: Longmorn Anaerobic Digestion Plant (Acorn Bioenergy Ltd)

Comments: Application 23/00709/APP . Received 1st May 2023, revised December 2024. Proposal to take distillery waste from four local distilleries (80% of feedstock from distillery co-products including pot ale, syrup and draff) and local farmers (break crops)

Local Authority: Moray

Site Activity (Material / Operations): Organics – AD

Throughput (t/yr): unknown

Current Status: Planning

Appendix 3 – Accredited Reprocessors

Packaging Waste

Index of the Public Register of Accredited Reprocessors and Exporters of Packaging Waste for Accreditation Year **2023**, Scottish Environment Protection Agency only as of 16 July 2025

No	Material	Size	Accredited Organisation
1	Glass Other	L	DDH
2	Glass Other	L	Sibelco Green Solutions UK
3	Glass Other	L	Dryden Aqua Ltd
4	Glass Re-melt	L	Dryden Aqua Ltd
5	Glass Re-melt	L	Ardagh Glass Ltd
6	Glass Re-melt	L	Enva Scotland Limited
7	Glass Re-melt	L	O-I Glass Ltd
8	Glass Re-melt	L	Sibelco Green Solutions UK
9	Plastic	L	Avanti Environmental Group Ltd
10	Plastic	S	Bonar Yarns Ltd
11	Plastic	S	British Polythene Ltd
12	Plastic	L	Impact Recycling Ltd
13	Plastic	S	Marlin Industries Scotland Limited
14	Plastic	L	Plastic Technology Services Limited
15	Plastic	S	Solway recycling Ltd
16	Wood	L	AW Jenkinson (Woodwaste) Ltd
17	Wood	L	Egger (Barony) Ltd
18	Wood	L	Enva Timber Recycling Limited
19	Wood	L	NWH Group Limited
20	Wood	L	West Fraser Europe Limited

* "L" indicates an accreditation to issue PRNs or PERNs for more than 400 tonnes of packaging waste unless the accreditation is suspended or cancelled. "S" indicates that the relevant company is accredited to issue PRNs or PERNs for 400 tonnes or less, unless the accreditation is suspended or cancelled.

Batteries

Extract of the Public Register of Approved Batteries Treatment Operators and Exporters
for Compliance Year 2023 as of 16 July 2025 for Scottish Environment Protection Agency only

Treatment Operators – Approved for Industrial and Automotive Batteries, and Portable Batteries

No	Accredited Organisation
1	Blancomet Scot Limited
2	CCL (North Limited)
3	Tes-Amm (Europe) Ltd
4	WEEE Solutions Limited
5	Fenix Battery Recycling Ltd

Waste Electrical and Electronic Equipment (WEEE)
Approved Authorised Treatment Facilities for WEEE – 2023

	AATF Name
1	Brookfield Metal Recycling Limited
2	Castle Enterprise Scotland Limited
3	CCL (North) Limited
4	Computer Recycling Services Limited
5	Dalton Group Limited
6	HMP Edinburgh
7	Home Economics
8	ILM Highland
9	Intelligent Storage Solutions
10	John Lawrie Metals Limited
11	John R. Adam & Sons Limited
12	Lowmac Alloys Limited
13	MGH Scotland Limited
14	Restructa Limited
15	Re-Tek (UK) Limited
16	Robertson Metals Recycling Limited
17	Scotwaste Recycling Limited
18	Second Opportunities
19	Shore Recycling Limited
20	SIMS Group UK Ltd (Dumfries)
21	Tayside Re-Users
22	TES-AMM (Europe) Ltd
23	Tomo Technology Limited
24	WEEE (Scotland) Limited
25	WEEE Solutions Limited

Appendix 4 - Sites treating materials

Plastics

Facilities Managing Plastics:

Site classification: Civic amenity

Site name / licence: East Ayrshire Council / WML/W/0020050

Weight treated (tonnes): 2273.24

Site classification: Incineration / Other Treatment

Site name / licence: Levenseat Renewable Energy Limited / Ppc/A/1150156

Weight treated (tonnes): 71.32

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 4.24

Site classification: Landfill / Civic Amenity / Composting / Anaerobic Digestion / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020083

Weight treated (tonnes): 655.64

Site classification: Landfill / Civic Amenity / Transfer Station:

Site name / licence: Shetland Islands Council / Ppc/N/0050027

Weight treated (tonnes): 57.97

Site classification: Landfill / Transfer Station / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020026

Weight treated (tonnes): 4.04

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Levenseat Limited / Ppc/E/0020001

Weight treated (tonnes): 807.9

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 416.1

Site classification: Metal Recycler

Site name / licence: King Brothers Limited / Wml/L/1117362

Weight treated (tonnes): 5.66

Site classification: Metal Recycler / Transfer Station

Site name / licence: Hamilton Waste And Recycling Limited / Wml/L/1109747

Weight treated (tonnes): 231.2

Site name / licence: Oban Skip Hire Limited / Wml/N/0220307

Weight treated (tonnes): 0.7

Site classification: Other Treatment

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 25.72

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 13.33

Site name / licence: Yes Recycling (Fife) Limited / Wml/L/Sepa2021-8014

Weight treated (tonnes): 244.34

Site name / licence: Impact Recycling Limited / Wml/L/Sepa2021-8019

Weight treated (tonnes): 132.31

Site name / licence: Plastic Technology Services Limited / Wml/W/0020117

Weight treated (tonnes): 11854

Site name / licence: Ccl (North) Limited / Wml/W/0022012

Weight treated (tonnes): 13.38

Site name / licence: Sims Lifecycle Services Limited / Wml/W/0220169

Weight treated (tonnes): 7.48

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited / Ppc/A/1015639

Weight treated (tonnes): 1.04

Site name / licence: Biffa Waste Services Limited / Wml/E/0020002

Weight treated (tonnes): 98.24

Site name / licence: Central Demolition Limited / Wml/E/0120005

Weight treated (tonnes): 53.2

Site name / licence: Dem-Master Demolition Limited / Wml/E/0120045

Weight treated (tonnes): 34.17

Site name / licence: Depothire Limited / Wml/E/0220172

Weight treated (tonnes): 133.66

Site name / licence: Wyllie Recycling Limited / Wml/L/1037193

Weight treated (tonnes): 7499.32

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 178.47

Site name / licence: Wrc Recycling Limited / Wml/L/1133375

Weight treated (tonnes): 8348.38

Site name / licence: Nathans Wastesavers Limited / Wml/L/1161634

Weight treated (tonnes): 193.6

Site name / licence: Eis Waste Services Limited / Wml/N/0020191

Weight treated (tonnes): 121.59

Site name / licence: Biffa Waste Services Limited / Wml/W/0000026

Weight treated (tonnes): 191.68

Site name / licence: J And M Murdoch And Son Limited / Wml/W/0000088

Weight treated (tonnes): 0.52

Site name / licence: Nwh Group Limited / Wml/W/0000199

Weight treated (tonnes): 111.86

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 209.69

Site name / licence: J And M Murdoch And Son Limited / Wml/W/0022002

Weight treated (tonnes): 144.28

Site name / licence: Lowmac Alloys Limited / Wml/W/0022033

Weight treated (tonnes): 375.46

Site name / licence: Nwh Group Limited / Wml/W/0022042

Weight treated (tonnes): 9.38

Site name / licence: R L Smith And Sons Limited / Wml/E/0220293

Weight treated (tonnes): 13.64

Site name / licence: Leavenseat Limited / Wml/L/1092893

Weight treated (tonnes): 70.64

Site name / licence: Cmi Waste Management Limited / Wml/W/0000043

Weight treated (tonnes): 0.72

Site classification: Transfer Station / Composting

Site name / licence: Binn Skips Limited / Wml/E/0220286

Weight treated (tonnes): 32.28

Site name / licence: Grays Recycling Services Limited / Wml/N/0220131

Weight treated (tonnes): 364.14

Site name / licence: William Munro Construction (Highland) Limited / Wml/N/0220249

Weight treated (tonnes): 20.52

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1016127

Weight treated (tonnes): 159.98

Site name / licence: Enva Scotland Limited / Ppc/A/1017028

Weight treated (tonnes): 0.02

Site name / licence: Aberdeen Harbour Board / Wml/L/5004027

Weight treated (tonnes): 0.58

Grand Total **35185.63**

Aluminium

Facilities Managing Aluminium:

Site classification: Civic amenity / Transfer station / Landfill (not operational)

Site name / licence: Western Isles Council / Wml/N/0050029

Weight treated (tonnes): 177.9

Site classification: Incineration / Other Treatment

Site name / licence: Levenseat Renewable Energy Limited / Ppc/A/1150156

Weight treated (tonnes): 37.32

Site classification: Landfill / Civic Amenity / Transfer Station

Site name / licence: Shetland Islands Council / Ppc/N/0050027

Weight treated (tonnes): 9.72

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Levenseat Limited / Ppc/E/0020001

Weight treated (tonnes): 112.7

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 136.88

Site classification: Metal Recycler

Site name / licence: Bernard Hunter / Wml/E/0000129

Weight treated (tonnes): 2.35

Site name / licence: Wml/E/0220099	Brookfield Metal Recycling Limited /
Weight treated (tonnes):	1434.73
Site name / licence:	Dalton Group Limited
	Wml/E/0220164
	Wml/W/0000219
Weight treated (tonnes):	
	507.57
	1248.25
Site name / licence: Wml/W/0000176	Daltons Demolitions Limited /
Weight treated (tonnes):	305.54
Site name / licence:	E Nicholson And Son (Metals) Limited / Wml/W/0000033
Weight treated (tonnes):	78.13
Site name / licence:	European Metal Recycling Limited
	Wml/E/0000242
	Wml/L/1018833
	Wml/L/1197173
	Wml/W/0000193
Weight treated (tonnes):	
	4189.34
	5003.81
	43235.28
	12047.5
Site name / licence:	Henderson Kerr Limited / Wml/W/0000226
Weight treated (tonnes):	5134.52
Site name / licence:	J R Jenkins Limited / Wml/E/0000314
Weight treated (tonnes):	10.14

Site name / licence: John Lawrie Metals Limited / Wml/E/0000210

Weight treated (tonnes): 302.2

Site name / licence: John Walker And Son / Wml/L/1041678

Weight treated (tonnes): 3312.69

Site name / licence: King Brothers Limited / Wml/L/1117362

Weight treated (tonnes): 2981.61

Site name / licence: Peter Thomas Dalton

Wml/E/0000113

Wml/E/0000128

Weight treated (tonnes):

109.23

1460.47

Site name / licence: R G S Hutchison / Wml/N/0020077

Weight treated (tonnes): 1301.49

Site name / licence: R M Easdale And Co Limited / Wml/L/1018925

Weight treated (tonnes): 12863.87

Site name / licence: S Norton And Company Limited / Ppc/A/1123280

Weight treated (tonnes): 24855.86

Site name / licence: Thomas Muir (Rosyth) Limited / Wml/L/1113364

Weight treated (tonnes): 134

Site classification: Metal Recycler / Transfer Station

Site name / licence: Binn Skips Limited / Wml/E/0000316

Weight treated (tonnes): 400.76

Site name / licence: John Lawrie Metals Limited

Wml/N/0050076

Wml/N/0050110

Weight treated (tonnes):

3432.86

9682.87

Site name / licence: Speedy Skip Hire Limited / Wml/N/0050088

Weight treated (tonnes): 4.77

Site name / licence: William Russell And Sons Limited / Wml/E/0000256

Weight treated (tonnes): 1180.06

Site name / licence: Hamilton Waste And Recycling Limited / Wml/L/1109747

Weight treated (tonnes): 2011.59

Site classification: Other Treatment

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 0.1

Site name / licence: Dalton Group Limited / Ppc/A/1155971

Weight treated (tonnes): 6227.25

Site name / licence: Legasea Limited / Wml/L/1195912

Weight treated (tonnes): 8.34

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 0.03

Site name / licence: Ram Tubulars Scotland Limited / Wml/L/5006062

Weight treated (tonnes): 4.26

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited

Ppc/A/1015639

Wml/E/0020002

Weight treated (tonnes):

14.32

22.46

Site name / licence: Cesscon Decom Limited / Wml/L/1189891

Weight treated (tonnes): 274.18

Site name / licence: Eis Waste Services Limited / Wml/N/0020191

Weight treated (tonnes): 45.03

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 19.73

Site name / licence: John Lawrie Metals Limited / Wml/N/0020154

Weight treated (tonnes): 48815.64

Site name / licence: Nathans Wastesavers Limited / Wml/L/1161634

Weight treated (tonnes): 57.48

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 53.67

Site name / licence: R L Smith And Sons Limited / Wml/E/0220293

Weight treated (tonnes): 238.11

Site name / licence: Wyllie Recycling Limited / Wml/L/1037193

Weight treated (tonnes): 344.82

Site name / licence: WEEE (Scotland) Limited / Wml/L/1125653

Weight treated (tonnes): 1.36

Site name / licence: WRC Recycling Limited / Wml/L/1133375

Weight treated (tonnes): 0.38

Site name / licence: Reigart Contracts Limited / Wml/W/0020100

Weight treated (tonnes): 12

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1016127

Weight treated (tonnes): 32.31

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 3.16

Site classification: Landfill / Other Treatment

Site name / licence: Patersons Of Greenoakhill Limited / Ppc/W/0020046

Weight treated (tonnes): 3.48

Site classification: Civic Amenity / Transfer Station / Composting / Landfill (Not Operational)

Site name / licence: Shanks Argyll And Bute Limited / Wml/W/0020043

Weight treated (tonnes): 2.18

Grand Total: 193886.3

Steel

Facilities Managing Steel

Site classification: Civic Amenity / Transfer Station / Landfill (Not Operational)

Site name / licence: Western Isles Council / Wml/N/0050029

Weight treated (tonnes): 177.9

Site classification: Incineration / Other Treatment

Site name / licence: Levenseat Renewable Energy Limited / Ppc/A/1150156

Weight treated (tonnes): 26.54

Site classification: Landfill / Civic Amenity / Transfer Station

Site name / licence: Shetland Islands Council / Ppc/N/0050027

Weight treated (tonnes): 9.72

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Levenseat Limited / Ppc/E/0020001

Weight treated (tonnes): 115.34

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 861.68

Site classification: Metal Recycler

Site name / licence: Bernard Hunter / Wml/E/0000129

Weight treated (tonnes): 1687.56

Site name / licence: Brookfield Metal Recycling Limited / Wml/E/0220099

Weight treated (tonnes): 24717.14

Site name / licence: Dalton Group Limited

Wml/E/0220164

Wml/W/0000219

Weight treated (tonnes):

6841.81

14738.25

Site name / licence: Daltons Demolitions Limited / Wml/W/0000176

Weight treated (tonnes): 6224.03

Site name / licence: David Shaw Metals / Wml/W/0000137

Weight treated (tonnes): 51.76

Site name / licence: European Metal Recycling Limited

Wml/E/0000242

Wml/L/1018833

Wml/L/1197173

Wml/W/0000193

Weight treated (tonnes):

4189.34

5003.81

43235.28

12047.5

Site name / licence: Henderson Kerr Limited / Wml/W/0000226

Weight treated (tonnes): 5134.52

Site name / licence: J R Jenkins Limited / Wml/E/0000314

Weight treated (tonnes): 10.61

Site name / licence: John Lawrie Metals Limited / Wml/E/0000210

Weight treated (tonnes): 659.66

Site name / licence: John Walker And Son / Wml/L/1041678

Weight treated (tonnes): 3312.69

Site name / licence: King Brothers Limited / Wml/L/1117362

Weight treated (tonnes): 2981.61

Site name / licence: Peter Thomas Dalton

Wml/E/0000113

Wml/E/0000128

Weight treated (tonnes):

464

9692.76

Site name / licence: Robertson Metals Recycling Limited / Ppc/A/1134390

Weight treated (tonnes): 108202

Site name / licence: S Norton And Company Limited / Ppc/A/1123280

Weight treated (tonnes): 93170.35

Site name / licence: Thomas Melrose Limited / Wml/L/1033801

Weight treated (tonnes): 25.2

Site name / licence: Thomas Muir (Rosyth) Limited / Wml/L/1113364

Weight treated (tonnes): 6773

Site classification: Metal Recycler / Transfer Station

Site name / licence: Binn Skips Limited / Wml/E/0000316

Weight treated (tonnes): 48.54

Site name / licence: John Lawrie Metals Limited

Wml/N/0050076

Wml/N/0050110

Weight treated (tonnes):

5600.66

18544.4

Site name / licence: Speedy Skip Hire Limited / Wml/N/0050088

Weight treated (tonnes): 89.04

Site name / licence: William Russell And Sons Limited / Wml/E/0000256

Weight treated (tonnes): 1180.06

Site classification: Other Treatment

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 14.2

Site name / licence: Dalton Group Limited / Ppc/A/1155971

Weight treated (tonnes): 22073.75

Site name / licence: Kdc Contractors Limited / Ppc/A/1170789

Weight treated (tonnes): 766.48

Site name / licence: Legasea Limited / Wml/L/1195912

Weight treated (tonnes): 8.34

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 44.25

Site name / licence: Collier Quarrying And Recycling Limited / Ppc/A/1197753

Weight treated (tonnes): 11079

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited

Ppc/A/1015639

Wml/E/0020002

Weight treated (tonnes):

14.32

22.46

Site name / licence: Cesscon Decom Limited / Wml/L/1189891

Weight treated (tonnes): 1822.76

Site name / licence: Cmi Waste Management Limited / Wml/W/0000043

Weight treated (tonnes): 14.43

Site name / licence: Eis Waste Services Limited / Wml/N/0020191

Weight treated (tonnes): 329.2

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 24.6

Site name / licence: J And M Murdoch And Son Limited / Wml/W/0022002

Weight treated (tonnes): 8.88

Site name / licence: John Lawrie Metals Limited / Wml/N/0020154

Weight treated (tonnes): 94258.12

Site name / licence: Jrd Skiphire (Scotland) Limited / Wml/L/1176461

Weight treated (tonnes): 2.5

Site name / licence: Macaulay Askernish Limited / Wml/N/0220030

Weight treated (tonnes): 959.01

Site name / licence: Nathans Wastesavers Limited / Wml/L/1161634

Weight treated (tonnes): 57.48

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 25.89

Site name / licence: Phoenix Decom Limited

Wml/L/5000975

Wml/L/5003980

Weight treated (tonnes):

341.64

2.48

Site name / licence: R L Smith And Sons Limited / Wml/E/0220293

Weight treated (tonnes): 238.11

Site name / licence: Reigart Contracts Limited

Wml/W/0020100

Wml/W/0020133

Weight treated (tonnes):

530

20

Site name / licence: Wyllie Recycling Limited / Wml/L/1037193

Weight treated (tonnes): 344.82

Site name / licence: Leavenseat Limited / Wml/L/1092893

Weight treated (tonnes): 45.48

Site name / licence: WEEE (Scotland) Limited / Wml/L/1125653

Weight treated (tonnes): 1.36

Site name / licence: Wrc Recycling Limited / Wml/L/1133375

Weight treated (tonnes): 0.38

Site name / licence: Peterhead Port Authority / Wml/L/1165834

Weight treated (tonnes): 140.84

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1016127

Weight treated (tonnes): 167.45

Site classification: Landfill / Transfer Station / Composting

Site name / licence: Shanks Argyll And Bute Limited / Ppc/A/1004280

Weight treated (tonnes): 2.96

Site classification: Landfill / Civic Amenity / Transfer Station / Composting

Site name / licence: Shanks Argyll And Bute Limited / Ppc/A/1004281

Weight treated (tonnes): 4

Site classification: Landfill / Civic Amenity / Composting / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020085

Weight treated (tonnes): 14.78

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 3.16

Site classification: Landfill / Other Treatment

Site name / licence: Patersons Of Greenoakhill Limited / Ppc/W/0020046

Weight treated (tonnes): 3.48

Site classification: Civic Amenity / Transfer Station / Composting / Landfill (Not Operational)

Site name / licence: Shanks Argyll And Bute Limited / Wml/W/0020043

Weight treated (tonnes): 24.56

Site classification: Transfer Station/Other Treatment

Site name / licence: Aberdeen Harbour Board / Wml/L/5004027

Weight treated (tonnes): 330.66

Grand Total: 509558.59

Paper And Card

Facilities Managing Paper and Card

Site classification: Civic Amenity / Transfer Station

Site name / licence: Moray Council / Wml/N/0020116

Weight treated (tonnes): 964.54

Site classification: Civic Amenity / Transfer Station / Composting / Anaerobic Digestion

Site name / licence: Western Isles Council / Wml/N/0220227

Weight treated (tonnes): 53.06

Site classification: Composting

Site name / licence: Forth Resource Management Limited / Wml/L/1038344

Weight treated (tonnes): 2771

Site classification: Landfill / Civic Amenity / Composting / Anaerobic Digestion / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020083

Weight treated (tonnes): 4951.63

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 183.94

Site classification: Metal Recycler

Site name / licence: King Brothers Limited / Wml/L/1117362

Weight treated (tonnes): 40.76

Site classification: Metal Recycler / Transfer Station

Site name / licence: Enva Scotland Limited / Wml/E/0000273

Weight treated (tonnes): 3071.94

Site name / licence: Hamilton Waste And Recycling Limited / Wml/L/1109747

Weight treated (tonnes): 4733.4

Site name / licence: Oban Skip Hire Limited / Wml/N/0220307

Weight treated (tonnes): 10.95

Site name / licence: Speedy Skip Hire Limited / Wml/N/0050088

Weight treated (tonnes): 12.85

Site name / licence: Enviroworx Limited / Wml/E/0000096

Weight treated (tonnes): 1.46

Site classification: Other Treatment

Site name / licence: Enva Scotland Limited / Ppc/A/1016807

Weight treated (tonnes): 0.06

Site name / licence: Saica Natur Uk Limited / Wml/W/0220257

Weight treated (tonnes): 21929.76

Site name / licence: Sims Lifecycle Services Limited / Wml/W/0220169

Weight treated (tonnes): 18.16

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 11.48

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 86.17

Site name / licence: Smurfit Kappa Uk Limited / Wml/L/5005403

Weight treated (tonnes): 3900

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited

Ppc/A/1015639

Wml/E/0020002

Wml/N/0220023

Wml/W/0000026

Weight treated (tonnes):

5.5

2317.56

103.4

1641.62

Site name / licence: Central Demolition Limited / Wml/E/0120005

Weight treated (tonnes): 121.37

Site name / licence: Cmi Waste Management Limited / Wml/W/0000043

Weight treated (tonnes): 7.88

Site name / licence: Dem-Master Demolition Limited / Wml/E/0120045

Weight treated (tonnes): 48.43

Site name / licence: Depothire Limited / Wml/E/0220172

Weight treated (tonnes): 169.8

Site name / licence: Easdale Environmental Developments Limited / Wml/W/0020135

Weight treated (tonnes): 22.52

Site name / licence: Eis Waste Services Limited / Wml/N/0020191

Weight treated (tonnes): 2221.9

Site name / licence: Enva Scotland Limited

Wml/L/1131703

Wml/W/0020110

Weight treated (tonnes):

2355.54

7831.2

Site name / licence: J And M Murdoch And Son Limited

Wml/W/0000088

Wml/W/0022002

Weight treated (tonnes):

16.88

195.66

Site name / licence: Jrd Skiphire (Scotland) Limited / Wml/L/1176461

Weight treated (tonnes): 0.26

Site name / licence: Lowmac Alloys Limited / Wml/W/0022033

Weight treated (tonnes): 40.68

Site name / licence: Nathans Wastesavers Limited / Wml/L/1161634

Weight treated (tonnes): 53.31

Site name / licence: Nwh Group Limited

Wml/W/0000199

Wml/W/0022042

Weight treated (tonnes):

1539.44

18.76

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 7226.24

Site name / licence: Wrc Recycling Limited / Wml/L/1133375

Weight treated (tonnes): 7411.31

Site name / licence: Wyllie Recycling Limited / Wml/L/1037193

Weight treated (tonnes): 8456.84

Site name / licence: Patersons Of Greenoakhill Limited / Wml/W/0022011

Weight treated (tonnes): 4.2

Site name / licence: Corrie Skips Limited / Wml/W/0220160

Weight treated (tonnes): 2.4

Site classification: Transfer Station / Composting

Site name / licence: Grays Recycling Services Limited / Wml/N/0220131

Weight treated (tonnes): 306.46

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1016127

Weight treated (tonnes): 1166.35

Site classification: Anaerobic Digestion

Site name / licence: Keenan (Recycling) Limited / Ppc/A/1026140

Weight treated (tonnes): 5589.2

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 96.4

Site classification: Landfill / Other Treatment

Site name / licence: Patersons Of Greenoakhill Limited / Ppc/W/0020046

Weight treated (tonnes): 7.02

Grand Total: 91719.29

Glass

Facilities Managing Glass

Site classification: Metal Recycler / Transfer Station

Site name / licence: Speedy Skip Hire Limited / Wml/N/0050088

Weight treated (tonnes): 64.74

Site classification: Other Treatment

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 1.6

Site name / licence: Sibelco Green Solutions Uk Limited / Wml/L/1117120

Weight treated (tonnes): 84770.35

Site name / licence: Sims Lifecycle Services Limited / Wml/W/0220169

Weight treated (tonnes): 0.14

Site classification: Transfer Station

Site name / licence: Central Demolition Limited / Wml/E/0120005

Weight treated (tonnes): 812.68

Site name / licence: Dow Group Limited / Wml/W/0220234

Weight treated (tonnes): 40.55

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 5580.95

Site name / licence: Hamilton Waste And Recycling Limited / Wml/W/0022032

Weight treated (tonnes): 3.84

Site name / licence: J And M Murdoch And Son Limited

Wml/W/0022002

Wml/W/0000088

Weight treated (tonnes):

531.07

1.92

Site name / licence: Lowmac Alloys Limited / Wml/W/0022033

Weight treated (tonnes): 1810.18

Site name / licence: Nathans Wastesavers Limited / Wml/L/1161634

Weight treated (tonnes): 57.48

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 114.34

Site name / licence: WH Malcolm Limited / Wml/W/0220162

Weight treated (tonnes): 102.6

Site name / licence: Wyllie Recycling Limited / Wml/L/1037193

Weight treated (tonnes): 33.96

Site classification: Transfer Station / Composting

Site name / licence: Grays Recycling Services Limited / Wml/N/0220131

Weight treated (tonnes): 68.24

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1016127

Weight treated (tonnes): 36.41

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 79.5

Site classification: Landfill / Transfer Station / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020026

Weight treated (tonnes): 446.72

Grand Total: 94557.27

Wood

Facilities Managing Wood

Site classification: Anaerobic Digestion

Site name / licence: SSE Generation Limited / Ppc/A/1084893

Weight treated (tonnes): 13.68

Site name / licence: Biogen Em Opco Limited (Formerly Kelda Organic Energy Limited) / Ppc/A/1111635

Weight treated (tonnes): 72.2

Site name / licence: Crofthead Biogas Limited / Ppc/A/1180559

Weight treated (tonnes): 142.82

Site classification: Civic Amenity / Transfer Station

Site name / licence: Moray Council / Wml/N/0020116

Weight treated (tonnes): 2031.54

Site name / licence: Orkney Islands Council / Wml/N/0050019

Weight treated (tonnes): 1418.6

Site classification: Civic Amenity / Transfer Station / Composting / Anaerobic Digestion

Site name / licence: Western Isles Council / Wml/N/0220227

Weight treated (tonnes): 530.05

Site classification: Composting

Site name / licence: Enva Organics Recycling Limited / Ppc/A/1038376

Weight treated (tonnes): 20327.96

Site name / licence: Forth Resource Management Limited

Wml/E/0220228

Wml/L/1023508

Wml/L/1038344

Weight treated (tonnes):

14343

8587

14950

Site name / licence: Gray Composting Services Limited / Ppc/A/1030633

Weight treated (tonnes): 759.62

Site name / licence: Keenan (Recycling) Limited / Wml/N/0220079

Weight treated (tonnes): 23206.36

Site classification: Composting / Landfill (Not Operational)

Site name / licence: Dundee City Council / Wml/E/0020079

Weight treated (tonnes): 7670.9

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 268.58

Site classification: Landfill / Civic Amenity / Composting / Anaerobic Digestion / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020083

Weight treated (tonnes): 37463.79

Site classification: Landfill / Civic Amenity / Composting / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020085

Weight treated (tonnes): 2.38

Site classification: Landfill / Civic Amenity / Transfer Station

Site name / licence: Shetland Islands Council / Ppc/N/0050027

Weight treated (tonnes): 1590.51

Site classification: Landfill / Composting

Site name / licence: Angus Council / Ppc/A/1000120

Weight treated (tonnes): 6210.14

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Levenseat Limited / Ppc/E/0020001

Weight treated (tonnes): 5749.88

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 1645.62

Site classification: Landfill / Transfer Station / Other Treatment

Site name / licence: A And M Smith Recycling Services Limited / Ppc/A/1008883

Weight treated (tonnes): 1890

Site classification: Metal Recycler

Site name / licence: King Brothers Limited / Wml/L/1117362

Weight treated (tonnes): 266.78

Site name / licence: Thomas Melrose Limited / Wml/L/1033801

Weight treated (tonnes): 804

Site classification: Metal Recycler / Transfer Station

Site name / licence: Enviroworx Limited / Wml/E/0000096

Weight treated (tonnes): 125.49

Site name / licence: Hamilton Waste And Recycling Limited / Wml/L/1109747

Weight treated (tonnes): 5346.21

Site name / licence: Oban Skip Hire Limited / Wml/N/0220307

Weight treated (tonnes): 73.9

Site name / licence: Private Contact / Wml/N/0020108

Weight treated (tonnes): 2387

Site classification: Other Treatment

Site name / licence: Allan Wilson Jenkinson / Ppc/A/1011417

Weight treated (tonnes): 77760.38

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 15.5

Site name / licence: Denholm Environmental Limited / Ppc/A/1016853

Weight treated (tonnes): 0.36

Site name / licence: Enva Scotland Limited / Ppc/A/1016807

Weight treated (tonnes): 32.36

Site name / licence: J And M Murdoch And Son Limited / Wml/L/Sepa2021-8016

Weight treated (tonnes): 1.32

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 5.41

Site name / licence: Augean Treatment Limited / Ppc/A/1004470

Weight treated (tonnes): 0.38

Site name / licence: Ram Tubulars Scotland Limited / Wml/L/5006062

Weight treated (tonnes): 10.46

Site name / licence: Ccl (North) Limited / Wml/W/0022012

Weight treated (tonnes): 0.44

Site classification: Transfer Station

Site name / licence: A W Jenkinson Woodwaste Limited

Wml/E/0020202

Wml/L/1100235

Weight treated (tonnes):

45132.97

49805.54

Site name / licence: Biffa Waste Services Limited

Ppc/A/1015639

Wml/W/0000026

Weight treated (tonnes):

35.97

2119

Site name / licence: Central Demolition Limited / Wml/E/0120005

Weight treated (tonnes): 1484.61

Site name / licence: Cmi Waste Management Limited / Wml/W/0000043

Weight treated (tonnes): 345.86

Site name / licence: Dem-Master Demolition Limited / Wml/E/0120045

Weight treated (tonnes): 1366.01

Site name / licence: Depothire Limited / Wml/E/0220172

Weight treated (tonnes): 289.56

Site name / licence: Eis Waste Services Limited / Wml/N/0020191

Weight treated (tonnes): 6592.24

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 15136.7

Site name / licence: Express Skip Hire / Wml/L/1098861

Weight treated (tonnes): 1237.44

Site name / licence:	Hamilton Waste And Recycling Limited / Wml/W/0022032
Weight treated (tonnes):	1
Site name / licence:	J And M Murdoch And Son Limited
	Wml/W/0000088
	Wml/W/0022002
Weight treated (tonnes):	
	264.34
	1154.9
Site name / licence: Wml/L/1176461	Jrd Skiphire (Scotland) Limited /
Weight treated (tonnes):	14.78
Site name / licence: Wml/L/1161634	Nathans Wastesavers Limited /
Weight treated (tonnes):	57.48
Site name / licence:	Nwh Group Limited
	Wml/L/1157026
	Wml/W/0000199
Weight treated (tonnes):	
	44787.1
	12.84
Site name / licence:	Oakbank Waste Management Limited / Wml/L/1090370
Weight treated (tonnes):	8644.14
Site name / licence: Wml/N/0050090	Pat Munro (Alness) Limited /
Weight treated (tonnes):	757.16
Site name / licence: Wml/E/0220293	R L Smith And Sons Limited /
Weight treated (tonnes):	769.84

Site name / licence: Wml/E/0120051	Realm Construction Limited /
Weight treated (tonnes):	746
Site name / licence:	Reigart Contracts Limited / Wml/W/0020133
Weight treated (tonnes):	165
Site name / licence:	Rogers Skip Hire Limited / Wml/L/1020968
Weight treated (tonnes):	465
Site name / licence:	Stevenson Brothers (Avonbridge) Limited / Wml/E/0220223
Weight treated (tonnes):	908.81
Site name / licence:	Suez Recycling And Recovery Uk Limited / Wml/L/1105142
Weight treated (tonnes):	53128
Site name / licence:	Timberpak Limited / Wml/L/1108334
Weight treated (tonnes):	80977.36
Site name / licence:	Wyllie Recycling Limited / Wml/L/1037193
Weight treated (tonnes):	145.18
Site name / licence: Wml/W/0022011	Patersons Of Greenoakhill Limited /
Weight treated (tonnes):	1
Site name / licence: Wml/E/0120053	D J Laing Recycling Solutions Limited /
Weight treated (tonnes):	57.06
Site name / licence:	James Jamieson Ardlethen Developments Limited / Wml/L/1019664
Weight treated (tonnes):	22.22
Site name / licence: Wml/L/1030210	Cameron Dalziel Skip Hire Limited /
Weight treated (tonnes):	5.28
Site name / licence:	Dhl Supply Chain Limited / Wml/L/1090052
Weight treated (tonnes):	34.31

Site name / licence: Leavenseat Limited / Wml/L/1092893

Weight treated (tonnes): 23.44

Site name / licence: Wrc Recycling Limited / Wml/L/1133375

Weight treated (tonnes): 458.07

Site classification: Transfer Station / Composting

Site name / licence: Andrew Cook (Containers) Limited / Wml/E/0220175

Weight treated (tonnes): 1432.72

Site classification: Transfer Station / Other Treatment

Site name / licence: Enva Scotland Limited / Ppc/A/1017028

Weight treated (tonnes): 406.94

Site name / licence: Taylors Industrial Services Limited

Ppc/A/1015769

Ppc/A/1016127

Weight treated (tonnes):

376.68

4354.86

Site name / licence: Walsh Brothers Industrial Services Limited / Ppc/A/1017492

Weight treated (tonnes): 1

Site classification: Landfill

Site name / licence: Easter Hatton Environmental (Waste Away) Limited / Ppc/N/0020026

Weight treated (tonnes): 2614.33

Site classification: Landfill / Transfer Station / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020026

Weight treated (tonnes): 14.26

Site classification: Landfill / Other Treatment

Site name / licence: Patersons Of Greenoakhill Limited / Ppc/W/0020046

Weight treated (tonnes): 1.88

Grand Total: 562053.5

Fibre-Based Composites

Facilities Managing Fiber-Based Composites

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited / Ppc/A/1015639

Weight treated (tonnes): 5.37

Site classification: Other Treatment

Site name / licence: Enva Scotland Limited / Ppc/A/1016807

Weight treated (tonnes): 8.33

Grand Total: 13.7

Organics

Facilities Managing Organics

Site classification: Anaerobic Digestion

Site name / licence: Biogen Em Opco Limited (Formerly Kelda Organic Energy Limited) / Ppc/A/1111635

Weight treated (tonnes): 26995.14

Site name / licence: Keenan (Recycling) Limited / Ppc/A/1026140

Weight treated (tonnes): 78487.69

Site name / licence: SSE Generation Limited / Ppc/A/1084893

Weight treated (tonnes): 22317.64

Site name / licence: Arla Foods Limited / Ppc/A/1003148

Weight treated (tonnes): 15623.38

Site name / licence: Crofthead Biogas Limited / Ppc/A/1180559

Weight treated (tonnes): 7926.84

Site classification: Anaerobic Digestion / Other Treatment

Site name / licence: Energen Biogas Limited / Ppc/A/1081847

Weight treated (tonnes): 95121.18

Site classification: Civic Amenity / Transfer Station

Site name / licence: Moray Council / Wml/N/0020116

Weight treated (tonnes): 2031.54

Site name / licence: Orkney Islands Council / Wml/N/0050019

Weight treated (tonnes): 1418.6

Site classification: Civic Amenity / Transfer Station / Composting / Anaerobic Digestion

Site name / licence: Western Isles Council / Wml/N/0220227

Weight treated (tonnes): 2383.35

Site classification: Composting

Site name / licence: Enva Organics Recycling Limited / Ppc/A/1038376

Weight treated (tonnes): 23447.89

Site name / licence: Forth Resource Management Limited

Wml/E/0220228

Wml/L/1023508

Wml/L/1038064

Wml/L/1038344

Weight treated (tonnes):

14343

12179

1056.7

14950

Site name / licence: Gray Composting Services Limited / Ppc/A/1030633

Weight treated (tonnes): 5979.92

Site name / licence: Keenan (Recycling) Limited / Wml/N/0220079

Weight treated (tonnes): 23206.36

Site name / licence: The Coach House Trust / Wml/W/0220256

Weight treated (tonnes): 22185.08

Site name / licence: The Firm Of A H Tucker / Wml/W/0220244

Weight treated (tonnes): 1246.75

Site classification: Composting / Anaerobic Digestion

Site name / licence: Earnside Energy Limited / Ppc/A/1004887

Weight treated (tonnes): 40690.3

Site name / licence: Scottish Water / Ppc/A/1017756

Weight treated (tonnes): 21089.54

Site classification: Composting / Landfill (Not Operational)

Site name / licence: Dundee City Council / Wml/E/0020079

Weight treated (tonnes): 8191.6

Site classification: Landfill / Civic Amenity / Composting

Site name / licence: Barr Environmental Limited / Ppc/W/0020019

Weight treated (tonnes): 429.54

Site classification: Landfill / Civic Amenity / Composting / Anaerobic Digestion / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020083

Weight treated (tonnes): 43628.79

Site classification: Landfill / Civic Amenity / Composting / Other Treatment

Site name / licence: Fife Council / Ppc/E/0020085

Weight treated (tonnes): 11405.95

Site classification: Landfill / Civic Amenity / Transfer Station

Site name / licence: Shetland Islands Council / Ppc/N/0050027

Weight treated (tonnes): 685.7

Site classification: Landfill / Composting

Site name / licence: Angus Council / Ppc/A/1000120

Weight treated (tonnes): 6517.16

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Levenseat Limited / Ppc/E/0020001

Weight treated (tonnes): 49045.41

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 394.28

Site classification: Landfill / Transfer Station / Other Treatment

Site name / licence: A And M Smith Recycling Services Limited / Ppc/A/1008883

Weight treated (tonnes): 1890

Site classification: Metal Recycler

Site name / licence: King Brothers Limited / Wml/L/1117362

Weight treated (tonnes): 231.32

Site classification: Metal Recycler / Transfer Station

Site name / licence: Hamilton Waste And Recycling Limited / Wml/L/1109747

Weight treated (tonnes): 1228.36

Site name / licence: Oban Skip Hire Limited / Wml/N/0220307

Weight treated (tonnes): 25.66

Site name / licence: Enviroworx Limited / Wml/E/0000096

Weight treated (tonnes): 421.89

Site classification: Other Treatment

Site name / licence: Alisrose Limited / Wml/L/1022346

Weight treated (tonnes): 110583

Site name / licence: Calachem Limited / Ppc/A/1008834

Weight treated (tonnes): 691.53

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 9.01

Site name / licence: J And M Murdoch And Son Limited / Wml/L/Sepa2021-8016

Weight treated (tonnes): 6

Site name / licence: Scottish Water / Wml/W/0000124

Weight treated (tonnes): 13536.9

Site name / licence: Sem Energy Limited / Ppc/A/1103677

Weight treated (tonnes): 919.26

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited / Ppc/A/1015639

Weight treated (tonnes): 1239.16

Site name / licence: Central Demolition Limited / Wml/E/0120005

Weight treated (tonnes): 247.81

Site name / licence: Cmi Waste Management Limited / Wml/W/0000043

Weight treated (tonnes): 13.12

Site name / licence: Depothire Limited / Wml/E/0220172

Weight treated (tonnes): 54.44

Site name / licence: Dow Group Limited / Wml/W/0220234

Weight treated (tonnes): 69.31

Site name / licence: Express Skip Hire / Wml/L/1098861

Weight treated (tonnes): 456

Site name / licence: J And M Murdoch And Son Limited

Wml/W/0000088

Wml/W/0022002

Weight treated (tonnes):

86.76

568.64

Site name / licence: Lowmac Alloys Limited / Wml/W/0022033

Weight treated (tonnes): 245.84

Site name / licence: Macaulay Askernish Limited / Wml/N/0220030

Weight treated (tonnes): 125

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 7384.86

Site name / licence: R L Smith And Sons Limited / Wml/E/0220293

Weight treated (tonnes): 2312.54

Site name / licence: Realm Construction Limited / Wml/E/0120051

Weight treated (tonnes): 746

Site name / licence: Scottish Water

Wml/N/0020217

Wml/E/0120052

Weight treated (tonnes):

5769.68

153.82

Site name / licence: Wyllie Recycling Limited / Wml/L/1037193

Weight treated (tonnes): 5006.98

Site name / licence: D J Laing Recycling Solutions Limited / Wml/E/0120053

Weight treated (tonnes): 57.06

Site name / licence: David Ritchie And Sons Limited / Wml/N/0220031

Weight treated (tonnes): 91.74

Site name / licence: Nwh Group Limited / Wml/W/0000199

Weight treated (tonnes): 12.84

Site classification: Transfer Station / Composting

Site name / licence: Andrew Cook (Containers) Limited / Wml/E/0220175

Weight treated (tonnes): 1432.72

Site name / licence: Binn Skips Limited / Wml/E/0220286

Weight treated (tonnes): 11.4

Site classification: Transfer Station / Other Treatment

Site name / licence: Mountwest 4 Limited / Wml/L/1124841

Weight treated (tonnes): 3378

Site name / licence: Taylors Industrial Services Limited

Ppc/A/1015769

Ppc/A/1016127

Weight treated (tonnes):

1205.75

83.76

Site name / licence: Nicol Of Skene Limited / Wml/L/5002898

Weight treated (tonnes): 161

Grand Total: **713435.49**

Batteries

Facilities Managing Batteries

Site classification: Metal Recycler

Site name / licence: E Nicholson And Son (Metals) Limited / Wml/W/0000033

Weight treated (tonnes): 13.57

Site classification: Other Treatment

Site name / licence: Blancomet Scot Limited / Ppc/A/1163107

Weight treated (tonnes): 6083.6

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 0.2

Site name / licence: Enva Scotland Limited / Ppc/A/1016807

Weight treated (tonnes): 44.57

Site name / licence: Fenix Battery Recycling Limited / Wml/W/0022040

Weight treated (tonnes): 377.83

Site name / licence: Sims Lifecycle Services Limited / Wml/W/0220169

Weight treated (tonnes): 11.99

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 426.44

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited / Ppc/A/1015639

Weight treated (tonnes): 61.69

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 2.14

Site classification: Transfer Station / Other Treatment

Site name / licence: Enva Scotland Limited / Ppc/A/1017028

Weight treated (tonnes): 5151.23

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1015769

Weight treated (tonnes): 99.78

Grand Total: 7637.04

Tyres

Facilities Managing Tyres

Site classification: Incineration / Other Treatment

Site name / licence: Levenseat Renewable Energy Limited / Ppc/A/1150156

Weight treated (tonnes): 71.32

Site classification: Landfill / Civic Amenity / Composting / Anaerobic Digestion / Other Treatment

Site name / licence: Fife Council, Ppc/E/0020083

Weight treated (tonnes): 620.54

Site classification: Landfill / Civic Amenity / Transfer Station / Composting

Site name / licence: Comhairle Nan Eilean Siar / Ppc/A/1004275

Weight treated (tonnes): 86.98

Site classification: Landfill / Transfer Station / Composting / Other Treatment

Site name / licence: Levenseat Limited / Ppc/E/0020001

Weight treated (tonnes): 849.61

Site name / licence: Lochiel Logistics Limited / Ppc/N/0050031

Weight treated (tonnes): 184.4

Site classification: Other Treatment

Site name / licence: Enva Scotland Limited / Ppc/A/1016807

Weight treated (tonnes): 8.91

Site name / licence: Impact Recycling Limited / Wml/L/Sepa2021-8019

Weight treated (tonnes): 123.31

Site name / licence: Pro Tyre Recycling Limited / Wml/L/1164188

Weight treated (tonnes): 3850

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 17.57

Site name / licence: Yes Recycling (Fife) Limited / Wml/L/Sepa2021-8014

Weight treated (tonnes): 244.34

Site name / licence: Tyrecycle Scotland Limited / Wml/L/5005001

Weight treated (tonnes): 62.2

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited / Ppc/A/1015639

Weight treated (tonnes): 5.61

Site name / licence: Caledonia Elt Recycling Limited / Wml/L/1150331

Weight treated (tonnes): 8763.22

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 154.93

Site name / licence: J And M Murdoch And Son Limited

Wml/W/0000088

Wml/W/0022002

Weight treated (tonnes):

0.4

39.66

Site name / licence: Oakbank Waste Management Limited / Wml/L/1090370

Weight treated (tonnes): 24.62

Site name / licence: UK Rubber Limited / Wml/L/1187102

Weight treated (tonnes): 6958.18

Site name / licence: Wrc Recycling Limited / Wml/L/1133375

Weight treated (tonnes): 3539.32

Site name / licence: R L Smith And Sons Limited / Wml/E/0220293

Weight treated (tonnes): 3.74

Site name / licence: Leavenseat Limited / Wml/L/1092893

Weight treated (tonnes): 70.64

Site name / licence: Micheldever Tyre Services Limited / Wml/L/1155771

Weight treated (tonnes): 97

Site name / licence: Reigart Contracts Limited / Wml/W/0020133

Weight treated (tonnes): 1

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1015769

Weight treated (tonnes): 0.46

Grand Total: 25786.96

Construction (Concrete)

Facilities Managing Construction (Concrete)

Site classification: Metal Recycler

Site name / licence: E Nicholson And Son (Metals) Limited / Wml/W/0000033

Weight treated (tonnes): 15.29

Site name / licence: Foundry Steels Limited / Wml/E/0000040

Weight treated (tonnes): 4

Site classification: Other Treatment

Site name / licence: Clearwater Dc 2001 Limited / Ppc/A/1004491

Weight treated (tonnes): 2

Site name / licence: J And M Murdoch And Son Limited / Wml/L/Sepa2021-8016

Weight treated (tonnes): 35132.53

Site classification: Transfer Station

Site name / licence: Central Demolition Limited / Wml/E/0120005

Weight treated (tonnes): 19647.88

Site name / licence: Cmi Waste Management Limited / Wml/W/0000043

Weight treated (tonnes): 961.86

Site name / licence: Enva Scotland Limited / Wml/W/0020110

Weight treated (tonnes): 71.42

Site name / licence: Hamilton Waste And Recycling Limited / Wml/W/0022032

Weight treated (tonnes): 130.36

Site name / licence: Jrd Skiphire (Scotland) Limited / Wml/L/1176461

Weight treated (tonnes): 90.47

Site name / licence: Morrow Skip Hire / Wml/L/1018827

Weight treated (tonnes): 180

Site name / licence: Reigart Contracts Limited / Wml/W/0020133

Weight treated (tonnes): 6900

Site name / licence: Wh Malcolm Limited / Wml/L/1036401

Weight treated (tonnes): 17.7

Site name / licence: Nwh Waste Group Limited / Wml/L/1118803

Weight treated (tonnes): 7700.8

Site classification: Transfer Station / Composting

Site name / licence: Binn Skips Limited / Wml/E/0220286

Weight treated (tonnes): 222.02

Site name / licence: Grays Recycling Services Limited / Wml/N/0220131

Weight treated (tonnes): 331.27

Site classification: Transfer Station / Other Treatment

Site name / licence: Taylors Industrial Services Limited / Ppc/A/1016127

Weight treated (tonnes): 381.16

Site name / licence: Wh Malcolm Limited / Wml/L/1195777

Weight treated (tonnes): 1638.68

Site name / licence: Nicol Of Skene Limited / Wml/L/5002898

Weight treated (tonnes): 273.45

Site classification: Landfill / Transfer Station / Other Treatment

Site name / licence: A And M Smith Recycling Services Limited / Ppc/A/1008883

Weight treated (tonnes): 82

Grand Total: **73782.89**

Electronics

Facilities Managing Electronics

Site classification: Metal Recycler

Site name / licence: John Lawrie Metals Limited / Wml/E/0000210

Weight treated (tonnes): 4.26

Site name / licence: S Norton And Company Limited / Ppc/A/1123280

Weight treated (tonnes): 3107.98

Site classification: Other Treatment

Site name / licence: Ccl (North) Limited / Wml/W/0022012

Weight treated (tonnes): 12.53

Site name / licence: Enva Fridge Recycling Scotland Limited / Ppc/A/1035205

Weight treated (tonnes): 2079.34

Site name / licence: Enva Scotland Limited / Ppc/A/1016807

Weight treated (tonnes): 50.16

Site name / licence: Ilm Highland / Wml/L/1018845

Weight treated (tonnes): 57.21

Site name / licence: Serco Limited / Wml/L/1123155

Weight treated (tonnes): 99.23

Site name / licence: WEEE Solutions Limited / Wml/L/1083066

Weight treated (tonnes): 2188.98

Site classification: Transfer Station

Site name / licence: Biffa Waste Services Limited / Ppc/A/1015639

Weight treated (tonnes): 951.44

Site name / licence: Easdale Environmental Developments Limited / Wml/W/0020135

Weight treated (tonnes):	144.33
Site name / licence:	Hm Prison Glenochil / Wml/L/1114931
Weight treated (tonnes):	14.32
Site name / licence:	John Lawrie Metals Limited / Wml/N/0020154
Weight treated (tonnes):	327.22
Site name / licence:	Lowmac Alloys Limited / Wml/W/0022033
Weight treated (tonnes):	3.5
Site name / licence:	Oakbank Waste Management Limited / Wml/L/1090370
Weight treated (tonnes):	1.39
Site name / licence:	WEEE (Scotland) Limited / Wml/L/1125653
Weight treated (tonnes):	1829.69
Site name / licence:	J And M Murdoch And Son Limited / Wml/W/0022002
Weight treated (tonnes):	1.74

Site classification: Transfer Station / Other Treatment

Site name / licence:	Enva Scotland Limited / Ppc/A/1017028
Weight treated (tonnes):	10.46
Site name / licence:	Taylors Industrial Services Limited / Ppc/A/1015769
Weight treated (tonnes):	242.2
Grand Total:	**11125.98**

Appendix 5 – Glossary and Definitions

BSI PAS 100 / 110 - A national compost benchmark that specifies the minimum requirements for the process of composting, the selection of material from which compost is made, and standards for the compost product quality. PAS 100 is applicable to composting facilities while PAS 110 is applicable to anaerobic digestion facilities. The use of this standard to improve the quality of compost in Scotland became part of Scottish Government policy in 2011, with 2014 being the first year it has been applied to the household waste official statistics. For 2011 – 2013 the wastes that met the PAS 100/110 standard was modelled to produce a back series.

C&D Waste - Waste from the construction and demolition industry.

C&I Waste - Waste from commercial and industrial sources. Includes waste from business and industrial premises in Scotland, but excludes waste from the construction and demolition industry.

Civic Amenity Site - Often referred to as Household Waste Recycling Centres (HWRCs) are facilities provided by local authorities where householders can legally dispose of their own household waste.

CoP - Code of Practice.

DRS - Deposit Return Scheme

Dry Recyclable Waste - Dry recyclable waste is legally defined in Section 75(7A) of the Environmental Protection Act 1990(e) (as amended by The Waste (Scotland) Regulations 2012) as controlled waste that is: glass; metals; plastics; paper; or, card (including cardboard).

Dry Mixed Recyclate (DMR) - Dry Mixed Recyclate (DMR) is considered as waste that consists of two or more of the 'dry recyclable waste' materials mixed together. MRFs also treat separately collected dry recyclable waste where multiple types of one waste stream (for example plastics) are sorted into their individual grades.

EPR - Extended Producer Responsibility

EWC Code - European Waste Catalogue code.

Hazardous waste - Waste with hazardous properties which may render it harmful to human health or the environment. Hazardous waste is also called Special Waste in Scotland as defined in the Special Waste Regulation 1996 (and amendments).

HDPE - High Density Polyethylene

Material Recovery Facility (MRF) Plastics Recovery Facility (PRF) or Plastics Recycling Facility - Legally defined as ‘a facility where dry recyclable waste is treated in order to separate that waste into a single dry waste stream or streams’ (The Waste (Recyclate Quality) (Scotland) Regulations 2015). MRFs accept co-mingled and separately collected dry recyclable waste, which is sorted into single streams using a mix of technology such as magnets, optical scanners and eddy currents, and hand picking lines from conveyors. Operational logistics can vary widely depending on the MRF, and this impacts the type of material they target and the degree of separation that takes place. Material outputs from MRFs are generally defined as grades and relate to different material types for example: Clear PET bottles, Mixed Plastic or Aluminium. Some MRFs target very specific recyclate grades, whereas others target mixed grades. Furthermore, some MRFs rely on other downstream sorting facilities to undertake additional segregation of material the MRF cannot process.

Similar to a MRF a PRF sorts and grades mixed plastic fractions into separate fractions or polymers. The facility may also process materials (washing and then grading / flaking / extrusion) to produce materials that are of high enough quality to be used as a feedstock for plastics processing.

Other diversion from landfill - Waste managed by methods outside of recycling, recovery or disposal. For 2023 this comprised exclusively waste composted at facilities not accredited to the BSI PAS 100/110 standard.

PET - Polyethylene Terephthalate

PP - Polypropylene

PRN - Packaging Recovery Note

PTT - Pots, tubs and trays

Recycling rate - Waste recycled as a percentage of all waste managed. Note that total waste generated is not used to calculate the recycling rate as it does not equal total waste managed due to differences in methodologies used to calculate the data.

Waste disposed - Waste landfilled and waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste generated - Waste that arises directly from Scottish businesses and households during the reporting year. C&I waste generated are estimated using data from licensed/permitted site returns and complex exempt activity return. C&D waste generated is estimated using data from licensed/permitted site returns, complex exempt activity returns and aggregate survey data. Household waste generated is taken from all 32 Scottish local authority returns using the web-based reporting tool

WasteDataFlow (WDF). Waste generated only includes waste that arises directly from the business, for example waste that is taken in by a business from another business and subsequently disposed is excluded from the waste generation.

Waste disposed by incineration - Waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste landfilled - Waste that is disposed of to landfill sites instead of being recycled or recovered. This includes incinerator ash, plus any recycling and composting rejects that occur during collection, sorting or further treatment that are landfilled.

Waste managed - Includes all wastes recycled, disposed, recovered and managed by other management within the relevant reporting year.

Waste recovered by incineration - Waste inputs to co-incineration facilities and to incineration facilities that incinerate mixed municipal waste and have been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste recycled - Recyclable materials that have been recycled, prepared for reuse and biodegradable materials that have been composted or anaerobically digested to quality standards set by PAS 100/110.

WFAS - Waste from all sources. This includes waste from commercial and industrial sources, construction and demolition sources and household sources.