

Scotland's Circular Economy and Waste Route Map to 2030

December 2024

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Ministerial foreword



Gillian Martin MSP, Acting Cabinet Secretary for Net Zero and Energy

2024 marks a key point in Scotland's circular economy journey.

In June the Circular Economy (Scotland) Bill was passed unanimously by the Scottish Parliament and is now the Circular Economy (Scotland) Act 2024. This landmark Act underlines Scotland's commitment to a circular economy based on sustainable consumption, production, and resource management. This is essential to power Scotland's transition to a fair, green and sustainable economy and is critical to meeting our obligations to tackle the twin climate and nature emergencies.

Following the passage of the Act, the focus now shifts to implementation.

This Route Map identifies the priorities to 2030 that will help us to progress to a circular economy and ensure we maximise the positive impact of the new Act for communities across Scotland.

The move to sustainable resource use and a circular economy directly supports the Scottish Government's four priorities. As well as being an important contributor to tackling the climate emergency and improving our environment, it can help grow the economy, by opening up new market opportunities, improving productivity and saving money. A circular economy can also contribute to eradicating child poverty through local employment opportunities and access to lower cost options, through reuse and more effective use of resources.

Finally, the Route Map's actions are also designed to support sustainable public services, in particular to modernise recycling, reuse and waste services, co-designed with communities and local government.

The Route Map is the product of extensive collaboration and engagement with the public, private and third sectors through two consultations since 2022, with consistently high levels of support for the proposals. This final document focuses on delivery of 11 priority actions. It sets out clear timelines to deliver these actions to maximise progress, as well as outlining areas where the pace can be accelerated should the future budget situation allow before 2030.

I want to thank all the individuals, businesses and organisations who have contributed to get us to this point, including our delivery partners in local government, SEPA and Zero Waste Scotland for their comprehensive input. It demonstrates the strength of support for Scotland's transition to a circular economy and the importance of working together to reach our net zero and economic growth goals.

I look forward to the next stage of Scotland's circular economy journey, delivering the Route Map's actions to ensure the transition works for Scotland's businesses, public sector and communities.

A handwritten signature in black ink, appearing to read "Annie Ma". The signature is fluid and cursive, with a long horizontal stroke at the end.

Executive summary

The Scottish Government is 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. We recognise that this will be a challenging task and that to achieve this Scotland needs to fundamentally change how it produces, consumes, and manages resources.

We can see the day-to-day impacts that climate change and the nature crises are having on our communities, our society, our economic wellbeing, and our environment – both here in Scotland and globally. The climate emergency has intensified our focus on emissions reduction, and on how we view and treat our precious resources.

Founded on evidence and collaboration over the past 3 years, this Circular Economy and Waste Route Map is part of the Scottish Government's response to these challenges.

It is designed to drive progress on three key fronts:

1. Setting the strategic direction and laying foundations for how we will deliver **our system-wide, comprehensive vision for Scotland's circular economy from now to 2030** – based on Responsible Production, Responsible Consumption, and Maximising Value from Waste and Energy.
2. Setting out priority actions from now to 2030 to **accelerate more sustainable use of our resources across the waste hierarchy**. We acknowledge the progress we have made against our existing 2025 waste reduction and recycling targets, the areas we have fallen short, and the lessons we can learn as we set out the framework for what comes next.
3. **Reducing emissions associated with resources and waste**. The Route Map sets out the opportunities we will take to decarbonise the waste sector ahead of the draft Climate Change Plan, to be published in 2025, and our approach to tackling the whole-life climate impact of Scotland's resource management and waste.

This Route Map outlines which actions we will prioritise to 2030, by when, and how we will work with others to drive sustainable use and management of our resources. This will lay the groundwork for delivery of Scotland's circular economy up to 2030. It is aimed at everyone who has a role to play: the people and communities of Scotland, businesses, the third sector, and the public sector, including local government.

The direction and actions set out in this Route Map are complemented by the new powers in the landmark Circular Economy (Scotland) Act 2024, and in some places are dependent on these powers. The circular economy strategy will build on this Route Map looking beyond 2030 and will identify priority sectors and systems taking a strategic longer term view up to 2045. It will consider economic drivers, behaviour change and international impact as well as setting out the broader vision, indicators, outcomes, and objectives that will be used to monitor progress.

This document is the final Route Map and takes into account the feedback from two consultations that were held in 2022 and in early 2024. Analysis of responses to the most recent consultation showed that there were consistently high levels of support for the actions.

Measures in this Route Map are grouped under four strategic aims, which reflect the span of the waste hierarchy:

- 1: Reduce and reuse**
- 2: Modernise recycling**
- 3: Decarbonise disposal**
- 4: Strengthen the circular economy**

For each strategic aim, we set out the **priority actions** we will focus on, and the **further actions** we will seek to progress, between now and 2030. We recognise there is a need to prioritise to provide the certainty that households, businesses, the public and third sectors need to make changes, and support and invest in a circular economy.

The Scottish Government is working within the current fiscal constraints to deliver on **11 priority actions** to drive progress, setting out delivery timescales that have been arrived at through collaboration and listening to local government and business community partners to ensure they remain affordable and deliverable. The Scottish Government is committed to progressing a circular economy at pace and will continually look to increase the speed of delivery where possible, taking account of partner feedback and the fiscal situation.

The way material flows around the economy is complicated and influenced by everyone in the supply chain. To deliver system-wide transformation, our actions must be coordinated, properly sequenced, and designed to deliver cumulative impact and wider benefits to Scotland. Our priority actions are being designed and implemented to maximise impact, both on their own terms, and working together as a strategic package. This allows priority measures to take a targeted, coordinated approach to specific materials across the waste hierarchy, recognising the variation in emissions or environmental impact of production, consumption or waste management of different materials and products.

Our Route Map to 2030 – Summary of actions

Priority actions (in **bold**) and further actions (bullet points)

Reduce and reuse

Responsible consumption, production and reuse

Publish a Product Stewardship Plan to set out how we will tackle the environmental impact of priority products by 2025/26

- Develop further measures to tackle consumption of problematic single-use items and promote uptake of reusable alternatives (including consideration of environmental charging), prioritising action on single-use drinks cups
- Develop measures to address the disposal of unsold consumer goods
- Develop measures to improve the reuse experience for consumers
- Deliver behaviour change-based approaches focussed on sustainable consumption, aligned to Let's Do Net Zero communications
- Identify ways to expand business models that prolong product lifespan
- Investigate further steps to promote business-business reuse platforms

Reduce food waste

Develop an intervention plan to guide long-term work on household food waste reduction behaviour change by 2026/27

Develop with stakeholders effective options to implement mandatory reporting for food waste and surplus by businesses from 2025/26

- Strengthen data and evidence
- Review the rural exemption for food waste recycling, as part of recycling co-design process
- Deliver enhanced support for businesses

Embed circular construction practices

Support the development of a model for regional Scottish hubs and networks for the reuse of construction materials and assets from 2025-2027

- Develop new and promote existing best practice standards in circular practices within the construction sector, and assess the options for both voluntary and mandatory compliance
- Investigate and promote options to incentivise and build capacity for the refurbishment of buildings
- Investigate and promote ways to reduce soil and stones disturbance, movement and volumes going to landfill
- Review opportunities to accelerate adoption of climate change and circular economy focussed purchasing in construction
- Consider how devolved taxes can incentivise the use of recycled aggregates and support circular economy practices

Modernise recycling

Household recycling

Facilitate a co-design process for high quality, high performing household recycling and reuse services, 2024 – 2026

- Introduce a statutory Code of Practice for household waste services
- Introduce statutory recycling and reuse local performance targets for household waste services (from 2030)
- Undertake a consultation to explore kerbside collection of textiles
- Strengthen the Householder's duty of care obligation in relation to household waste
- Give local authorities more tools to support household recycling and reduce contamination
- Undertake a review of waste and recycling service charging
- Review the monitoring and reporting framework for local authority waste services
- Develop options and consult on the introduction of end destination public reporting of household recycling collected

Commercial recycling

Review of compliance with commercial recycling requirements, 2026

Co-design measures to improve commercial waste service provisions, commencing by 2030

- Conduct a national compositional study of waste from commercial premises

Decarbonise disposal

Develop a Residual Waste Plan to 2045, 2027

Facilitate the development of a Sector-Led Plan to minimise the carbon impacts of the Energy from Waste Sector, 2027

- Support the inclusion of energy from waste in the UK Emissions Trading Scheme (ETS), and investigate other fiscal measures to incentivise low carbon disposal
- Review and target materials currently landfilled to identify and drive alternative management routes
- Facilitate the co-production of guidelines for effective community engagement
- Increase the capture of landfill gas

Strengthen the circular economy

Develop a circular economy strategy every five years, first one in 2026

Set new circular economy targets by 2027

- Review and refresh Scotland's Waste Data Strategy's action plan
- Maintain a programme of research on waste prevention, behaviour change, fiscal incentives and material-specific priorities
- Develop public procurement opportunities to reduce the environmental impact of public spending, including scoping new legislative circular economy requirements for contracting authorities under section 82 and 82A of the Climate Change (Scotland) Act 2009
- Support greater uptake of green skills, training, and development opportunities

Chapter 1. Introduction and case for change

Introduction: A circular economy in Scotland

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. Material consumption and waste are primary drivers of nearly every environmental problem Scotland currently faces, from water scarcity to habitat and species loss.

Around four-fifths of Scotland's carbon footprint comes from the products and services we manufacture, use and throw away and 90% of global biodiversity loss and water stress are caused by extraction and processing of these products.

The Scottish Government is 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 for as long as possible.

We recognise this will be a challenging task and to achieve this Scotland needs to fundamentally change how it produces, consumes and manages resources. The update to the Climate Change Plan set out our circular economy vision that by 2045 Scotland's cultural, social and business norms will be driven by a focus 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 waste and energy is harnessed efficiently.

Purpose

Why do we need the Circular Economy and Waste Route Map?

Much has changed since most of our current waste targets were set in 2010. The climate emergency has intensified our focus on emissions reduction, and how we view and treat our precious resources.

We can see the day-to-day impacts that climate change and the nature crises are having on our communities, our society, our economic wellbeing, and our environment – both here in Scotland and globally.

Founded on evidence and collaboration, the Route Map is part of the Scottish Government's wider response to these challenges, sitting alongside a range of other

strategies and plans (see *Strategic context for change below*). It is designed to drive progress on three key fronts:

1. Setting the strategic direction and laying foundations for how we will deliver **our system-wide, comprehensive vision for Scotland's circular economy from now to 2030**. The shift to a circular economy can help realise the economic growth potential associated with climate action.
2. Setting out priority actions from now to 2030 to **accelerate more sustainable use of our resources across the waste hierarchy**. We acknowledge the progress we have made against our existing 2025 waste reduction and recycling targets, the areas where we have fallen short, and the lessons we can learn as we set out the framework for what comes next.
3. **Reducing emissions associated with resources and waste**. The Route Map sets out the opportunities we will take to decarbonise the waste sector ahead of the draft Climate Change Plan, to be published in 2025, and our approach to tackling the whole-life climate impact¹ of Scotland's resource management and waste.

The development of the Route Map

This document is the final Route Map and takes into account the feedback from two consultations that were held in 2022 and in early 2024.² It outlines our priorities for delivery through to 2030, and how we will deliver and coordinate these actions to achieve maximum positive impact for communities and businesses in Scotland. It is aimed at everyone who has a role to play: the people and communities of Scotland, businesses, the third sector, and the public sector, including local government.

This level of transformation will take time, and we set out our intention later in this Route Map to develop a circular economy strategy every five years from 2026 (see '*Strengthen the circular economy*' section), alongside new circular economy targets by 2027. The strategy will build from the Route Map's framework, taking a longer-term view of what is needed to deliver a circular economy.

Both the preparation of the strategy and setting of targets are requirements under the **Circular Economy (Scotland) Act 2024** ('the Circular Economy Act').³ The Act, passed unanimously by the Scottish Parliament in June 2024, contains provisions to underpin Scotland's transition to a circular economy, and modernise Scotland's waste and recycling services. The Act includes new powers that will allow us to take action now and into the future. The direction and actions set out in this Route Map are complemented by the new powers in the Act and, in some places, are dependent on these powers.

Case for change

Scotland's waste and recycling targets

To drive progress towards our circular economy goals, Scotland has had a set of waste and recycling targets in place for over the past decade, spanning the waste hierarchy (see Figure 1 below):⁴

- 15% reduction of all waste by 2025, against 2011 levels
- 33% reduction of food waste by 2025, based on 2013 baseline
- Minimum of 60% recycling of household waste by 2020
- Minimum of 70% recycling of all waste by 2025
- Maximum 5% of all waste to landfill by 2025
- A ban on all biodegradable municipal waste going to landfill by 2025



Figure 1: Scotland's Waste Hierarchy

As the 2022 and 2024 consultations set out, Scotland has made good long-term progress towards reaching these ambitions.

The total amount of waste going to landfill in Scotland has halved over the past decade (2.3 million tonnes or 23% of all waste managed was sent to landfill in 2022) and over 62% of waste was recycled in 2022. In the same year, we met our 2025 target to reduce all waste by 15% for the second year in a row.

Table 1 below summarises the progress against these targets. In addition, Scotland had a target to recycle and reuse 70% of construction and demolition waste by 2020. This target has been met every year since 2011.

The cumulative impact of these targets on net zero objectives has been positive. Based on Zero Waste Scotland estimates, these targets were initially expected to reduce Scotland's annual waste carbon impact by 22% below 2011 levels, or 3.1

MtCO₂e, by 2025. As of 2018, estimates suggest that Scotland had already surpassed this, achieving carbon savings of 4.6 MtCO₂e, 30% below 2011 baseline levels.⁵

Despite this progress, in some areas progress has not been at the pace and scale required. While the 2025 targets have provided a good platform for progress over the past decade, we know from the Route Map's analysis that **they are not universally the best indicators to deliver our circular economy, emissions and nature objectives.**⁶ 'All waste' tonnage-based targets do not account for the varying environmental or carbon impact of individual materials. This was reinforced by Climate Change Committee advice to the Scotland Government and Parliament, which recommended that Scotland "*set targets to reduce waste and improve recycling rates beyond 2025... on the basis of separate waste streams (rather than 'All waste') and where possible consider carbon-based metrics.*"⁷

The Route Map's review of our resources and waste system found that the sustainable choices are still not the easy choices for households, businesses or those in the waste sector, and large-scale and rapid system change is required to drive progress, and ensure a more rapid transition to net zero and a fully circular economy in Scotland.⁸

As we set out what comes next to 2030 through this Route Map and the Circular Economy Act, we recognise the role 2025 targets have played, and the lessons we can learn moving forward. The actions set out in this Route Map are designed to chart what must come next to deliver the pace and scale required to meet our resources and circular economy objectives – including the role of future targets and the development of a longer-term strategy.

2025 TARGET	PROGRESS
Reduce total waste arising in Scotland by 15% against 2011 levels	<p>On track: 15% (2022)</p> <p>Met for two years in a row, but highly variable from year-to-year, strongly linked to scale of construction and demolition activity. Household and Commercial & Industrial waste trend is gradually reducing.</p>
Reduce food waste by 33% against 2013 levels	<p>Off track: 5% increase against the 2013 baseline (2021 food waste estimate). Per capita, equivalent to 189 kg per person per year, an increase of 4kg or 2% against the baseline.</p> <p>This reflects a similar pattern to the UK as a whole, with 2021 data likely influenced by the COVID-19 pandemic.⁹ Scotland is highly unlikely to meet its target to reduce food waste by 33% by 2025.</p>
Minimum of 60% recycling of household waste by 2020	<p>Missed : 43.5% (2023)</p> <p>Progress plateaued at around 45% for several years. It fell back to 42% in 2020 (COVID-19 impact). Local authority recycling rates range from 20.7% - 58.2%.</p>
Minimum of 70% recycling of all waste by 2025	<p>At risk: 62.3% (2022)</p> <p>Steady increase since 2011. Fell back from 61% (2018) due to COVID-19 impacts, but has recovered. Much of year-on-year variability driven by construction and demolition waste.</p>
Maximum 5% of all waste to landfill by 2025	<p>Off track: 23.2% (2022)</p> <p>Waste sent to landfill fell from around 7 million tonnes in 2005 to 2.3 million tonnes in 2022, and 2.0 million tonnes in 2023. Rapid decline in waste going to landfill recently, driven by shift from landfill to incineration.</p>
Ban on all biodegradable municipal waste going to landfill by 2025	<p>On track: 554,000 tonnes (2023)</p> <p>Overall trend is a 57% decrease since 2011.</p>

Table 1: Progress towards Scotland's 2025 waste and recycling targets.

Climate targets

The Scottish Government has set climate change ambitions to become a net zero greenhouse gas emitting nation by 2045.¹⁰ We have committed to doing this in a way that is just and fair for all people across Scotland and realises the economic growth potential associated with climate action. We know we must also take responsibility for our global carbon footprint associated with the goods and services we import.

Waste sector emissions

The 2020 Climate Change Plan update¹¹ set out emission 'envelopes' for each sector, including waste, which reflect the overall pathway to net zero by 2045.

Within Scotland total greenhouse gas emissions have approximately halved since 1990, with waste management sector emissions reducing even faster during that period. In 2022, the waste management sector emissions stood at 1.6 MtCO₂e, 75% lower than the 6.5 MtCO₂e in 1990.¹² The subsector covering waste incineration with energy recovery has its carbon dioxide emissions accounted for under the electricity sector, rather than waste management. Emissions from energy from waste were around 0.3 MtCO₂e in 2022, representing 19.5% of electricity generation emissions.

While progress has been made to reduce sector emissions, to achieve the emissions envelope set out in the Climate Change Plan update, we must **more than halve waste sector emissions** from their current position (1.6 MtCO₂e in 2022), to 0.7 MtCO₂e by 2032. As part of this process, we must look at all sources of greenhouse gas emissions across the resources and waste sector, including legacy emissions from landfill sites and critical opportunities to decarbonise incineration, as outlined in the independent review of incineration and its role in the waste hierarchy.¹³

Scotland's carbon footprint

Scotland's emissions reduction targets, set out in the Climate Change Plan, are based on emissions from sources located here in Scotland, mainly around disposal. However, we know we must also take responsibility for the larger carbon footprint associated with the waste produced here in Scotland, and the wider global impact from the goods and services we import.¹⁴

Although the waste management sector now only directly accounts for around 4% of total Scottish greenhouse gas emissions as reported through the Climate Change Plan, over 90% of the carbon impact of Scotland's waste is produced well before disposal, at the materials production stage. In 2018, the annual whole-life carbon impact of Scotland's waste was 10.6 MtCO₂e.¹⁵

Looking beyond the waste we produce, **around four-fifths of Scotland's total carbon footprint comes from the products and services we manufacture, use and throw away.**¹⁶ This underlines the work we must undertake together: sustainable resource use is key to tackling climate change and will be vital for other sectors to deliver their own net zero goals as well as dealing with resource constraints.

Strategic context for change

Our work to deliver a circular economy and drive sustainable resource management does not sit apart from the world we live in and the major challenges we collectively face. It directly supports the Scottish Government's priorities of growing the **economy**, tackling the **climate emergency** and improving Scotland's **public services**, whilst indirectly supporting the **reduction in child poverty**.¹⁷

By delivering a circular economy in Scotland and driving progress through the priority actions in this Route Map, we can support:

Our economy: Opening up new market opportunities, improving productivity, saving money, and increasing self-sufficiency and resilience by reducing reliance on international supply chains and global shocks. The shift to a circular economy can help Scotland realise the economic growth potential associated with climate action. Our waste reduction and recycling outcomes support progress towards the National Performance Framework outcome for the economy, and our strategy for economic transformation¹⁸ recognises that the circular economy represents an enormous economic and industrial opportunity for Scotland as part of this transformation.

Our climate: Sustainable resource use is key to tackling climate change and improving our environment. Although the waste management sector only directly accounts for around 4% of total Scottish greenhouse gas emissions, we know we must also take responsibility for the full lifecycle impact of waste and our global carbon footprint. Our circular economy objectives are core pillars of our Environment Strategy and its outcomes.¹⁹ Creating sustainable growth is a key part of the Scottish Government's purpose and the circular economy contributes to a range of UN Sustainable Development Goals.²⁰ A primary driver of biodiversity loss internationally is the extraction and manufacture of raw materials, and the disturbance of soils, which are only recently being fully recognised as extremely important ecosystems. Our biodiversity strategy²¹ sets out the outcomes needed to halt biodiversity loss by 2030 and restore and regenerate biodiversity by 2045. The supporting delivery plan includes key actions the circular economy can make to achieving these key milestones.

Our society: Strengthening communities by providing local employment opportunities, lower-cost options to access the goods Scotland needs, and tackling existing inequalities. As we continue to face economic challenges, the rapid, just transition to a more circular economy is needed more than ever and can contribute to our central mission to eradicate child poverty. The transition to a circular economy is challenging but is a major opportunity to transform our economy, our communities and our lives for the better.

Our public services: Supporting public services to become more sustainable, improving productivity and reducing waste. Modernising recycling, reuse and waste services will be co-designed with communities to ensure households and businesses are at the heart of how services are designed and operate.

Our role in the world: Sustainable consumption and production also alleviate pressures on the natural world and its finite resources globally. This can directly help Scotland meet its obligations to tackle the twin climate and nature emergencies through a just transition, showing genuine climate leadership and playing our full part on the global stage.

Our approach

Our strategic aims

Measures in chapter 2 are grouped under four strategic aims, which reflect the span of the waste hierarchy. These strategic aims are outlined in **Figure 2**, and the text below.

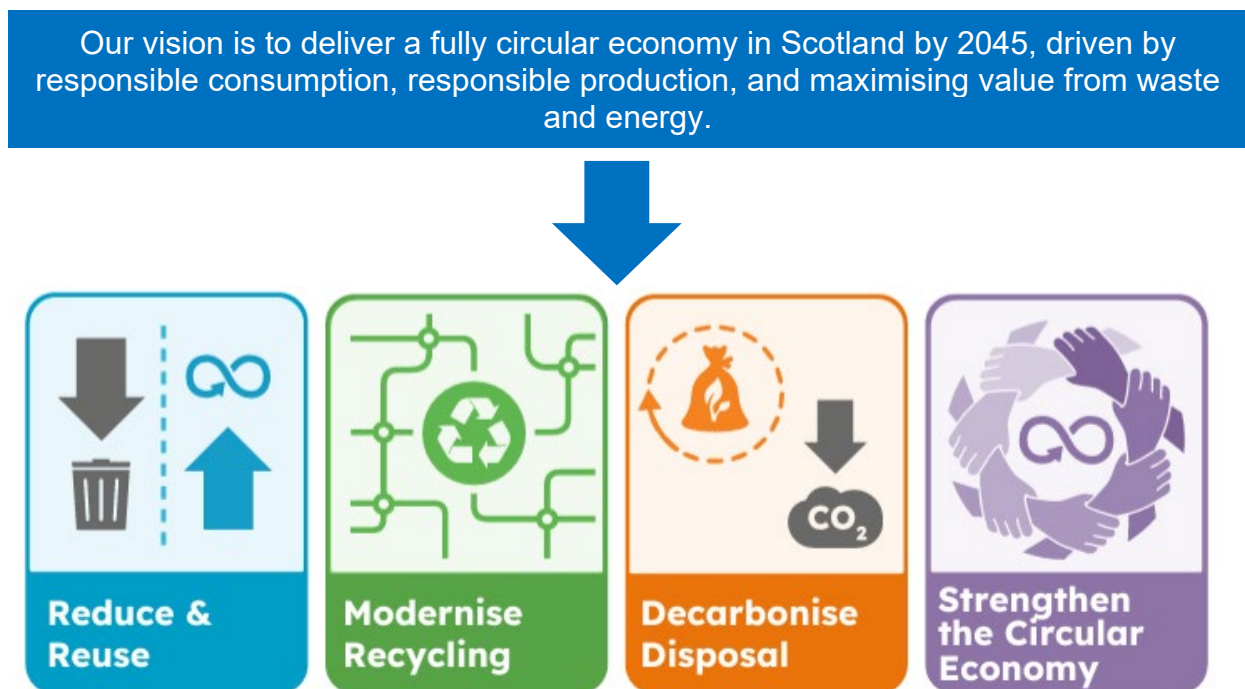


Figure 2: The Scottish Government's vision and strategic aims for a circular economy

More information about each strategic aim and its objectives is outlined in chapter 2, but in summary they cover the following:

Reduce and reuse: Reducing waste and reusing resources are the top goals of the waste hierarchy and central to changing our relationship with materials and products. Building an economic system that moves away from being based on items that are designed to be disposable brings significant environmental and economic benefits.

Modernise recycling: Increasing the amount of materials recycled and increasing the proportion of these recycled in Scotland will deliver emission reductions, reduce the environmental impacts associated with extracting new raw materials, and create a range of important economic opportunities to reprocess and reuse materials.

Decarbonise disposal: While our focus is to prevent materials from becoming waste in the first place, we want to ensure that materials that cannot be avoided, reused or recycled are managed in a way that minimises environmental and climate impacts, encourages management of materials further up the waste hierarchy, and minimises broader societal impacts.

Strengthen the circular economy: We must maintain a strategic approach to the delivery of a circular economy, ensuring the right structures and support are in place to enable action across the economy, robustly monitoring and evaluating progress.

Our approach

Throughout the development of the Route Map, our approach has been underpinned by five guiding principles that have shaped its vision, aims and priorities, and will guide its implementation.

We take a whole system approach. The way that material flows around the economy is complicated and influenced by everyone in the supply chain. Considering the whole system – including our global footprint – is vital for prioritising and delivering measures, and we draw out the interdependencies and cross-cutting themes spanning our priority actions. This includes a **‘material-first’ approach**, where we take a targeted, coordinated approach to materials across the waste hierarchy, recognising the variations in emissions and environmental impact.

We are ambitious and agile. No country has yet identified a long-term pathway to achieving zero waste and a circular economy. We must be brave and bold, learn by doing, and be agile. We must consider actions that have the potential to drive future change, even if they are not ready yet, and therefore set out a range of actions at different levels of development.

We are evidence driven. Not all the answers are known at this stage. We are led by a clear evidence-driven approach that underpins our priority actions and investments. We published new research throughout the development of the Route Map to address gaps in evidence. This is an approach we will continue to take: areas for further research, and some of the barriers to overcome, are highlighted in this document as part of implementation of our actions.

We are fair and inclusive. The system-wide change we need must be designed and delivered in a fair and inclusive way. We are committed to ensuring that future generations are not unfairly burdened, and that existing inequalities are tackled, not exacerbated. This is directly contributing to the Scottish Government’s national mission to eradicate child poverty. A **Just Transition** is key to this. It includes considering opportunities for training/re-training and employment to create fair work, and a more sustainable material footprint and through the creation of markets and processes for used materials. Increased reuse also requires significant expansion of premises for collection, storage, and retail offering local economic benefits.

Everyone must play their part. Achieving our waste, recycling and wider emissions reduction objectives is a shared endeavour. We know a circular economy can only be delivered through a “Team Scotland” approach, defined by collaboration and co-

design. Collaboration and partnership have been critical to our progress so far, and we can only be successful if everyone plays their part – government, households, communities, charities and businesses. Our approach has been and will continue to be guided by both the Verity House Agreement and New Deal for Business Group’s recommendations and implementation plan.²²

Cross-cutting themes

There are key cross-cutting themes, which underpin the actions and transformation we need to deliver. These themes are highlighted throughout chapter 2, and include:

- **Behaviour change:** Urgent, system-wide change is required if we are to achieve our ambitions. The first consultation set out the diverse range of incentives that impact our decisions and behaviour; measures build on this and look strategically across the waste hierarchy at embedding positive behaviour change.
- **Data and evidence:** Improvements in understandings of material flows, availability and quality of data will be crucial to achieve significant impacts across the resources and waste system.
- **Infrastructure:** Identifying what future strategic infrastructure requirements will be, both in Scotland as a whole and on a place-based basis for local needs, linked to National Planning Framework 4.²³ This ranges from reuse capacity, through to local recycling, domestic reprocessing and residual waste management infrastructure. In 2025 the Scottish Government will publish a waste reprocessing infrastructure report to support this work and meet our statutory requirement, as set out in the Circular Economy Act. In order to fully understand existing capacity and provide clear and stable environment for investment, we seek to understand and address existing and planned reprocessing infrastructure in Scotland, potential gaps in capacity, key areas of economic opportunity, and any significant barriers to future growth.
- **Legislative framework:** In order to support the transition to a circular economy, Scotland needs the right legislative framework to make the right choices the easy choices for actors across our economy and society. The Circular Economy Act provides additional powers to underpin Scotland’s transition to a circular economy.

Assessing impacts

Alongside the draft Route Map, we published high-level assessments of the potential impact on equality, socio-economic considerations, island communities, and business and regulation. We will shortly publish updates to these assessments which will provide more focus on potential impacts from specific measures where this is feasible, particularly priority actions, as well as commentary on cumulative impacts. We will work to reflect where new or existing evidence exists, including the feedback from the second consultation.

For example, within the **Business and Regulatory impact assessment**, following feedback from businesses and local authorities around the potential financial cost of some measures, we will provide additional indications of where potential costs may emerge related to the delivery of specific measures. While there will be some limitations and uncertainties at this stage before implementation, we recognise it is

important to provide these updates to help stakeholders plan for the future and to facilitate further work with government on design.

This is the beginning of this process, rather than the end, and as we move into the implementation phase of the Route Map, the Scottish Government reiterates its commitment to work in partnership with stakeholders to assess the full impacts of specific measures as they are further defined to ensure they remain feasible, impactful and deliver value for money. For example, measures may need to consider further individual and cumulative impacts on the environment, public spending, the cost to business including small and medium-sized enterprises, consumer choice and affordability, equality, socio-economic and island communities' impacts.

We recognise that, where appropriate, individual measures set out in the Route Map may be subject to further public consultation, for example where secondary legislation is needed.

Strategic Environmental Assessment (SEA)

The Environmental Assessment (Scotland) Act 2005 requires plans, programmes and strategies that are likely to have a significant impact on the environment to be assessed and for measures to avoid, prevent or reduce adverse effects to be sought, where possible, prior to implementation.

Alongside our updated draft Route Map consultation in January 2024, we published the Environmental Report prepared as part of the SEA, which contained findings on the likely environmental implications arising from the measures set out in the Route Map.²⁴ The responses received to this Route Map consultation, and the findings of the SEA, have informed the final Route Map and will be reflected in the Post Adoption Statement which we will publish shortly.

Working with the UK governments

Environmental policy, including waste management, is devolved to Scotland. Through this Route Map we set out how we are taking action on policy measures that lie within devolved competence. That includes our clear commitment to seek to maintain or enhance the environmental standards in place when we left the EU and to maintain alignment with developing EU standards where possible and meaningful to do so.

However, we recognise that certain powers relating to the circular economy are reserved to the UK Government, and that the production of our products, services and materials involve supply chains that go beyond Scotland, spanning the UK, European Union, and the rest of the world.

The Scottish Government works constructively with the other UK governments on key measures. In many cases our interests are aligned, and it makes sense to work across the UK to accelerate our transition to a more circular economy. We are aware that DEFRA Ministers are establishing a Circular Economy Taskforce, which we understand will inform the development of a circular economy strategy across the UK Government during 2025.

While the strategy will be England-only in scope, Scottish Government officials are engaging with UK officials on input into the development of the strategy, recognising that there may be implications for, and opportunities to align policy with, devolved governments.

It is clear that many areas to drive more rapid progress require collaborative action with the UK government and other devolved governments. Given the immense challenges we collectively face, we need enhanced cooperation to deliver our shared ambitions, at pace, in a host of areas that would unlock circular economy and emission reduction progress across the UK's nations. This was reinforced by the Climate Change Committee's 2023 emission reduction progress report for the UK, highlighting a "lack of urgency".²⁵ We will continue to call on others, including the UK Government, where we need to see further progress, especially where powers are reserved. These areas include aspects of product design and some technical standards, the role of VAT and tax to incentivise and encourage sustainable behaviours, and measures to influence global markets and reduce imported and exported emissions.

We will continue to work within the Common Frameworks to manage potential policy divergence as well as where policies can align. Should an exclusion from the post-Brexit UK Internal Market Act 2020 be required to ensure measures are effectively implemented in Scotland, we will follow the agreed Common Framework process.

Chapter 2. Actions to 2030

Introduction

This chapter outlines our priorities to accelerate progress to meet our sustainable resource objectives, deliver a circular economy and reduce emissions through to 2030. Measures in this chapter are grouped under four strategic aims:

- 1: Reduce and reuse
- 2: Modernise recycling
- 3: Decarbonise disposal
- 4: Strengthen the circular economy

For each strategic aim to 2030, we set out:

- Our vision and objectives
- Our approach to measuring progress
- A summary of where we are today and the actions we have taken so far
- A recap of consultation feedback
- The actions we will take between now and 2030; and their system-wide impact and dependencies across the Route Map to achieve maximum positive impact for communities and businesses in Scotland.

Consultation findings

The priorities set out in this Route Map are based on rigorous gathering and assessment of the evidence and an extensive programme of engagement, including two public consultations, over the past three years.

The most recent consultation took place in January 2024 and the [analysis of responses](#) showed that there were consistently high levels of support for the actions within the four strategic aims, ranging from 71% to 81% support levels.²⁶ Alongside this support, the responses to the consultation provided constructive feedback. This has directly informed the final shape of this Route Map and will inform the final design and implementation phase for measures.

Priority actions for delivery

We recognise there is a need to prioritise to provide the certainty that households, businesses, the public and third sectors need to make changes, support and invest in a circular economy.

Throughout this Route Map, we have set out **priority actions**. These are the actions that we consider are critical to unlocking progress, and which we intend to focus on. They are based on a review of the evidence under each strategic aim, and their potential role to drive progress through collaboration and partnership to 2030.

Each section also sets out the **further actions** we will seek to take. These actions are designed to complement the priority actions. In some cases they support delivery

of the priority actions (e.g. underpinning research, data, legislation), while in other cases they build on the priority actions through to 2030.

We recognise that some actions are not for government alone to deliver, and that these actions will be subject to discussions with partners and stakeholders, the outcomes of future spending allocations, availability of Parliamentary time and support, and further research where relevant.

This final Route Map **focuses on the delivery of 11 priority actions** to drive progress. This reflects the feedback from the most recent consultation, and the updated assessment of the policy package.

The Scottish Government is working within the current fiscal constraints, and we have ensured we have set out clear delivery timescales for these 11 priority actions, informed by collaboration and feedback from local government, business, and other stakeholders, to ensure they remain affordable and deliverable. The Scottish Government is committed to progressing a circular economy at pace and will continually look to maximise the speed of progress where possible taking account of partner feedback and the fiscal situation.

A whole system approach: the bigger picture

The way that material flows around the economy is complicated and influenced by everyone in the supply chain. To deliver system-wide transformation, we cannot work in silos. All of our actions must be coordinated, properly sequenced, and designed to deliver cumulative impact and wider benefits to Scotland. Throughout this chapter we highlight how our priority actions are being designed and implemented to maximise impact, both on their own terms, in coordination with the other measures across this Route Map, and with wider initiatives. This allows priority measures to take a **targeted, coordinated approach to specific materials** across the waste hierarchy, recognising the variation in emissions or environmental impact of production, consumption or waste management of different materials and products.

1: Reduce and reuse

Summary of priority actions:

- Publish a Product Stewardship Plan to set out how we will tackle the environmental impact of priority products (**by 2025/26**)
- Develop an intervention plan to guide long-term work on household food waste reduction behaviour change (**by 2026/27**)
- Develop with stakeholders effective options to implement mandatory reporting for food waste and surplus by businesses (**from 2025/26**)
- Support the development of a model for regional Scottish hubs and networks for the reuse of construction materials and assets (**from 2025 - 2027**)

Vision statement

Reducing and reusing waste are at the top of the waste hierarchy and central to changing our relationship with materials and products. Building an economic system that moves away from being based on items designed to be disposable will bring significant environmental benefits.

Strategic objectives

This strategic aim has three key objectives:

- **Challenging the current approach to consumption and production** by mainstreaming reuse and repair, and incentivising and promoting sustainable choices. This means prioritising reuse, making repair easier, and working with businesses and the UK Government to drive better product design, ensuring producers take responsibility for the environmental impact of what they sell.
- **Focus on reducing food waste** from all sources, learning from our 2019 Food Waste Reduction Action Plan. This means addressing the whole food system; resetting our approach to food waste; enhancing our circular bioeconomy, and ensuring we have the data needed to understand and drive progress.
- **Focus on embedding circular construction practices** to reduce resource needs, reduce waste and carbon, and encourage refurbishment and reuse. This means improving collaboration between Government and industry; incentivising sustainable construction practices; reducing whole life carbon emissions; adopting sustainable/circular procurement practices promoting best practice, and improving our understanding of how and where waste is generated.

Measuring progress

Scotland's previous targets focussed on tracking **reduction of overall waste generated** (to reduce waste generated by 15% between 2011 and 2025) and **reducing the amount of waste being sent to landfill** (send a maximum 5% of all waste to landfill by 2025). Official waste statistics published annually by SEPA provide the data to assess progress against these metrics.²⁷

Based on the most recent data (2022), we have met our overall waste reduction target for two years in a row (*see chapter 1*). However, the total amount of waste we generate in Scotland can vary significantly year-on-year, largely due to differences in waste from construction and demolition. The **carbon footprint of Scotland's waste** has also reduced by 30% between 2011 and 2018.²⁸

The total amount of **household waste generated** in Scotland in 2023 decreased by 26,000 tonnes (1.1%) from 2022.²⁹ This is the lowest amount of household waste generated since the start of the current time series in 2011. The carbon impact of household waste is now under 1 tonne carbon dioxide equivalent (CO₂e) per person for the first time since reporting began in 2011.

As we set out in the Route Map's two consultations, the 5% to landfill target does not account for the carbon intensity of waste being diverted to landfill and is not a good indicator to measure the sector's progress to net zero.

Our previous targets included reducing food waste by 33% from 2013 to 2025, and Scotland is committed to achieving the UN's Sustainable Development Goal 12.3 to halve food waste by 2030. We have **published a new Scottish food waste estimate**,³⁰ showing how much food waste was disposed of by households and businesses across different sectors in 2021. This provides a comparison with our 2013 baseline, noting that the 2021 estimate may be impacted by the ongoing implications of the COVID-19 pandemic. The latest data shows the scale of the problem has increased in Scotland over the past decade, and it is highly likely we will fall short in meeting our 2025 target. Part of the challenge is consistent and regular measuring of food waste, rather than estimation: without understanding the volume and source of waste, it is difficult to know where to focus action and resources to make a real impact.

By 2027, we will set **new circular economy targets**. These will follow the development of a monitoring and indicator framework to allow for more holistic tracking of Scotland's consumption levels and wider measures of circularity. See the '*Strengthen the circular economy*' section for more.

Taking action

The next section sets out where we are now, what we have done so far, and our actions to accelerate progress to 2030. We set out what actions we will prioritise to unlock progress, their system-wide impacts and strategic dependencies with other measures in this Route Map; and the further actions we will seek to take to complement the priority measures to 2030. Measures are grouped under our three 'Reduce and reuse' objectives:

- Section 1: Drive responsible consumption, production and reuse
- Section 2: Reduce food waste
- Section 3: Embed circular construction practices

Section 1: Responsible consumption, production and reuse

Priority action:

- **Publish a Product Stewardship Plan to set out how we will tackle the environmental impact of priority products (by 2025/26)**

Further actions to 2030:

The Product Stewardship plan will provide a framework for how we prioritise products and tackle their environmental impact. To complement and build on this targeted approach, we will also seek to progress the following actions to 2030:

- Develop further measures to tackle consumption of problematic single-use items and promote uptake of reusable alternatives (including consideration of environmental charging), prioritising action on single-use drinks cups
- Develop measures to address the disposal of unsold consumer goods
- Develop measures to improve the reuse experience for consumers
- Deliver behaviour change-based approaches focussed on sustainable consumption, aligned to Let's Do Net Zero communications
- Identify ways to expand business models that prolong product lifespan
- Investigate further steps to promote business-business reuse platforms

Where we are now

In Scotland, we use on average 19.3 tonnes of resources per person per year, well above the 6-8 tonnes per person considered to be sustainable.³¹ Cutting our material consumption is one of the most important ways that we can all limit our impact on the environment, and is essential for Scotland's just transition to a low-carbon and green economy and to alleviate pressures on the natural world and its finite resources globally.

Around 90% of the carbon impact of Scotland's waste is produced before disposal, during resource extraction, manufacturing, and transport.³² The way that products are designed and manufactured shapes how long they will last, whether they can be reused or repaired, and how easily they can be recycled. This means we need to consider the whole system, reducing our need for new products, and maximising the life of existing ones.

In 2022, the total amount of waste generated was 10.2 million tonnes, a 15% reduction compared with 2011.³³ While this is encouraging, the impacts of COVID-19 and the high variability in construction and demolition waste directly influence this target, and we know we must embed system-wide change in order to maintain progress.

What we have done so far

We have taken steps to reduce waste and embed more sustainable approaches across sectors. This includes:

- introducing a **ban on the manufacture and supply of certain single-use plastic items**
- introduction of the **single-use carrier bag charge** in 2014, and increasing the charge to 10p from 2021
- introducing **extended producer responsibility for packaging** from 2025, alongside the other UK governments
- banning the sale and supply of **single-use vapes** from 2025
- funding **reuse projects and infrastructure** through the Recycling Improvement Fund³⁴
- **supporting businesses** through Zero Waste Scotland³⁵
- supporting **sharing libraries and repair cafes**,³⁶ increasing the total to 100 by 2025
- introducing requirements through the **National Planning Framework 4** to encourage developers to minimise waste and carbon intensity in construction projects

Public sector organisations with significant purchasing power are embedding circular approaches to how they operate and procure goods and services. For example, the Scottish Government has established an **NHS Scotland Circular Economy Programme** to support the transition to more circular supply systems within NHS Scotland.³⁷

Building on these initiatives, we included several key provisions in our **Circular Economy Act** to drive sustainable consumption and production.³⁸ These include powers to introduce a charge for single-use items,³⁹ and develop measures to address the disposal of unsold consumer goods.

Delivering our vision

Despite these steps, it is clear that further action is needed to drive system-wide change: moving away from the linear model of consumption to a circular economy with sustainable resource use. This section sets out our priority and further actions to make progress to 2030.

Priority actions

Publish a Product Stewardship Plan to set out how we will tackle the environmental impact of priority products.

Timescale: Publication in 2025/26, supported by research and development in 2023-2025. Implementation plans will run to 2030.

2022 and 2024 consultation recap

In our 2024 consultation, plans to develop a Product Stewardship Plan were broadly supported, with respondents welcoming the emphasis on environmental accountability throughout the supply chain. 85% of respondents to the [first 2022 consultation](#)⁴⁰ agreed with the measures to promote responsible consumption, production and reuse.

What is product stewardship?

Product stewardship is an approach that means whoever designs, produces, sells or uses a product takes responsibility for minimising its environmental impact **throughout all stages of that product's life cycle**. It is an umbrella term and includes the responsibilities of each actor in the supply chain to minimise waste, maximise reuse, recycle where products genuinely meet the end of their life, and dispose of products responsibly. In line with the 'polluter pays' principle⁴¹, those who cause pollution should bear the financial responsibility for any damage or remedial action required as a result. Producers must take responsibility to reduce the environmental and carbon footprint of their products. However, product stewardship also recognises that everyone involved with the product has a role to play: for example, those involved in the design, supply chain and transport of a product, retailers, consumers, and waste management actors. There is no one-size-fits all approach, and roles and specific actions will vary from one product to another.

What we will do

Producer responsibility schemes are currently in place UK-wide for packaging, waste electrical and electronic equipment (WEEE), batteries, and end-of-life vehicles (ELVs). We are working with the UK and devolved governments to reform existing Producer Responsibility schemes and to introduce a Deposit Return Scheme (DRS) for single-use drinks containers, alongside action in Scotland to address the environmental impact of single-use products.

Alongside delivery of these existing policies, we intend to take an evidence-based approach to setting our next priorities for action, ensuring that we are targeting areas where we can have the greatest impact.

To achieve this, **we will develop and publish a Product Stewardship plan by 2025/26**. This will provide a framework to prioritise products based on their environmental and economic impact. Based on this framework we will identify at least three priority products for action over the next five years. To support this approach, we have commissioned research to support an evidence-based model for product stewardship in Scotland.

Based on international evidence and initial research, **we are considering textiles and mattresses as priority products**. For example, Zero Waste Scotland's latest Carbon Metric Report⁴² shows textiles make up 4% of household waste by weight in Scotland, but account for nearly a third (32%) of the carbon impact of Scotland's household waste. We recognise the need for a strategic approach to textiles across

the waste hierarchy, from production and consumption through to recycling and end-of-life management.

For priority products, **we will set out implementation plans for the product stewardship measures we intend to take forward**. We will examine a wide range of policy tools to improve product standards, drive progress in reuse, repair, and refurbishment, or reduce the need for new products to be placed on the market. This will also account for measures being considered by the EU,⁴³ and by other governments across the UK, including recommendations of the UK Government's Circular Economy Taskforce.

We will consider both voluntary and regulatory measures, considering the responsibilities of different parts of the supply chain, the 'polluter pays' principle, and each actor's duty of care. Policies could be introduced individually or as part of broader EPR schemes.

Some aspects of product stewardship measures, such as product labelling requirements, are reserved to the UK Government and existing EPR schemes have been taken forward on a four-nations basis in recognition of the benefits this can bring. We will consider actions we can take in Scotland, how we can best collaborate with the UK Government and other devolved governments, and our asks of the UK Government where powers are reserved. As the UK Internal Market Act 2020 could prevent some measures from being effectively implemented in Scotland, we will respect the agreed Common Framework process to agree exclusions if required.

The bigger picture: Making an impact

- Coordinated and consistent incentives: To drive the right behaviours around how we treat materials in place across the waste hierarchy.
- The prioritised approach will help inform how any **future charges on single-use items** should be applied to ensure cohesion across the package of measures taken forward between now and 2030.
- We are ensuring a product stewardship approach aligns with our other measures across this Route Map in targeting specific products or materials. For example, the **household recycling co-design**, including a new statutory Code of Practice for recycling services, and the development of our **Residual Waste Plan** should be coordinated with product stewardship, to enable a consistent approach to specific materials.

Further actions to 2030

To complement our **Product Stewardship Plan**, we will seek to progress the following actions to 2030.

1. **We will develop further measures to tackle consumption of problematic single-use items and promote uptake of reusable alternatives (including consideration of environmental charging), prioritising action on single-use drinks cups.**

Reducing waste from single-use items and supporting the move to reusable alternatives will be a key part of our transition to a more circular economy, building on the success of policy measures such as the single-use carrier bag charge and the ban of certain single-use plastics products. We will continue to prioritise actions to tackle the impact of problematic single-use items, alongside a prioritised approach to product stewardship.

Through the Circular Economy Act, we have powers to introduce environmental charges for single-use items. We are considering the use of these new powers to introduce a charge for single-use drinks cups. Responses to a public consultation on initial proposals for how a charge could work will be published in early 2025. The findings, alongside other stakeholder engagement, will be taken into account when finalising our approach.

A charge or ban on unnecessary products provides a strong incentive to choose reusable alternatives or to avoid certain products altogether. The introduction of the single-use carrier bag charge in 2014 reduced plastic bag use by 80% in the first year alone.⁴⁴ Extending this approach to other products offers an opportunity to further drive sustainable consumption practices, linked to the development of a prioritised approach to product stewardship. Charges would also raise awareness of the environmental impacts of the products we use, helping to reshape our relationship with resources and supporting the transition to more sustainable models of consumption.

2. Develop measures to address the disposal of unsold consumer goods.

The management of unsold consumer goods and preventing either new or good as new products from being destroyed, has been identified as a key area for activity. The Circular Economy Act includes new powers to introduce restrictions on the disposal of unsold consumer goods. Action on unsold consumer goods will be built on further research and co-design with stakeholders and businesses and may include regulations to implement the powers in the Act. A proportionate approach will be taken, focusing on businesses and products that have the most significant environmental impact in Scotland and taking into account the availability of reuse and recycling as alternatives to disposal. French legislation has identified clothing, cosmetics, hygiene products and electrical items as priorities for restrictions. We have commissioned research this year into potential products and approaches in Scotland to inform consultation on next steps.

3. Develop measures to improve the reuse experience for consumers.

We will build on the considerable progress that has been made in the accessibility, acceptability, and perception of used items by identifying a package of support measures to optimise the reuse experience for consumers, building on the Revolve initiative.⁴⁵ Supported by Zero Waste Scotland, who will lead work with partners, we will work to learn from their experiences and accelerate progress, by identifying additional support measures such as funding routes, collaboration, and integration

with other policy initiatives. We will support the creation of reuse hubs to embed reuse as a constant alternative to buying new. This will include actions to integrate online reuse, enhancing skills and training, and collaboration with the wide range of existing public and private repair and reuse offerings. We will also facilitate sharing of best practice examples on reusable items as an alternative to single-use, such as North Ayrshire Council's Real Nappy Incentive Scheme,⁴⁶ to encourage uptake in other areas.

4. Deliver behaviour change-based approaches focussed on sustainable consumption, aligned to Let's Do Net Zero communications.

Recent research produced by Consumer Scotland, which considered a number of consumer markets (household goods, transportation, parcel deliveries, food and drink, and recreation/holidays), found that many of the sustainable behaviours and choices being presented to consumers can appear optional or are perceived as only having a limited impact on the environment or tackling climate change.⁴⁷ The research found that a lack of reliable trustworthy information is making it difficult for many consumers to fully understand the issues to be able to make informed choices. Strategic research projects currently underway by Scottish Government and Zero Waste Scotland will generate additional evidence and insights to help us understand what impacts consumer behaviours and choice. We will build on this and other sources, to develop and implement behaviour change and engagement approaches. This will align with Scotland's Let's Do Net Zero⁴⁸ communications campaign to raise consumer and business awareness of the impacts of consumption and alternatives to buying new, or at all. In developing these approaches, we will engage with a range of stakeholders in the public, private, and third sectors.

5. Identify ways to expand business models that prolong product lifespan.

We will continue to encourage, incentivise, develop and where necessary provide support for businesses and business models that increase the availability of long-lasting products on the market by incentivising upgradeability, repair, and circular business models. Examples could include leasing, subscription models or sharing libraries. Building on the work that Zero Waste Scotland are leading in this area with delivery partners, we will coordinate findings across this work and the steps we are seeking to take to investigate promotion of business-business reuse platforms (see action below).

6. Investigate further steps to promote business-business reuse platforms.

We are committed to supporting alternative business models so that leasing, repair and refurbishment, and reuse of products is easier and more attractive for businesses. There are good examples of this across Scotland and we are keen to promote and extend how easy these are to access, improve the quality of products and increase uptake of these services. Through this approach we aim to normalise leasing, repairing, buying second-hand, and selling unwanted items etc., which will extend product lifespans. Working with Zero Waste Scotland, we will undertake a focussed piece of work looking at ways we can promote sustainable behaviours and

business to business reuse platforms. This will look at themes such as support for operators to establish themselves in new areas, including:

- expanding existing service models to include new products;
- digitisation of stock to expand markets;
- developing partnership approaches to achieve operational efficiencies;
- investment in skills and training programmes to ensure expertise is available to make businesses viable.

Consultation respondents were supportive of measures to support businesses to reduce waste and normalise reuse, with emphasis on a collaborative approach which involves engagement with businesses and industry stakeholders.

Section 2: Reduce food waste

Priority actions:

- **Develop an intervention plan to guide long-term work on household food waste reduction behaviour change (by 2026/27)**
- **Develop with stakeholders effective options to implement mandatory reporting for food waste and surplus by businesses (from 2025/26)**

Further actions to 2030:

To complement and build on these priorities, we will seek to progress the following actions to 2030:

- Strengthen data and evidence
- Review the rural exemption for food waste recycling, as part of recycling co-design process
- Deliver enhanced support for businesses

Where we are now

Tackling food waste is one of the most important ways we can reduce the carbon impact of Scotland's waste. If food waste is sent to landfill, it releases methane - a greenhouse gas many times more potent than carbon dioxide. Some of these emissions can be avoided by recycling food waste, but we know that cutting down on wasted food particularly the waste of edible food, reduces the 'upstream' emissions, and costs, associated with growing, harvesting, processing, transporting, and buying food to begin with. UK research has suggested that achieving a 58% per capita reduction in food waste by 2050, would contribute up to 9.1 MtCO₂e and reduce cumulative emissions by 143 MtCO₂e by 2050.⁴⁹

The importance of tackling food waste as part of wider efforts to reduce emissions was reinforced in the Climate Change Committee's '2023 Progress Report to the UK Parliament' which recommended that food waste reduction policy be integrated into the Net Zero delivery strategy for the agriculture and land use, and waste sectors.⁵⁰ Acting on food waste to reduce emissions can also help Scotland become a Good Food Nation. The Good Food Nation (Scotland) Act 2022 provides an overarching framework for clear, consistent, and coherent future Scottish food policy and ensures that any new food related policy will be considered in the context of the national Good Food Nation Plan.

Scottish Government has committed to embedding food loss and waste consideration across relevant policies and strategies, including the Good Food Nation Plan; the Local Food Strategy; the Agricultural Reform Programme; and through the review of the 2019 Food Waste Reduction Action Plan, as well as this Route Map in order to help meet the United Nations Sustainable Development Goal 12.3 to halve food waste and reduce food loss by 2030.⁵¹

Reducing food waste remains a significant and growing challenge. Actions to reduce food waste in Scotland have not yielded results partly as a consequence of changed consumer behaviour since COVID-19. The latest Scottish food waste data estimate for 2021 suggests that over 1 million tonnes of food were wasted in Scotland during 2021, accounting for around 6% of Scotland's total carbon footprint that year.⁵² It also suggests that the scale of the problem has increased in Scotland over the past decade. In comparison to the 2013 baseline, in 2021 – despite a 1% per capita decrease in food waste at the household level – **there was a total 2% per capita increase and an overall 5% increase in the tonnage of food wasted.**

Scotland is not alone in facing this challenge. Globally, no country has successfully demonstrated how to reduce food waste at a sufficient scale; a comparable increase in food waste has been seen across the UK during the same period between 2018 and 2021.⁵³

While there will always be unavoidable, inedible food waste such as eggshells, coffee grounds, and apple cores, which are difficult to address, achieving an overall reduction in food waste will significantly contribute to our objectives to reduce waste and its carbon impact.

What we have done so far

Within this wider context, we have continued to deliver on our 2019 **Food Waste Reduction Action Plan**.⁵⁴ The Review of progress in delivering this Plan⁵⁵ highlights a range of achievements, including communication campaigns to raise awareness of food waste; funding **FareShare's 'Surplus with Purpose' scheme**; and the **Food Waste Reduction Business Support Service**,⁵⁶ run by Zero Waste Scotland.

The Scottish Government's £70m Recycling Improvement Fund (RIF) is helping to tackle food waste by **enhancing food waste recycling collections**. Since 2021, a range of local authority projects have been funded to deliver this improvement, including projects in: Edinburgh; Midlothian; Clackmannanshire; Western Isles; Perth & Kinross; Glasgow; North Lanarkshire; East Ayrshire; South Ayrshire; Angus; Highland; Fife; Falkirk, and Renfrewshire. As of December 2024, a total of £2.7 million in funding has been awarded to these local authorities to improve access and infrastructure for food waste recycling to help ensure food that is not used is recycled and its environmental impact is reduced.

We continue to part-fund the Waste and Resources Action Programme's (WRAP) **Courtauld Commitment 2030**,⁵⁷ which is engaging in collaborative action across the entire UK food chain to deliver farm-to-fork reductions in food waste, greenhouse gas (GHG) emissions, and water stress.

Our ongoing commitment to WRAP is helping to support the delivery of their **Food Waste Reduction Roadmap** within Scotland and across the UK. WRAP's latest progress report indicates that businesses that voluntarily signed up to the Roadmap commitments are making improvements across the supply chain, manufacturing, and retail services. However, it highlights that further action and improved decision-

making regarding the purchase, storage, and use of food in households are needed to reduce overall food waste.⁵⁸

However, as noted in the Review of our 2019 Food Waste Reduction Action Plan, pre-existing food waste reduction actions – although limited by the COVID-19 pandemic and the cost of living crisis – have not delivered results at the scale and speed required.

Delivering our vision

It is our view that sticking to the same path will not yield the results we need to see. A collective reset of our approach to tackling food waste in Scotland is required, as part of wider, cross-government food policy.

Our Review of the 2019 Food Waste Reduction Action Plan reinforced the need to redefine our approach to reducing food waste across all sectors and households in Scotland for both the short and long term to deliver the desired results.

The actions we set out here are based on the evidence we have so far on how best we can reset our approach and accelerate Scotland's goal to reduce food waste. We know that improving how we measure food waste and identifying where and why it occurs across businesses and households, is a critical step: better understanding of the volume and make-up of waste will allow for more effective action and allow for resources to be targeted to make a real impact. Available evidence also underlines the importance of focussing action on household behaviour change, testing different interventions to determine what actions deliver food waste reduction.

We will also seek to engage widely on this issue, including with the other UK governments on opportunities for coordinated action. We recognise that tackling food waste is a shared challenge across the UK and globally, and while we intend to do all we can within the competence of the Scottish Parliament to tackle food waste, progress will also rely on action by others, including at a UK-level.

Priority actions

We will develop an intervention plan to guide long-term work on household food waste reduction behaviour change.

Timescale: By 2026/27.

2022 and 2024 consultations

In 2024, respondents from a mix of sectors expressed support for this priority action, describing food waste reduction as critical in cutting carbon emissions, addressing biodiversity loss, decreasing the environmental impact of food production, and supporting food security. The proposal was also welcomed particularly strongly by respondents in 2022, with many individuals and organisations from different sectors highlighting the critical importance of public education and changing household behaviours that result in food waste.⁵⁹ Feedback across both consultations highlighted the need for a long-term programme of interventions that result in

sustained behaviour change rather than focusing on short term results; and the importance of considering food waste as part of wider food systems and food production.

What we will do

2021 data suggests householders contribute around 60% of Scotland's food waste, which is a per capita estimate of 111kg per person per year and the equivalent of 2.3 million tonnes of CO₂eq.⁶⁰ We believe there is great potential through behaviour change interventions to deliver a significant impact on household food waste. We know that available evidence to support household food waste reduction behaviour change is limited.

To tackle this, the Scottish Government and its partners aim to gather evidence about and review interventions that have potential to reduce household food waste. This will enable us to develop a behaviour intervention plan by 2026/27, focusing on a *test of change and improvement* approach. This action will help address gaps in food waste reduction behaviour change knowledge and inspire action at various decision-making stages, including when and how to purchase and store food. It will address the comments by respondents to the first consultation which emphasised the importance of changing household behaviours to deliver food waste reduction results, and the need for an evidence-based direction.

While there is a lack of international case-studies demonstrating food waste reduction at a sustained level, the intervention plan will draw together insightful research into household behaviours across Scotland.

As part of this, we will work with Zero Waste Scotland, householders and wider partners, including WRAP UK, Food Standards Scotland, Public Health Scotland and Local Authorities, to better understand household behaviours and link this intervention into the wider recycling co-design process (See the '*Modernise Recycling*' section) to reduce food waste and deliver more consistent recycling services and maximise the amount of waste – including food – being diverted away from disposal to residual waste.

Developing an understanding of suitable interventions will provide the foundation to guide long-term work on household behaviour change and provide the best available evidence for local and national governments to reduce household food waste at the scale and speed required.

We will develop with stakeholders effective options to implement mandatory public reporting for food waste and surplus by businesses.

Timescale: Develop from 2025/26.

2022 and 2024 consultations

There was broad consensus (85% agreed) in the [first consultation](#)⁶¹ response that reducing food waste should be seen as a priority and if delivered effectively, the proposals described would contribute to a reduction of food waste in Scotland. This was echoed in 2024's consultation, with several respondents recognising that mandatory reporting for food waste and surplus will facilitate effective monitoring, management and ultimately reduction of waste. The collaborative approach set out in the draft Route Map was welcomed by a range of sectors. However, organisations from a mix of sectors raised concerns about the additional cost, resource and administrative burdens that mandatory reporting might lead to, for example for SMEs; ensuring sufficient lead-in time for businesses; and questions on scope and implementation considerations, for example definitions of food waste.

What we will do

Business and non-business organisations contributed 427,505 tonnes, or 41%, of total food wasted in Scotland in 2021. This is equivalent to nearly 2.5 million tonnes of CO₂eq.

Utilising new powers included in the Circular Economy Act,⁶² the Scottish Government will take action to put in place more effective monitoring and management of food waste, by placing duties on businesses to report publicly on food waste and surplus.

The Scottish Government is aware that a number of companies already report on food surplus, redistribution, and the destination for waste stock. Around 60 businesses that operate in Scotland already report food waste and surplus on a voluntary basis (at a UK-wide level), and a range of large businesses from retailers to manufacturers are signed up to WRAP's UK-wide Courtauld 2030 voluntary commitment to take action to reduce food waste, for example through the use of food waste reduction action plans.⁶³

However, this voluntary approach is unlikely to lead to action at the scale required to help reduce business food waste in Scotland and it does not provide clear information on the volume of food waste produced by businesses.

Food waste will be the first area where we introduce mandatory public reporting of waste and surplus in Scotland. The Scottish Government intends to develop, with stakeholders, effective options for how public mandatory reporting of food waste and surplus by businesses can be fairly and effectively implemented.

We will ensure that the design and implementation of any new requirements are considered with stakeholders, including the business community, in line with the principles of the New Deal for Business. We recognise that reporting will be an additional ask on businesses, and that many food businesses work across the UK. We will continue to work with key partners to ensure we are engaging at a Scottish and UK level to maximise potential impact and simplicity for the business sector.

We want to learn from businesses' experience of reporting, building on what has been proven to work and understand what good practice looks like as the basis for developing reporting standards.

The Scottish Government will **establish an expert advisory group** to help develop the most effective way to implement mandatory public reporting for food waste and surplus by businesses, with the intention of developing options from 2025/26. Further consultation and engagement will be undertaken as part of the development of secondary legislation informed by best practice from existing voluntary reporting.

This collaborative approach will enable Scottish Government to engage with stakeholders, including business representatives and SEPA, to explore concerns raised in both consultations about the potential challenges to smaller organisations for implementing mandatory reporting. It will also provide an opportunity to strategically link to other policy developments, including the new circular economy monitoring and indicator framework and Digital Waste Tracking; and help define an appropriate and robust indicator of food waste across businesses.

Mandatory public reporting for other materials

Previous feedback through consultation and during the Parliamentary passage of the Circular Economy Act highlighted the potential role of mandatory reporting for other materials. Following our focus on food waste, we intend to explore the role mandatory public reporting could play in driving sustainable resource use across other material streams, such as clothing and textiles or construction waste. We will explore this with stakeholders, particularly business, giving due consideration to the evidence on environmental and climate impact of specific materials, existing measures in place, and alignment with the priorities set out in this Route Map.

The bigger picture: Making an impact

- Findings from the food waste behaviour change action will inform the delivery of our priority actions across this Route Map, including measures **embedding positive behaviour change** to deliver wider sustainable consumption, and maximise the use of recycling services through the household and commercial recycling co-designs.
- The development of mandatory reporting will also have wider strategic importance and lessons to learn, as we **work with businesses** to support them in reducing overall waste and becoming more circular.
- Findings from the **review of the 2019 Food Waste Reduction Action Plan** have informed our priority actions and underline the importance of delivering these actions as part of a wider reset in our approach in tackling food waste. Collectively they will strengthen data and evidence to inform targeted long-term action to reduce food waste in the years to 2030 and beyond.

Further actions to 2030

To complement and build on delivery of the priority actions above, we will seek to progress the measures outlined below to drive food waste reduction.

1. Strengthen data and evidence.

In partnership with Zero Waste Scotland, we will continue driving research into food waste reduction action and behaviour change. This will build on findings from the latest information about food waste in Scotland, including the review of the 2019 Food Waste Reduction Action Plan and the 2021 Food Waste Estimate. It will expand upon current research by Zero Waste Scotland on the food redistribution landscape, capacity, and challenges in Scotland, as well as research into data and insights in the home, and development of the household intervention plan as outlined in the priority measures. Strengthening data and evidence will significantly help to address the challenges and opportunities for food waste reduction across Scotland, and specifically within households.

2. Review the rural exemption for food waste recycling, as part of recycling co-design process.

As outlined in the review of the 2019 Food Waste Reduction Action Plan, the 2019 commitment to consult on this exemption did not take place due to external pressures, such as the COVID-19 pandemic. The Scottish Government remains committed to reviewing the rural exemption for food waste collections. This will be considered through the household recycling co-design process (see *Modernise Recycling* section) and inform the development of a future statutory recycling Code of Practice.

3. Deliver enhanced support for businesses.

Through our delivery partner Zero Waste Scotland, we will seek to review existing support for businesses and investigate alternative forms of support to enhance food waste reduction activities. This could include updating education and training tools and/or building on the Love Food Hate Waste workplace training or providing sector-specific best practice guides. To provide the optimal level of support, we would look to explore incentives for research, development, commercialisation and the adoption of bioprocessing techniques and bioeconomy opportunities in Scotland.

Section 3: Embed circular construction practices

Priority action:

- Support the development of a model for regional Scottish hubs and networks for the reuse of construction materials and assets (from 2025 - 2027)

Further actions to 2030:

To complement and build on this priority, we will seek to progress the following actions to 2030:

- Develop new and promote existing best practice standards in circular practices within the construction sector, and assess the options for both voluntary and mandatory compliance
- Investigate and promote options to incentivise and build capacity for the refurbishment of buildings
- Investigate and promote ways to reduce soil and stones disturbance, movement and volumes going to landfill
- Review opportunities to accelerate adoption of climate change and circular economy focussed purchasing in construction
- Consider how devolved taxes can incentivise the use of recycled aggregates and support circular economy practices

Where we are now

Construction and demolition accounts for up to half of all waste produced in Scotland. This waste is largely soil excavations from housing and infrastructure projects as well as bricks, tiles, and concrete from demolition. Scotland has met the European Union target of 70% recycling and reuse of construction and demolition waste by 2020 every year since 2011. The latest data indicates a recycling rate of 90.4% in 2022.⁶⁴ However, there is a need to focus further up the waste hierarchy, reducing waste and reusing resources.

In 2022, the construction and demolition sector generated 4.6 million tonnes of construction and demolition waste, down from 5.8 million tonnes in 2018. Waste varies greatly year to year due to differences in construction and wider economic activity. This variation is currently one of the main factors determining whether we achieve the previous 15% waste reduction target in any given year. Despite meeting this target two years in a row according to the most recent data (2022),⁶⁵ we face significant challenges in consistently meeting it without accelerating action to reduce waste from construction and demolition.

What have we done so far

Actions to drive circular economy practices in the sector include introducing requirements through the **National Planning Framework 4** to encourage developers to minimise waste and carbon intensity in construction projects; promoting **The Net Zero Public Sector Buildings Standard**, which is a voluntary standard to support public bodies to meet their net zero commitments, publishing new **Sustainability in Construction** guidance; the establishment of the Construction Accord and supporting the **Construction Scotland Innovation Centre** (now BE-ST).⁶⁶

Research from Zero Waste Scotland and Green Built Environment sets out evidence on the feasibility and potential for increased material and asset reuse in the construction and demolition sector, based on workshops with representatives associated with the Scottish construction sector.⁶⁷

Delivering our vision

Priority action

Support the development of a model for regional Scottish hubs and networks for the reuse of construction materials and assets.

Timescale: Scoping work commenced in 2023; ongoing feasibility research and engagement in 2024/25; development of investment ready models from 2025 to 2027.

2022 and 2024 consultations

In the [first consultation](#),⁶⁸ 79% of respondents agreed or strongly agreed with the proposals in this package, and there was a high level of support from the construction sector (82%). In the most recent consultation, most responses, including from within the construction and development sector, were broadly supportive of this priority action, with a few acknowledging the leading role the construction sector can play in implementing circular economy practices and others welcoming efforts to share best practice, reduce barriers, and facilitate reuse of materials. While support levels were high, respondents raised key issues that the feasibility work should consider, including quality assurance of secondary materials, and systemic, regulatory, licensing, and spatial challenges.

What we will do

It is our view that a programme for reuse of construction materials would provide a much-needed coordinated approach and logistical platform to expand reuse opportunities across the sector. This intervention provides the greatest opportunity and impact to support the sector directly to drive waste reduction and reuse, help build market confidence and provide lower carbon options for use on construction projects.

We know that there are a wide range of materials used in construction and arising from demolition that are not currently reused, with estimates suggesting only 5-10% of materials are currently being reused.⁶⁹ Achieving greater use of materials which still have function and meet regulatory standards will contribute towards the waste reduction and emission reduction targets, by avoiding the use of unnecessary virgin materials and maximising the useful life of embedded carbon.

We agree with stakeholder feedback from the first consultation, that a regional approach is most likely to have the best impact. We will **prioritise supporting the sector to develop regional Scottish hubs and networks for the reuse of construction materials and assets**. This is in line with the identification of Circular Economy Materials Management Facilities as a national development in National Planning Framework 4.⁷⁰ This measure will aim to:

- Provide **coordinated support** for the development of regional platforms to store, stock and source used construction materials. Learn from national and international experience to help understand and address the challenges of supply and demand alignment, the geographic dispersal of materials, and the price drivers that favour new, high carbon materials over used.
- Promote **best practice** waste prevention and materials efficiency for new construction or refurbishment. Help facilitate the use of tools and processes that support a whole project life digital approach to material management such as Building Information Modelling ('BIM'), circularity statements, material/site waste management plans, Materials Passports, deconstruction audits, and quality standards such as the Building Research Establishment Environmental Assessment Method ('BREEAM').
- Assess **policy measures and interventions** which would help extend the lifespan of buildings and materials through durability, repairability, retrofit and refurbishment. Identify the barriers and skills gaps that need to be addressed to facilitate a circular economy approach to maintaining our current building stock and infrastructure.
- Align activities with those provided by **BE-ST** and other stakeholders to promote the role of digital technology and SMART construction tools and processes that increase resource efficiency and provide whole life data on building materials (material passports) that can be used to maintain and extend building lives and provide Material Banks through accurate deconstruction audits for future material reuse.

To drive this forward, early scoping research was commissioned in 2023 alongside a place-based feasibility study for a construction materials reuse hub in Glasgow. Building on this, a [feasibility study of regional materials hubs in Scotland](#) has been undertaken in 2024/25 by Zero Waste Scotland.⁷¹ This work looked at barriers and actions to support progression, as well as regional disparities, and involved engagement with Scottish construction industry stakeholders. Further feasibility work and engagement will continue. and involved engagement with Scottish construction industry stakeholders. Further feasibility work and engagement will continue.

The Scottish construction sector holds great expertise and there are some innovative projects in this space; we recognise that this measure is more likely to succeed if the

sector plays a leading role. The Scottish Government wants to work in partnership with the sector and other stakeholders to develop this measure, and to consider and address the challenges highlighted through the feasibility work and responses to both Route Map consultations. As part of this process, we will draw on stakeholder expertise to understand what support industry may need to enable them to lead on the creation of platforms and locally trial, pilot and learn from what works. We will assess the support requirements around skills, processes, and technology to make materials ready for reuse, highlighting the opportunities for green skills transfer and new green circular job creation.

The bigger picture: Making an impact

- This intervention provides the greatest opportunity and impact to support the sector to drive waste reduction and reuse, help build market confidence and provide lower carbon options for use on construction projects.
- It can support creation of **new incentives for skills, training, green jobs and just transition**: through the creation of markets and processes for used materials, deconstruction of buildings for material reuse, sustainable procurement, and training requirements and employment opportunities.
- **Emissions reduction and tackling biodiversity loss**: Through maximising the life of useful products and materials, reducing mining, extraction practices and the disturbance of soils associated with virgin extraction.
- **Supporting economic transformation**: By transitioning the construction sector to a more sustainable material footprint, supporting a just transition, and maintaining economic viability at local and national levels.

Further actions to 2030

Below we outline actions we will seek to progress to complement and build upon the priority action above.

1. Develop new and promote existing best practice standards and assess the options for both voluntary and mandatory compliance.

We will seek to review existing practice and work with industry to understand the opportunities and requirements for successful adoption and compliance. Work being led by Zero Waste Scotland on the construction reuse priority action above will support this activity. Subject to findings, we will develop a strategic plan for any new measures or standards taken forward, and take a phased approach to implementation based on material type, business or project size. While we believe that a significant impact can be achieved on a voluntary basis, we will also explore options for mandatory compliance.

2. Investigate and promote options to incentivise and build capacity for the refurbishment of buildings.

There is a need to move beyond management of waste materials to maximising the lifespan of carbon and material intensive structures. Zero Waste Scotland will undertake research into the potential barriers and opportunities for increasing the number of buildings that are refurbished. We will also seek to work with relevant

stakeholders to better understand how the local application of circular economy planning principles set out in NPF4 (e.g. NPF4 Historic Assets and Places Policy 7, Brownfield, vacant and derelict and empty buildings Policy 9, and Zero Waste Policy 12), can support more refurbishment of existing buildings over new build.

3. Investigate and promote ways to reduce soil and stones disturbance, movement and volumes going to landfill.

The organic matter in topsoil is a valuable carbon sink and a rich biodiversity habitat. The construction of buildings and infrastructure, as well as the drainage of soils to create public open space, can reduce levels of organic matter in soils and release carbon. This intervention will support better understanding of the opportunities to reduce soil disturbance, and soil movement within and off site. Linking to the wider work led by Zero Waste Scotland to identify and support best practice in the sector (see action 1 above), we will seek to investigate how, and identify and promote what technical support is needed to enable sector behaviour and design change to minimise soil disturbance and removal off site, in alignment with National Planning Framework 4.

4. Review opportunities to accelerate adoption of climate change and circular economy focussed purchasing in construction.

The public sector is responsible for over half of all expenditure on construction activities in Scotland.⁷² Zero Waste Scotland will examine the potential for sustainable procurement practices to improve material efficiency and reduce waste at all stages in a construction project. Through this approach it can raise awareness of best practice and the opportunities that are available throughout the construction process, during building use and at end of life.

5. Consider how devolved taxes can incentivise the use of recycled aggregates and support circular economy practices.

We will consider how devolved taxes can be used together to incentivise the use of secondary aggregates and support circular economy practices. The Scottish Parliament has passed the Aggregates Tax and Devolved Taxes Administration (Scotland) Act 2024, which sets out the key arrangements for a devolved environmental tax that aims to encourage the minimum necessary exploitation of primary (i.e. fresh or new) aggregate.⁷³ The planned introduction date of the Scottish Aggregates Tax is 1 April 2026.

2: Modernise recycling

Summary of priority actions:

Household:

- Facilitate a co-design process for high quality, high performing household recycling and reuse services (2024 - 2026)

Commercial:

- Review of compliance with commercial recycling requirements (2026)
- Co-design measures to improve commercial waste service provisions (commencing by 2030)

Vision statement

Recycling helps to conserve our natural resources, keeps valuable materials flowing through our economy and reduce the amount of waste sent to landfill. We want Scotland to become a world leader in recycling, where recycling and reuse services are easy to use and accessible to all, and support and encourage positive choices. We want a high-performing recycling system that includes: modernised recycling services for households and businesses across Scotland; optimises the performance of collection services; and can recycle most waste types to maximise diversion of waste from disposal. Increasing the amount of materials recycled and increasing the proportion of these recycled in Scotland will deliver carbon reductions, reduce the environmental impacts associated with extracting new raw materials, and create a range of important economic opportunities to reprocess and reuse materials here in Scotland.

Strategic objectives

This section has two key objectives to improve recycling from households and commercial organisations, including businesses:

- **Modernise household recycling and reuse** services, improving and optimising performance. This is about making the right choices the easier choices for households, ensuring appropriate recycling and reuse standards and high performing services across Scotland in order to maximise diversion of recyclable waste from disposal. This means co-designing refreshed service standards that promote high quality reuse and deliver more consistent recycling services across Scotland that reflect best practice and take account of local context.
- **Support businesses in Scotland to reduce waste and maximise recycling**, with clear incentives in place to ensure that the most sustainable choices are the easiest choices. This means ensuring the right conditions for high quality and reliable commercial waste management services; and supporting ongoing investment in services, infrastructure, and innovation to minimise wider impacts such as air pollution and waste crime. We want a clear focus on commercial premises and on materials where specific barriers exist to improving recycling,

and to have high quality, timely commercial waste data to better understand the composition of commercial waste streams, and to co-design interventions that maximise prevention, reuse, and recycling.

Measuring progress

Scotland's previous targets have focussed on **increasing household and commercial recycling rates**, including the target to increase recycling of waste from all sources to 70% by 2025. Official waste statistics published annually by SEPA provide the data to assess progress against these metrics.⁷⁴

Since 2011, Zero Waste Scotland's annual publication **Carbon Metric** has been helping to measure our progress and demonstrating how waste reduction and sustainable waste management can play a critical role in the fight against climate change. Most recent data from 2021 shows the carbon impact of household waste in Scotland was 12.8% below the 2011 baseline.⁷⁵

The Circular Economy Act includes powers to set **new circular economy targets for Scotland** (see the '*Strengthen the circular economy*' section for further details).

The Act also allows for **local recycling targets** to be set from 2030 for local authorities. These will be set and delivered through a joint action focussed improvement programme between Scottish and Local Government. Through this, local targets, underpinned by funding agreed as sufficient to enable their delivery, will be jointly set between Scottish Government and individual local authorities, and a delivery programme will be jointly devised that would enable Councils to increase their recycling and reuse rates.

Where we are now

Recycling is part of everyday life in Scotland. Between 2004 and 2011 Scotland's **household recycling rate** more than doubled. However, in recent years progress has slowed. Scotland's household recycling rate remained at around 45% for several years, and it fell back to 42% in 2020, in part due to the impacts of COVID-19. In 2023, the recycling rate showed some signs of recovery, standing at 43.5%.⁷⁶ Across Scotland, local authority household recycling rates vary significantly. In 2023 they ranged from 20.7% to 58.2%, and the local authorities with lower recycling rates tend to manage the largest national shares of household waste.

SEPA estimates that the **commercial and industrial recycling rates** are currently around 53%, and waste has steadily reduced with a 23% decrease between 2011 and 2022.⁷⁷ The changes in commercial waste management are significant and highlight the success of the waste industry in supporting their customers to recycle more and dispose of less.

Most households and commercial premises in Scotland have access to common recycling services, but it often remains easier to throw things away than recycle or reuse them. For Scottish households, just over half of what we throw away at the kerbside could be recycled through existing systems.⁷⁸

Currently, the incentives to recycle are weak and there remains confusion about what materials can be recycled. This means that large quantities of recyclable materials are still sent for disposal when they could be recycled.

SEPA data shows that just under a fifth of everything put out for recycling by householders is non-recyclable or not the target material.⁷⁹ This contamination makes managing recycling collections more costly and can mean the whole load must be taken for incineration or landfill.

Reducing waste and recycling play a key part in Scotland's journey to net zero. Household waste makes up approximately 21% of Scotland's waste by weight, but 55% of the total waste carbon emissions, while the top five most carbon intensive materials accounted for under half (46%) of all household waste by weight in 2021, but 83% of household waste carbon impacts.⁸⁰

What we have done so far

Modernising recycling

We have delivered and continue to progress key measures to modernise recycling in Scotland.

Scotland's landmark **Waste (Scotland) Regulations 2012**⁸¹ amended the Environmental Protection Act 1990 to place requirements on Local Authorities to provide a comprehensive recycling service to their householders and established the minimum standards for that service. In partnership with the Convention of Scottish Local Authorities (COSLA), the Scottish Government agreed in 2015 the voluntary **Scottish Charter for Household Recycling**,⁸² which seeks to deliver more consistent recycling collections across Scotland.

In 2021, the £70 million **Recycling Improvement Fund**⁸³ was introduced by the Scottish Government to enable local authorities to improve recycling infrastructure and services across Scotland. As of December 2024, over £63 million has been awarded to 25 local authorities, funding a range of service improvements with the potential to reduce CO₂e emissions by over 60,522 tonnes each year, the equivalent of taking more than 32,000 cars off the road.

In addition, £1.083 billion of funding has been made available through the Strategic Waste Fund between 2008 and 2022 to assist local authorities in the implementation of the Zero Waste Plan, including support for projects to drive local improvements in recycling.⁸⁴

Building on this platform we have set out a range of further measures to improve services, increase the recyclability of products, increase capture at end-of-life for products and provide greater incentives for domestic reprocessing. This includes **extended producer responsibility (EPR) schemes** for packaging, waste electrical and electronic equipment (WEEE) and batteries, with the first scheme for packaging to begin from 2025. Packaging EPR is anticipated to increase recycling rates for packaging materials to 76% by 2030.⁸⁵ In addition to requiring packaging producers

to meet certain recycling targets, it will require producers to cover the full net cost of managing their packaging when it becomes waste. Funding will go to local authorities, from producers, to fund effective and efficient collection systems for household packaging waste.

In 2022 Scottish Government published an updated **Marine Litter Strategy for Scotland**⁸⁶ with an action plan that included improving the waste management of end-of-life fishing and aquaculture gear. Research has detailed the nature and volume of waste arisings from these industries and focus is now on considering the gaps in waste management infrastructure to be filled in order to avoid landfill or transportation abroad for recycling. Co-design is at the heart of this policy area, developing solutions to a challenging problem, which threatens the health of our environment with plastic pollution, and restricts our circular economy growth.

We remain committed to the delivery of a successful **Deposit Return Scheme (DRS)** to increase recycling rates for single use drinks containers to at least 90%. Scottish DRS Regulations were laid in 2020 and establish the framework for DRS in Scotland. The planned implementation of those Regulations was delayed following the UK Government's refusal to agree a full UK Internal Market Act exclusion for the scheme in 2023. We are working closely with the UK Government and the Department of Agriculture, 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.

Moving forward, household recycling measures are a significant feature of the **Circular Economy Act**.⁸⁷ As well as the power to introduce household waste recycling targets for local authorities from 2030, the Act includes provision for a new statutory Code of Practice on household waste recycling which will set standards for recycling and reuse services across Scotland. These are covered in more detail in the actions section below.

Tackling Waste Crime

We are taking forward a range of measures to address waste crime. We remain clear that illegal waste activities have no place in Scotland, undercut legitimate operators, and remove materials from the circular economy.

Working with partners, including the Serious Organised Crime Taskforce, the Scottish Environment Protection Agency (SEPA) regulate businesses to protect and improve the environment taking appropriate action against those who do not comply with legislation or authorisations. SEPA has utilised a multi-agency approach working with partners using targeted interventions to disrupt, impact and reduce waste crime, monitoring over 242 active cases including 21 high priority sites (as of November 2024), with some linked to Serious Organised Crime activity.

The **National Litter and Flytipping Strategy** sets out how national and local government, business, third sector, communities and individuals can work together to support behaviour change, improve infrastructure, and strengthen enforcement, in order to protect our environment and prevent the escape of materials from the

economy. The six-year Strategy and Year 1 Action Plan⁸⁸ were published in 2023. An update and [Year 2 Action plan](#)⁸⁹ was published in October 2024.

The Circular Economy Act includes new powers for SEPA and Local Authorities to search and seize vehicles involved in waste crime. This has been used to good effect by Local Authorities in England. The Act also allows for further increase to the fixed penalty notices for flytipping to a maximum of level 3 of the standard scale (£1,000) and powers to improve flytipping reporting which will be beneficial to understanding and addressing flytipping in the future.

SEPA and Scottish Government are working together to bring existing environmental permitting regimes into the **single integrated authorisation framework** provided by the Environmental Authorisations (Scotland) Regulations 2018. This will include waste carriers who, for example, will be subject to a more rigorous “fit and proper person” test, making it easier to keep criminals out of the waste collection business and enabling SEPA to revoke authorisations where a person or their associate has been convicted of a relevant offence such as fly-tipping. The framework will also improve SEPA’s enforcement powers and includes powers to issue regulatory notices to address contraventions of the regulations.

SEPA and Scottish Government are working with the other three UK nations to develop **Digital Waste Tracking service** which will bring a step change in transparency and accountability around the movement of Scottish waste across the UK from start to finish. The improved information this provides will allow SEPA to prioritise action to tackle waste crime and, more generally, target interventions much more effectively.

Delivering our vision

The next section sets out the actions we will prioritise to unlock progress; and the further actions we will seek to take to complement the priority measures to 2030.

Measures are grouped under our two objectives:

- **Household:** Modernise household recycling and reuse services, improving and optimising performance.
- **Commercial:** Support for business and commercial premises in Scotland to reduce waste and maximise recycling.

Section 1: Household recycling

Priority actions:

- **Facilitate a co-design process for high quality, high performing household recycling and reuse services (2024 - 2026)**

Further actions:

To both complement and build on our priority actions, we will seek to progress the following actions to 2030:

- Introduce a statutory Code of Practice for household waste services
- Introduce statutory recycling and reuse local performance targets for household waste services (from 2030)
- Undertake a consultation to explore kerbside collection of textiles
- Strengthen the Householder's duty of care obligation in relation to household waste
- Give local authorities more tools to support household recycling and reduce contamination
- Undertake a review of waste and recycling service charging
- Review the monitoring and reporting framework for local authority waste services
- Develop options and consult on the introduction of end destination public reporting of household recycling collected

Priority action

Facilitate a process to co-design high quality, high performing household recycling and reuse services with households, COSLA, local authorities and service operators.

Timescale: Scoping work commenced in 2023; delivery of the co-design process started with methodology development in 2024 and will conclude in 2026.

2022 and 2024 consultations

Proposals across the household recycling package were well supported. 82% of respondents agreed with the household recycling proposals in the 2022 consultation and 76% of those who responded in the [2024 consultation](#) agreed or strongly agreed with the proposals.⁹⁰ Most respondents welcomed the idea of the co-design to deliver more consistent service provision across the country, while some noted that a 'one size fits all' approach is unlikely to work given Scotland's diverse geography, local housing stock and existing recycling infrastructure. One of the main concerns raised was that actions may be difficult to implement due to the financial challenges facing the public sector and lack of available local authority funding and capacity.

Some respondents emphasised the importance of ensuring that the proposed actions do not undermine or interfere with the implementation of legislation related to Extended Producer Responsibility and the Deposit Return Scheme.

What we will do

The Circular Economy Act provides for a transition from a voluntary to a statutory approach to Scotland's Household Recycling Code of Practice. We will **co-design the new Code of Practice to create modern, efficient, and affordable waste and recycling service standards that are deliverable**. This approach will also promote greater prioritisation and mainstreaming of reuse, aligning with our 'Reduce and reuse' initiatives. See below for more information on the Code of Practice.

The co-design will be evidence-based, identifying areas that can be strengthened and updated in order to deliver better services across Scotland and increase recycling rates.

This process has already begun with methodology development, scoping, and initial phases of engagement between Scottish Government and local government. **Partnering with COSLA, local government and other stakeholders**, the co-design will be delivered across multiple years and **conclude by the end of 2026**. As the co-design methodology has developed, engagement with local government has indicated that more time than originally anticipated will be required to complete the process to jointly develop a new Code of Practice.

We will draw upon the wealth of experience, expertise and best practice within Scottish local authorities and elsewhere, to design effective modern services for the future. This includes ensuring that the co-design process is underpinned by the principles set out by the Verity House Agreement, focusing on collaboration to achieve better outcomes locally for individuals and communities.⁹¹ The co-design process will be informed by:

- **Research**, indicating the features of high-performing services in different geographical, socio-demographic and operational contexts, building on our previous 2021 research⁹² and consideration of behavioural insight evidence.
- Existing **service structure, function and performance review**, building on the platform created by the Scottish Household Recycling Charter and incorporating the findings of our review of its Code of Practice.
- Upcoming **service demands** and **material flow changes**: This will account for the latest information regarding waste composition,⁹³ including the large volume of food waste that is thrown away and the associated carbon emissions. It will account for future changes, for example as a result of DRS and packaging EPR. It will consider the most effective approaches to implementation of our commitment to require kerbside collection of plastic film and flexible packaging in Scotland, to be reflected in the statutory Code of Practice. Consideration will also include our Climate Change Plan update commitments regarding consultation on the current rural exemption and food separation requirements for food waste collections; mandatory separate collection of bio-waste (e.g. garden waste) and

textiles in line with EU requirements;⁹⁴ and delivering on recommendations made by the independent review of incineration in Scotland.⁹⁵

- A review of **funding mechanisms** for services to ensure modern, efficient and affordable outputs, building on key findings and the investments made through the former Strategic Waste Fund and the Recycling Improvement Fund, and the provisions set out in the Circular Economy Act. Changes to waste, recycling and reuse services and the move to a mandatory Code of Practice will be closely linked to the forthcoming Packaging Extended Producer Responsibility and its funding model, and the proposed review of service charging to ensure that this is incentivising the right choices to increase recycling (see below).
- Assessment of **effective communication practices** to inform future standards.
- Consideration of any additional **infrastructure** required to deliver high-performing services, linked to wider circular economy infrastructure requirements set out elsewhere in the Route Map, and the development of the waste reprocessing infrastructure report for publication in 2025, as set out in the Circular Economy Act.
- Assessment of the potential for **multiple local authorities to collaborate or partner** to deliver services, and the potential efficiencies and economies of scale that this may offer.

Food waste

A focus on improving food waste will be vital in this co-design process: recycling services and participation rates and reducing contamination of recycling that is collected. The latest household waste composition analysis for Scotland (2021-2023) shows that reducing and recycling food waste is one of the biggest challenges Scotland faces in our efforts to tackle the climate impact of Scotland's waste. Along with textiles, food waste is one of the most carbon intensive household waste materials, yet every year Scottish households threw away 330,000 tonnes of food waste, an average of 131 kilogrammes per household in the residual waste bin.⁹⁶ This confirms our analysis from the first Route Map consultation, that food waste recycling 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.

Residual waste

We know that there is strong evidence that encouraging households to minimise residual waste is key to driving recycling rate improvements.⁹⁷ In other countries, this has been achieved in multiple ways, for example through restricting effective weekly residual waste capacity (via smaller bins and/or less frequent collections, as promoted through Scotland's existing recycling Code of Practice), enforced volume limits (as in Wales), or other fiscal measures to incentivise reducing residual waste and maximising reuse and recycling. The co-design of the new Code of Practice will consider how existing measures to restrict household residual waste capacity can be supported or improved.

The bigger picture: Making an impact

- Household recycling: The recycling co-design process will establish a framework for future recycling measures, shaping a future statutory household Code of Practice and aid in meeting local targets.
- Reduce and reuse: The co-design process and statutory Code of Practice will promote waste reduction and reuse, linking to producer responsibility and product stewardship measures. Product Stewardship priorities must inform and be informed by the co-design process, to ensure future policies and actions are aligned to target priority materials across the waste hierarchy.
- Decarbonising disposal: Removing recyclable material from residual waste, especially plastics, can substantially reduce emissions associated with incineration, aligning with policies incentivising the recovery of more plastics from residual waste, and the inclusion of incineration in the UK Emissions Trading Scheme.
- Future infrastructure requirements: A key cross-cutting theme for a modern circular economy, we intend to take a strategic approach to this, working alongside public and commercial sector partners; the co-design process will support this process, exploring what Scotland will need in the future to modernise recycling.

Further actions to 2030

Here we set out further actions we will seek to take to 2030 to modernise household recycling and reuse services. The measures listed intend to build on and complement our priority action.

1. Introduce a statutory Code of Practice for household waste services, with a focus on recycling and reuse.

The Circular Economy Act requires that Scottish Ministers prepare and publish a statutory Code of Practice on household waste recycling.⁹⁸ This represents a shift away from the voluntary approach to Scotland's Household Recycling Charter towards a mandated approach to household waste collection services. We believe that putting the new Code on a statutory footing will provide a clear strategic direction for household recycling in Scotland, accelerate improvements to both the quality and quantity of recycling and improve the consistency of services. This statutory Code of Practice will ensure that services are high performing in different local contexts and put people at the heart of how services are designed by maximising participation, material capture, and quality. Plans to develop a statutory Code of Practice were largely welcomed by respondents to the 2024 consultation, recognising this action as a key driver for improving household recycling rates. As outlined above (see priority action), the new Code of Practice will be co-designed with local authorities and other relevant stakeholders to take into account the different geographical and community needs that local authorities and residents

across Scotland encounter, addressing concerns raised in consultation responses about presenting an unsuitable 'one-size-fits-all' approach.⁹⁹

The new Code of Practice, as an output of the co-design concluding by the end of 2026, will then be subject to public consultation. The implementation date for local authority services will be dependent on the time required for local authorities to develop and align their services with the statutory requirements.

2. Introduce statutory recycling and reuse local performance targets for household waste services from 2030 onwards.

The Circular Economy Act enables the setting of statutory local recycling and reuse targets (e.g. recycling, preparation for reuse and composting) for local authorities to help drive further improvements in local recycling performance for household waste services from 2030. This will complement the co-designed statutory Code of Practice (see above) and the wider work to develop a new circular economy monitoring and indicator framework and circular economy targets (see '*Strengthen our circular economy*' section). Local targets must be evidence based and will be informed by research on metrics that measure the quality and quantity of materials collected. To support this, new research on the design, application and use of targets across the world was published.¹⁰⁰ We recognise that targets must be achievable and fair; local authorities are at different starting points, with varied geographies and demographics, and service providers must have the tools needed to meet the required standard. The Scottish Government will, therefore, work with local government through an action-focussed improvement programme to set achievable, appropriate targets as part of the development of secondary regulations and consultation regarding new targets ahead of 2030.

3. Undertake a consultation to explore kerbside collection of textiles

In line with new EU policy, the Scottish Government will consult on the separate collections of textile waste from households. This will consider whether kerbside collection of textiles or alternative means of collection by local authorities should be a mandatory service in Scotland. In 2021 textiles accounted for nearly a third (32%) of the carbon impacts of Scotland's household waste.¹⁰¹ The consultation aims to provide the Scottish Government with further intelligence and information from householders, local authorities and the third sector on the feasibility of household textile collections. This will enable the policy to be considered through the co-design of the new Household Recycling Code of Practice, if assessed to be practical and desirable.

4. Strengthen the Householder's duty of care in relation to household waste: making a breach of the householder duty of care a criminal offence and creating a new fixed penalty notice regime to enforce this duty.

Householders have some specific, limited duty of care obligations to take reasonable steps to ensure that their household waste is only transferred to a legitimate waste carrier or other person authorised to transport waste. They are subject to separate obligations with respect to the storage of household waste on their property. The Circular Economy Act amends the Environmental Protection Act 1990 to make a breach of the householder's duty of care a criminal offence and provides local authorities, and other relevant enforcement bodies, with powers to issue Fixed Penalty Notices as an alternative to prosecution for this offence. The policy intention is to aid in the prevention of fly-tipping where flytipped waste can be traced back to a particular household. This will be developed in parallel with action 5 below, to ensure a coherent set of new enforcement powers for local government. A Fixed Penalty Notice for breach of the householder duty of care may only be issued where there is a reason to believe that the householder has breached the duty. If a householder has taken reasonable steps to comply with their duty of care, then there would be no basis to issue a Fixed Penalty Notice. There will be an initial focus on communication and awareness raising to ensure households are aware of their duty of care responsibilities and the new offence. Timing for delivery will be informed by the household recycling co-design process.

5. Give local authorities more tools to ensure that households are properly using their recycling containers and to reduce recycling contamination.

There are currently limited powers for local authorities to ensure that households are properly using their recycling containers or to prevent recycling being placed in non-recyclable containers. Current criminal enforcement routes are onerous and expensive for local authorities. The Circular Economy Act amends the Environmental Protection Act 1990 to enable local authorities to deploy an escalating response to non-compliance, by initially issuing written warnings and where those warnings are not heeded, civil penalties, or in more serious circumstances, Fixed Penalty Notices to householders who consistently place the wrong materials in waste and recycling bins. This provides local authorities with greater flexibility in their approach and more proportionate enforcement tools. Similar powers are already available to local authorities in England (written warnings and civil penalties) and Wales (Fixed Penalty Notices) to enforce persistent or deliberate contamination. This will be developed in parallel with action 4 above, to ensure a coherent set of new enforcement powers for local government. Timing for delivery will be informed by the household recycling co-design process.

6. Undertake a review of waste and recycling service charging.

Currently, households in Scotland can be charged for collection of certain waste and recycle streams, such as garden waste or uplift of larger items. We intend to conduct a review of waste and recycling service charging to ensure that we have the right incentives to reduce waste and maximise use of recycling and reuse services.

This will enable the policy to be considered through the co-design of the new Household Recycling Code of Practice, and collective decisions taken based on the evidence provided.

7. Review the monitoring and reporting framework for local authority waste services, and subsequently strengthen where necessary.

As part of the recycling co-design and development of local statutory targets, we intend to review in partnership with local government where additional or alternative reporting may be required to help drive and assure further service improvements, and public confidence in local services. This will take into account existing national and local reporting arrangements already in place or planned, for example through measures like a UK-wide Digital Waste Tracking system and the development of a new circular economy monitoring and indicator framework for Scotland (see '*Strengthen the circular economy*' section). The intention of this work is to ensure consistency of data availability, quality and accessibility, a cross-cutting theme across this Route Map. We will seek to take forward appropriate improvements identified, consult on and implement required changes prior to commencing statutory targets for local authorities in 2030.

8. Develop options and consult on the introduction of a requirement on local authorities and others to report publicly on end destination of household recycling collected.

To increase transparency and strengthen public confidence in recycling services, and boost Scotland's ability domestically to manage its waste, we will develop options for and consult on a statutory duty on local authorities to report on the end destinations of collected material. This will include any necessary responsibility for those involved in waste management supply chains to provide data. Both Route Map consultations showed widespread support for this proposal, with many respondents agreeing that it would help improve public confidence in recycling. We recognise the need to be mindful of how additional reporting requirements on actors in the supply chain are placed and will carefully consider links to existing and planned measures, including UK-wide Digital Waste Tracking, as options are developed.

Section 2: Commercial recycling

Priority actions:

- Review of compliance with commercial recycling requirements (2026)
- Co-design measures to improve commercial waste service provisions (commencing by 2030)

Further actions to 2030:

To both complement and build on these priorities, we will seek to progress the following action to 2030:

- Conduct a national compositional study of waste from commercial premises

Priority actions

Review of compliance with commercial recycling requirements.

Timescale: Preparatory work for the review has already commenced, and findings will be reported in 2026.

2022 and 2024 consultations

Most respondents to the first consultation agreed that the proposed review of compliance would help gather insight and contribute to an evidence base to inform future policy and actions, and some commented on the scope of the review. This was echoed in responses to the second consultation, with the action broadly welcomed.^{102 103} A few respondents reflected on issues related to the quality of material collected from commercial premises, while others noted that this action will help to understand, and then address, barriers to compliance with the requirements.

What we will do

It is clear from the response to the 2024 consultation that stakeholders broadly agree with the vision and aims for commercial recycling and reuse. To build on this platform, we set out our intention to initiate a co-design with businesses and the waste sector to achieve these goals (see below).

However, to meaningfully tackle the barriers and support Scottish businesses and other commercial sector premises to achieve waste reduction and improved recycling and reuse, we must first improve our understanding of these barriers.

Working alongside SEPA and other delivery partners, we will therefore undertake a targeted review of compliance with current commercial recycling requirements in Scotland. The review will report its findings in 2026. Scotland's commercial waste requirements in the Environmental Protection Act 1990 were brought in by the Waste

(Scotland) Regulations 2012,¹⁰⁴ and we believe it is the right time to review whether these requirements, and their enforcement, are delivering their aims.

The review will look at current compliance with the statutory requirements by businesses and other commercial premises, and the underlying reasons or barriers to compliance. We will use the review to support compliance, and its findings will feed directly into the co-design process (see below) to develop further interventions to maximise waste prevention, reuse, and recycling.

Co-design measures to improve commercial waste service provisions that drive waste prevention and reuse, and maximise recycling.

Timescale: Commencing by 2030.

2022 and 2024 consultations

Respondents from a diverse range of sectors expressed support for this proposal, valuing the emphasis on a collaborative approach. The suggested interventions were welcomed, particularly the focus on reducing food waste and the exploration of fiscal measures to incentivise commercial recycling and waste prevention. Feedback noted that delivering this after the household recycling co-design provided opportunities for learnings from that co-design process to be fully maximised.

What we will do

Our review of the available evidence¹⁰⁵ and the feedback from stakeholders to both consultations has strengthened our view that a co-design of new interventions and approaches to commercial waste and recycling is vital to make progress in this area.

We believe that effective co-design of new commercial waste measures must take an evidence-based approach. This was reinforced by 2024 consultation feedback, that improving the quality of evidence and data in this area is vital in order to identify priority materials or specific sectors requiring further interventions. For this reason, the action is dependent on the completion of the review of compliance (action above) and an improved understanding of the commercial waste composition (see further action below). Given these key dependencies, we intend to commence co-design by 2030 and will look to commence this sooner should these dependencies permit.

The co-design will involve in-depth engagement with the business community, the Scottish resources and waste sector and other key stakeholders. The aim of this process will be to identify and design measures that will deliver improvements in waste prevention, reuse, and recycling, and reduce emissions associated with commercial waste.

This will draw directly on the expertise held across the sector, on the experiences of different sizes of businesses and organisations, and on the evidence drawn together through key measures like waste compositional analysis and the review of compliance. Our approach will be based on the principles of the New Deal for Business, ensuring the expertise of and evidence from the business sector informs

policy development and avoids unnecessary or unintended costs, whilst supporting circular economy objectives.

Potential measures will be a matter for the co-design process, but for illustration, 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 to drive the progress required. Consideration will be given to how any measures would impact waste reduction and reuse/repair efforts, targeting of specific materials in line with other Route Map measures (e.g. Product Stewardship, Residual Waste Plan), management routes to reprocessing, and maximising the economic value of resources. In line with stakeholder feedback to the first consultation food waste reduction and recycling in particular will be prioritised, building on the interventions proposed in the 'Reduce and reuse' section of the Route Map.

The commercial co-design will also draw upon the **lessons learned from the equivalent household co-design process** outlined above, particularly given the roles of local authorities across both the household and commercial services landscape.

We will ensure strategic alignment between the co-design and the measures set out in the '*Decarbonise disposal*' section below, including policies incentivising the recovery of more plastics from residual waste, and the role of incineration in the UK Emissions Trading Scheme. The co-design is key to meeting our commitments to **maximise the value of waste, decarbonise residual waste, and achieve the best environmental outcomes for materials**. We believe this process will help ensure a shared vision across Scotland about what must be done to achieve our waste and climate change objectives to 2030 and beyond. It will provide clear confidence in future measures that take account of the specific challenges facing both commercial premises and the resources and waste sector in Scotland and will enable successful delivery at both a national and local level.

Further actions to 2030

Below we set out a further action we will seek to take to 2030 to complement our priority actions.

1. Conduct a national compositional study of waste from commercial premises.

There is currently no detailed data or analysis of commercial waste at a national level, so it is unknown how much recyclable material is contained in residual commercial waste. 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. To support this process, ZWS has published a report¹⁰⁶ on a survey to scope the existing data

availability and practices within the commercial recycling and waste landscape, helping to explore the challenges and opportunities around delivery of a national compositional study. Early scoping indicates that there are significant cost implications and data availability challenges associated with delivering a successful programme of commercial waste compositional analysis. For that reason, confirmation of progress will be dependent on future budget allocations and further work across delivery partners to resolve key barriers.

There was broad support for this measure in the 2022 and 2024 consultations, with respondents describing it as an 'essential' exercise in terms of addressing data gaps within commercial recycling and improving service provision. This broad support continued with the respondents to the 2024 consultation also citing the need to address gaps in data as a valuable exercise.

3: Decarbonise disposal

Summary of priority actions:

- Develop a Residual Waste Plan to 2045 (2027)
- Facilitate the development of a Sector-Led Plan to minimise the carbon impacts of the Energy from Waste Sector (2027)

Vision statement

The production and management of waste results in environmental impacts and represents missed economic opportunities for these materials. That is why our focus in this Route Map is to prevent materials from becoming waste in the first place. As we accelerate our move to a circular economy, we will produce less waste. We want to ensure that materials that cannot be avoided, reused, or recycled are managed in a way that **minimises environmental and climate impacts**, encourages management of materials further up the waste hierarchy, and minimises broader societal impacts.

Strategic objectives

To deliver this vision, we have set out the following strategic objectives:

- **Understand the best environmental outcomes for specific wastes:** we need a clear understanding of key waste streams and the impacts of options to manage them.
- **Ensure there is an appropriate capacity to manage waste:** Waste management requires long-term investment in infrastructure and skills, but the nature and amount of waste will change as we move to a circular economy. Therefore, we need to clearly understand and signal future capacity requirements and timelines for policy implementation to enable investment in the right levels of capacity.
- **Improve environmental outcomes for waste through innovation:** Alongside delivering the right amount of capacity, we also need research, development, and innovation to adopt improvements and new technologies.
- **Incentivise decarbonisation of the waste sector:**¹⁰⁷ We need to ensure the best environmental outcomes for waste aligns with our emissions reduction ambitions. This will require us to continue to divert biodegradable waste away from landfills, mitigate the emissions from biodegradable waste already landfilled, and take action to decarbonise the energy from waste sector.

We recognise that waste management is a complex system; the nature and volume of waste streams will change in time, including due to other policies set out in this Route Map. Generally, those managing waste have little control over the nature and volumes of waste streams; and the options available to manage these wastes depend heavily on geography, available capacity, and advancements in technology.

Measuring progress

Scotland's previous indicators in this space have focussed on the proportion of waste landfilled, both overall and biodegradable municipal waste. Continued diversion of waste away from landfill has contributed to progress against our 2025 target to send a maximum of 5% of waste to landfill by 2025. However, while our current 2025 targets are important milestones, they should not be the end destination. Our Route Map consultations highlighted that **we need to move beyond measuring tonnage alone**.¹⁰⁸ As we set out in the Route Map's two consultations, the 5% to landfill 'all waste' tonnage-based target does not account for the varying environmental or carbon impact of individual materials, is not a good indicator to measure the sector's progress to net zero, and is not fully aligned with our vision to deliver the best environmental and climate impacts for all waste. This approach was endorsed by many of the responses to both consultations and aligns with recommendations by the Climate Change Committee.¹⁰⁹

The further **decrease in greenhouse gas emissions from the Waste Management Sector** is important for measuring progress. The majority of emissions are from the decomposition of biodegradable waste in landfills, which produces methane - a greenhouse gas that is around 28 times more potent in the atmosphere than carbon dioxide over a 100-year period. Actions that further divert biodegradable waste from landfill, including those set out in this chapter, are therefore vital to reducing our greenhouse gas emissions.

Similarly, we want to see **long-term reduction of emissions from Energy from Waste**. Energy from Waste emissions are reported under the Electricity Sector. In line with recommendations from the Climate Change Committee and the Independent Review of Incineration, from June 2023, we started reporting emissions from Energy from Waste as a sub-category within the Scottish greenhouse gas inventory.¹¹⁰

By 2027, we will set new circular economy targets. These will follow the development of a monitoring and indicator framework, which will allow more holistic tracking of Scotland's consumption levels and wider measures of circularity. As part of this process, we will consider the wider environmental impacts of waste, aligning with our Environment Strategy. See the 'Strengthen the circular economy' section for more detail.

Where we are now

We now landfill around half of what we did in 2011, but we still landfill 23.2% of all the waste we produce in Scotland.¹¹¹ Measures such as the Scottish Landfill Tax, diverting waste from landfill to incineration, and improving recycling rates have reduced the amount of waste sent to landfill.¹¹²

These measures, as well as increased food waste recycling, have reduced the amount of biodegradable waste sent to landfill, which has reduced Waste Sector emissions. In 2022, the Waste Management Sector was responsible for emissions of 1.6 MtCO₂e, largely from the landfilling of biodegradable waste, a significant decrease from 6.5 MtCO₂e emitted in 1990.¹¹³

However, the diversion of waste to energy from waste facilities has led to an increase in emissions from energy from waste (reported as emissions in the Electricity Sector) to around 0.3 MtCO_{2e} in 2022, 19.5% of electricity generation emissions. These energy from waste emissions are expected to rise in the short-term as further waste is diverted from landfill, although this is expected to be accompanied by a larger longer-term decrease in emissions from the waste sector as a whole due to lower landfill emissions.¹¹⁴ The actions set out in this chapter are, therefore, vital to reduce greenhouse gas emissions from both the Waste Management and Power Sectors.

Despite a significant reduction in the waste sent to landfill, achieving the previous target to send a maximum of 5% of waste to landfill target by 2025 represents a significant challenge. Much of the remaining material we landfill has a low carbon impact when landfilled or cannot easily be recycled or disposed of by other means. As set out above, achieving the previous 5% target does not fully align with our emissions reduction commitments or other environmental ambitions in the long term.

What we have done so far

Current measures to divert waste from landfill to recycling or other disposal include **the Landfill Tax (Scotland) Act 2014, a ban on biodegradable municipal waste going to landfill** from 31 December 2025, and support for local authorities to secure contracts that comply with the landfill ban.

We commissioned the **independent review of incineration** and published our responses to both of Dr Church's reports.¹¹⁵ The independent review found that, in terms of managing residual waste, incineration was currently preferable to landfill but made clear recommendations around capacity and decarbonisation of energy from waste. We accepted, in principle or in full, all of the Review's recommendations. In response to recommendations on capacity, our National Planning Framework 4 sets out that the Scottish Government will **not support new developments of energy from waste facilities, except under limited circumstances**.¹¹⁶ 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 declines through our acceleration to a circular economy. To drive decarbonisation of energy from waste (EfW), we have set a clear ambition to **end the unnecessary incineration of plastics**.

In addition, 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.

Delivering our vision

Priority actions:

- **Develop a Residual Waste Plan to 2045 (2027)**
- **Facilitate the development of a Sector-Led Plan to minimise the carbon impacts of the Energy from Waste Sector (2027)**

Further actions:

To both complement and build on these priorities, we will seek to progress the following actions to 2030:

- Support the inclusion of energy from waste in the UK Emissions Trading Scheme (ETS), and investigate other fiscal measures to incentivise low carbon disposal
- Review and target materials currently landfilled to identify and drive alternative management routes
- Facilitate the co-production of guidelines for effective community engagement
- Increase the capture of landfill gas

It is clear from both Route Map consultations and the independent Review of Incineration, that further action is required to ensure that materials that cannot be avoided, reused or recycled are managed in a way that **minimises environmental and climate impacts**, encourages management of materials further up the waste hierarchy, and minimises broader societal impacts. This section sets out our priority actions to deliver this, and therefore accelerate progress against our waste and climate targets.

Priority actions

Develop a Residual Waste Plan to ensure the best environmental outcome for unavoidable and unrecyclable waste and set strategic direction for management of residual waste to 2045.

Timescale: Research and engagement from 2025, with an interim report in 2025/26. Publication in 2027.

2022 and 2024 consultations

Priority actions in the decarbonise disposal package were strongly supported by respondents to the [2024](#) consultation, building on the strong support for the disposal package in the [2022](#) consultation. Many respondents from different sectors welcomed plans to develop a long-term Residual Waste Plan, citing the importance of providing strategic direction, expertise, and collaboration across sectors. Some respondents sought additional detail on the Plan.

What we will do

We will develop a Residual Waste Plan to 2045. The Plan will be published in 2027 and will set the long-term vision for future disposal practices in Scotland to minimise the environmental and climate impacts of waste while ensuring that we have appropriate capacity in place to manage the expected, declining volumes of waste in the future.

Waste systems are highly complex and there are a variety of factors that will influence the future volumes, compositions and types of waste that need to be managed in Scotland, and which will need to be strategically considered over the long-term. The specific scope of the Plan will be shaped in collaboration with the advisory group (see below), but broadly, it will:

- Build on current **data** to improve our understanding of the current and future residual waste streams.
- Investigate and make recommendations on Scotland's long-term **infrastructure** requirements to manage waste. This includes considering how to ensure a strategic withdrawal from landfill and diverting waste away from landfill where appropriate, while ensuring we maintain the necessary capacity to manage waste for which landfill remains the best environmental outcome.
- Publish an **indicative cap** to inform planning and investment decisions on future EfW capacity requirements.
- Take a **targeted approach to manage materials** to ensure the best environmental outcome for materials when they require disposal. This will require the identification of priority waste streams and actions to reduce the environmental impact of their disposal. For example, exploring alternative pathways for sorting residues, by researching potential uses, treatment options, cost benefit analysis, market demand and implementation measures.
- Investigate **emerging technologies** that may allow better management of waste and minimised environmental and social impacts where materials continue to be disposed of. This includes how we manage unavoidable wastes such as those containing persistent organic pollutants.
- Consider how we manage **legacy waste infrastructure** to continue to minimise environmental impacts and maximise societal gains.

The results of initial research will be outlined through an **interim report** in 2025/26, which will help inform any future research to support the development of the final Plan.

To guide the development of the Plan, we will **establish a Residual Waste Advisory Panel**. We believe this collaborative approach is vital to draw upon the expertise across these sectors and build joint ownership and the confidence needed to invest in infrastructure across the resource recovery chain.

Facilitate the development of a Sector-Led Plan to minimise the Carbon Impacts of the Energy from Waste Sector.

Timescale: Research and engagement during 2025/26. Publication in 2027.

2022 and 2024 consultations

This proposal received good support in the 2024 consultation. As with the first consultation, responses on this proposal asked for more detail about implementation, expressed broad support, or suggested potential effective processes to capture and use energy more effectively, remove plastics, and capture and use carbon post-incineration. There were also concerns expressed about the sector-led nature of the plan: while some respondents emphasised the importance of the sector taking responsibility for decarbonisation, some made suggestions to ensure a broad spectrum of input to the plan from a range of stakeholders.

What we will do

We will facilitate the development of a Sector-Led Plan to minimise the Carbon Impacts of Energy from Waste (EfW).

The energy from waste sector currently produces around 0.3 MtCO₂e of emissions each year. The sector will need to align with emissions reductions ambitions; while ensuring there is sufficient capacity to manage the decreasing volumes of waste we produce in Scotland.

This Sector-Led Plan will form a specific strand of the Residual Waste Plan. It will set out how the sector will minimise climate impacts of energy from waste specifically, and ensure that actions across the energy from waste sector are aligned with net zero ambitions by:

- Focusing on measures to end the unnecessary incineration of high carbon-emitting materials from incineration, such as plastics
- Identifying barriers to ending the unnecessary incineration of plastics and opportunities to overcome these barriers
- Considering how Scotland can make the most of potential opportunities presented by the inclusion of energy from waste and incineration in the UK Emissions Trading Scheme
- Consider opportunities to decarbonise energy from waste, particularly the barriers and opportunities, such as carbon capture, utilisation and storage, as some consultation respondents flagged
- Identify knowledge gaps and essential research required to overcome barriers to decarbonisation of the sector.

Waste industry ownership of this Sector-Led Plan is important to ensure economic and environmental viability of the plan, and that a significant impact can be achieved on a voluntary basis. However, given the urgency and scale of actions required to tackle the climate, biodiversity, and pollution challenges, we will also explore options for mandating compliance.

The bigger picture: Making an impact

- Strategic importance: The Residual Waste Plan and Sector-Led Plan have broad strategic importance across this Route Map, informing what data and evidence we will need to understand the waste we produce, how we manage current, future and legacy waste infrastructure, and what waste management looks like in a fully circular economy. It will, therefore, be critical to link up the development of both Plans with the development of measures across the Route Map including:
 - Reduce and reuse: The product priorities identified in our Product Stewardship Plan, with the way we treat products directly impacting future residual waste management composition and future needs.
 - Modernise household recycling: Accounting for the outputs of the Household Recycling co-design and resulting statutory Code of Practice, as more material is recycled, and we think strategically about our recycling, reprocessing and disposal infrastructure requirements.
 - Commercial recycling: Consideration of the findings of the review of compliance with commercial recycling requirements, which will form important evidence for the development of the Residual Waste Plan, alongside the commercial recycling co-design.

Further actions to 2030

The Residual Waste Plan and the Sector-Led Plan ('the Plans') are the key interventions to drive delivery of our strategic objectives and provide a framework for the development of additional measures. Here we set out the further actions we will seek to progress to 2030.

1. Support the inclusion of energy from waste in the UK Emissions Trading Scheme (ETS), and investigate other fiscal measures to incentivise low carbon disposal.

Building on our 4-nations response to a call for evidence, which set out that the UK ETS Authority (formed of the 4-nations) is minded to include energy from waste and incineration in the UK ETS,¹¹⁷ and the second consultation on the proposed UK ETS expansion, which closed 2 August 2024, we are working with other UK nations to develop this policy.

The UK ETS Authority¹¹⁸ has noted that inclusion of incineration and energy from waste in the UK ETS could facilitate reductions in emissions and increased efficiency of these processes by, for example, incentivising increases in recycling and investments in mixed waste sorting, heat networks and carbon capture and storage. We will continue to work collaboratively with Scottish stakeholders to consider the impacts of expanding the UK ETS and, with local authorities, to explore effective decarbonisation options for waste materials.

Given this, the 4-nations response noted an intention to include incineration and energy from waste in the UK ETS with an initial transitional Monitoring, Reporting and Verification (MRV) period, where emissions from the waste sector are monitored, reported, and verified without UK ETS costs being imposed, in 2026.

We will also consider what additional fiscal measures and supporting policies could be introduced to reduce the carbon emissions associated with disposal further, particularly through the Sector-Led Plan to minimise Carbon Impacts of Energy from Waste.

2. Review and target materials currently landfilled to identify and drive alternative management routes.

We have committed to extending the ban on landfilling waste to include non-municipal biodegradable waste,¹¹⁹ subject to appropriate consultation and work to provide assurance around some specific waste streams. We will seek to bring forward a call for evidence to begin to better understand these and other problematic waste streams and identify alternative treatment options for these wastes.

3. Facilitate the co-production of guidelines for effective community engagement.

The independent review of incineration¹²⁰ noted that communities deserve more authentic and committed engagement before, during, and after development of residual waste treatment facilities from local authorities and industry than is currently sometimes the case. In response to the independent review's recommendation on this, we will facilitate the co-production of meaningful and effective community engagement guidance, working with community groups, local authorities, and residual waste operators, seeking to significantly strengthen transparency, community engagement and trust before, during, and after development of facilities.

4. Increase the capture of landfill gas.

Building on our commitment in the Climate Change Plan update (2020)¹²¹, we want to work with industry and the public sector to maximise landfill gas capture opportunities in Scotland. Subject to future budget outcomes, we will seek to extend the landfill gas capture programme to increase the number of sites undertaking investigative or development work, to optimise and increase the amount of landfill gas captured in Scotland and minimise environmental and climate impacts of closed landfill sites. We intend to support this with research to explore current and emerging options for low-level gas capture. We will set out further detail on this work in our next draft Climate Change Plan in 2025.

We recognise that industry has made strides to improve and optimise landfill gas capture. To complement the efforts being made across the public and private sectors, through our Residual Waste Plan, (see above) we intend to review the potential options to drive the pace and scale of decarbonisation and engage with industry to understand the consequences of changes to landfill management financial incentives on decarbonisation.

4: Strengthen the circular economy

Summary of priority actions:

- Develop a circular economy strategy every five years (**first one in 2026**)
- Set new circular economy targets (**by 2027**)

Vision Statement

Delivering a circular economy requires sustained transformational system change, and a range of actions that are both complementary and coordinated to drive sustainable management of our resources. If we are to maximise the opportunities that a circular economy brings to Scotland, we must maintain a strategic approach to its delivery, ensuring the right structures and support are in place to enable action.

Strategic Objectives

Building on the whole-system approach used to develop this Route Map, the key objective of this chapter is to provide strategic oversight and direction for the delivery of a circular economy in Scotland. This means:

- **Setting strategic direction and maximising impact**, there is a need to ensure the range of actions that we are undertaking is both complementary and coordinated as part of our overall efforts to tackle the twin crises of climate change and biodiversity loss. This includes setting our circular economy objectives within the wider strategic framework and mainstreaming across different policy areas to meet our objectives, as chapter 1 sets out.
- **Coordinating action across cross-cutting areas** to support progress across the waste hierarchy. These include research, data, and evidence to underpin successful delivery of our vision and individual measures; sustainable procurement to enable and define how we demand products and services; and the skills and training required to drive a fully circular economy in Scotland.
- **Robustly monitoring and evaluating progress** to enable agile working, take action where we are not on track, and learn from and implement what works.

What we have done so far

The **Environment Strategy for Scotland**¹²² creates an overarching framework for Scotland's strategies and plans on the environment and climate change. It sets out a guiding vision for Scotland's environment and our role in tackling the global climate and nature crises.

Making Things Last: a circular economy strategy for Scotland was published in 2016. This integrated elements of the Zero Waste Plan (2010) and Safeguarding Scotland's Resources (2013).¹²³

The **update to the Climate Change Plan (2020)** sets out the Scottish Government's pathway to our previous emissions reduction targets set in 2019, including the waste management sector's contribution.¹²⁴ A new draft Climate Change Plan will be published in 2025, in line with the changes made to our target framework by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2024.¹²⁵ This Plan will reflect our new carbon budget targets that will be set by forthcoming secondary legislation.

The Circular Economy (Scotland) Act 2024¹²⁶ sets the legislative framework for Scotland's circular economy by placing requirements on, or enabling further action by, central and local government, businesses, and householders.

Delivering our vision

Priority actions:

- **Develop a circular economy strategy every five years (first one in 2026)**
- **Set new circular economy targets (by 2027)**

Further actions to 2030:

To both complement and build on the priorities throughout this Route Map, we will seek to progress the following actions to 2030:

- Review and refresh Scotland's Waste Data Strategy's action plan
- Maintain a programme of research on waste prevention, behaviour change, fiscal incentives and material-specific priorities
- Develop public procurement opportunities to reduce the environmental impact of public spending, including scoping new legislative circular economy requirements for contracting authorities under section 82 and 82A of the Climate Change (Scotland) Act 2009
- Support greater uptake of green skills, training and development opportunities

Priority actions

Develop a circular economy strategy every five years.

Timescale: Update or refresh every five years, with the first strategy set from 2026.

2022 and 2024 consultations

There was strong support in both consultations, with more than three-quarters (76%) of respondents agreeing with the proposed priority measures set out in the second consultation for this strategic aim.¹²⁷ Many respondents endorsed the proposal to develop a circular economy strategy, and much of the feedback focussed on the

strategic focus and specific issues to include or consider in the development of the strategy.

What we will do

To strengthen the strategic approach to progressing Scotland's circular economy, there is now a requirement on Scottish Ministers to publish or refresh a circular economy strategy every 5 years, as set out in the Circular Economy Act.¹²⁸

The Act includes a range of requirements for the strategy including the need to set out objectives and plans for meeting and monitoring them. It also sets out the desirable aspects of the economy that Ministers must have regard to, such as reducing the consumption and whole life-cycle carbon emissions associated with goods. Other areas to which Scottish Ministers must have regard include priority sectors and systems, behavioural change, and international impacts.

The strategy and an associated monitoring and indicator framework will be developed with stakeholders and consulted on in 2025, and published in 2026. This will give a clear indication of priority sectors and systems, and direction of travel for businesses. It will build on existing frameworks, such as this Route Map, and the Act requires that it must be considered when wider policies, including proposals for legislation, are being developed.

Set new circular economy targets by 2027.

Timescale: Following the publication of a monitoring and indicator framework in 2026, circular economy targets will be developed and set by 2027.

2022 and 2024 consultations

There was broad support for the proposal to set new circular economy targets in both consultations, with some respondents reflecting on how targets will help to drive action and consistently monitor progress.

What we will do

It is clear from the consultations, and through recommendations from the Climate Change Committee, that there is broad support for a new suite of indicators to track Scotland's progress in moving to a circular economy. The setting of statutory circular economy targets is also now a requirement under the Circular Economy Act.

Following the publication of a circular economy strategy in 2026 we will develop new statutory circular economy targets by 2027. These will build on the monitoring and indicator framework that will be consulted on alongside the strategy.

Developing an agreed monitoring and indicator framework first will ensure that the data we measure is consistent and aligns with the strategy's vision and outcomes. It will also allow for more holistic tracking of Scotland's circularity, for example considering consumption, reuse, recycling, and disposal as well as ensuring that

wider social, economic, and environmental impacts (such as carbon emissions and loss of natural resources) are taken into account.

While our current 2025 waste and recycling targets have helped drive improvements, in some cases they are not the best indicators to deliver our circular economy objectives. Many of our existing targets are weight-based, and do not specifically measure emissions reduction or other environmental impacts. The measures set out in the Route Map are focussed on the actions we must take to accelerate progress, setting the framework for the required transformational change in how we manage our resources across our economy and society in the years ahead. New circular economy targets can help us make this transition.

Statutory circular economy targets could include reducing the use of materials, increasing reuse, increasing recycling, and linking to priorities within the circular economy strategy (see above). The development of targets will give explicit consideration to material-specific targets, rather than ‘catch-all’ indicators, as recommended by the Climate Change Committee, to provide a more powerful, targeted approach for the challenges we face today.¹²⁹

In the draft Route Map, we consulted on a proposal to review **the feasibility and impact of setting reuse targets** in Scotland, as part of the ‘Reduce and reuse’ package. This remains our intention, as a potential driver to encourage measures that extend product lifespan, mainstream opportunities for reuse, and support progress towards metrics that monitor consumption. For consistency and to ensure this is prioritised, this work will be considered as part of the wider work to develop the monitoring and indicator framework, and circular economy targets.

The bigger picture: Making an impact

- Achieving coordinated cumulative impact: We have worked with a wide range of stakeholders to refresh our governance structure so that it drives the circular economy transformation to 2030 and enables a Team Scotland approach.
- National and local strategic coordination: Accounting for how any new national targets translate to local strategies and targets. For example, how the statutory Household Recycling Code of Practice and local recycling targets interact with packaging extended producer responsibility scheme material targets, and national recycling and reuse targets. Providing a clear throughline to our wider strategic goals, including our commitment to reduce emissions.

Tackling Scotland’s global footprint

As set out in Scotland’s Environment Strategy, the Scottish Government is committed to ensuring Scotland plays its part in tackling the climate and nature emergencies. We want to both understand - and minimise - our overseas carbon and wider environmental impact, as Scotland’s current demand on nature far exceeds its capacity to supply. All of the measures in this Route Map are designed to support Scotland’s efforts to take responsibility for our global impact. Key examples include:

1) Targeting products and materials: Measures are designed to reduce demand for raw materials for the production of goods through promoting reuse and repair, and encouraging sustainable product design and production, resource efficiency and responsible consumption. For example, textiles account for nearly a third (32%) of the carbon impact of household waste.¹³⁰ **Reduce and reuse** measures can help break up the fast fashion cycle and the new **co-designed Code of Practice** for household waste and recycling may help reduce emissions from waste by considering ways to prevent materials like textiles and clothing from going to disposal.

2) Tracking our global footprint: Scotland's Carbon Footprint highlights the greenhouse gas emissions associated with the spending of Scottish residents on goods and services, wherever in the world these emissions arise.¹³¹ Earlier in 2024, Zero Waste Scotland published the first outputs from a new **Scottish Waste Environmental Footprint Tool**,¹³² which provides further insights on the full lifecycle climate and wider environmental impacts of Scotland's waste. The **Scottish Material Flow Accounts (MFA)** help to understand the scale and nature of Scotland's consumption.¹³³

3) Focusing on food waste: The emissions linked to global food waste and loss generates an estimated 8-10% of global greenhouse gas emissions.¹³⁴ Food waste causes inefficient use of resources linked to the production, transportation, distribution, and preparation of food, including demands on ecosystems. This underlines the importance of reducing food waste here in Scotland across all sectors and households. Measures such as **mandatory public reporting of food waste and surplus** and **behaviour change at a household level** will help drive this.

4) The role of public procurement: Procurement is a further key lever to help reduce environmental and carbon footprints. We will continue to embed climate considerations in our procurements and supply chains, underpinning the sustainable procurement duty and progressive policy on climate and circular economy considerations.

5) Maximising the value of our resources, taking responsibility for our waste: To reduce Scotland's global carbon impact, we must take responsibility for our own waste, managing and processing as much as possible here in Scotland. A large majority of Scotland's waste is already managed within Scotland, but around 15% is currently processed elsewhere, representing a lost economic opportunity and an environmental cost too. Measures within **Modernise recycling** and **Decarbonise disposal** are focussed on tackling this. The **recycling co-design** action will help consider the available markets and reprocessing capacity for collected materials, and opportunities to facilitate this. This will complement existing measures like **extended producer responsibility** schemes and our planned waste reprocessing infrastructure report. To strengthen public confidence in where recycling goes, we intend to consult on the introduction of **end destination public reporting** of household recycling collected.

6) Waste exports and wider trade policy: Waste exports are a key part of supporting the transition to a circular economy. International waste export legislation is a reserved matter for the UK Government, and we will continue to engage with the

UK Government and encourage it to continue the delivery of a ban on plastic waste exports to non-OECD countries. We also continue to urge the UK Government to consider expanding the plastics exports ban to all countries while working in partnership with devolved governments to review further opportunities or targeted restrictions for other materials to drive circular economy approaches, in line with Climate Change Committee recommendations. More broadly, trade has a role to play in reducing overseas environmental impacts. The Scottish Government has been implementing **Scotland's Vision for Trade**,¹³⁵ published in January 2021, using trade as a lever to achieve climate targets and improve our international environmental impact. Where levers are reserved to the UK Government, such as Free Trade Agreement and World Trade Organization negotiations, we engage with it to support coherence between climate, the environment and trade.

Further actions to 2030

Building on our priority actions, we will seek to progress further actions up to 2030 to meet our objectives. These actions are centred around three cross-cutting themes:

- Research, data and evidence
- Sustainable procurement
- Skills and training

This section outlines the high-level strategic approach we will seek to take under each theme up to 2030.

2022 and 2024 consultations

Almost all consultation respondents agreed with the proposed cross-cutting measures in 2022. This was replicated in 2024, with the highest level of support for any package across the draft Route Map (81% agreement levels). Constructive comments were provided on the themes, specific suggestions for action, and questions about resourcing.

Research, evidence and data

Research and innovation must sit at the heart of our circular economy. We must learn by doing, be open to new and innovative ideas, understand the costs and benefits of taking action, measure how we are doing, and continue to test new solutions. The following actions between now and 2030 can help us achieve this:

1. Review and refresh Scotland's Waste Data Strategy's action plan.

Scotland's waste strategy has been developed and implemented in partnership across Scottish Government, SEPA, Zero Waste Scotland, with key input from the commercial, public and third sectors.¹³⁶ Since 2017 it has supported key data and evidence developments in Scotland, which have fundamentally improved our collective understanding of how materials move around the economy and have supported the decision-making required to reduce emissions and drive delivery on existing waste and recycling targets. Successes include development of the Scottish household waste composition analysis, supporting the Scottish Material Flow Accounts (MFA)¹³⁷ to better understand Scotland's raw material footprint, and

support for practical design and delivery of the UK-wide Digital Waste Tracking service, in partnership with the other UK governments and agencies.

Across this Route Map we have a range of measures that rely on timely data and evidence to maximise delivery of meaningful benefits. To ensure this happens, and that we have a data landscape that remains fit for the future, we intend to work closely with partners to review and refresh the strategy's action plan. We will also give due consideration as to whether the strategy itself should be refreshed. We will seek to undertake this work to align with the outputs of the new strategy and monitoring and indicator framework for Scotland's circular economy, and emission reduction-related monitoring requirements, which will both inform future data requirements. We will account for the changes to the data landscape that key measures like extended producer responsibility schemes, modernising recycling reform, and the Digital Waste Tracking service, will have.

2. Maintain a programme of research on waste prevention, behaviour change, fiscal incentives and material-specific priorities.

The research packages Scottish Government and its delivery partners have published alongside the two Route Map consultations have provided invaluable insights and given us the confidence to set the Route Map's priorities. Across this document, we highlight where further research is planned or underway as a step towards the delivery of many of our priority measures. There are key cross-cutting themes, notably behaviour change, and it is important to maintain a strategic view of our research to ensure we maximise benefits across all of our strategic aims. This includes understanding how international examples of best practice can be applied in Scotland, and the readiness of new approaches and technologies to be rolled out at scale. This will build on the considerable body of work that already exists, and in the spirit of collaboration and partnership, we remain committed to working with partners in academia, the public sector, the private sector, social enterprises, and NGOs to shape research, share learning and develop evidence-based policies and best practice.

Sustainable Procurement

3. Develop public procurement opportunities to reduce the environmental impact of public spending, including scoping new legislative circular economy requirements for contracting authorities under section 82 and 82A of the Climate Change (Scotland) Act 2009.

Procurement enables and defines how we demand products and services and underpins investment within the private sector to create new business models and products. The Scottish public sector spends more than £16 billion a year buying goods, services and works.¹³⁸ This scale of spending can directly help safeguard our environment and resources, and play a role in delivering our climate, waste, and recycling aims. This purchasing power has the potential to stimulate market development and innovation and demonstrate leadership across sectors. Across this Route Map there are specific procurement-based measures that can support our strategic aims, including reviewing existing procurement practices in reference to reducing consumption, circular economy, and the construction sector. This includes:

- Exploring opportunities to accelerate adoption of climate and circular economy focus through what, how and how much public bodies buy. The **sustainable procurement duty** in the Procurement Reform (Scotland) Act 2014 aligns with our aim to reduce unnecessary consumption of goods and materials by requiring public bodies to consider improvements for the economic, social, and environmental wellbeing of the area in which they operate. To maximise opportunities for a circular economy it requires a whole systems approach where local leaders work with procurement, finance, and service delivery managers to make informed choices. We will further promote and develop the Scottish Government's **Sustainable Procurement Tools**,¹³⁹ which are a range of free tools to support public sector procurers to purchase sustainably, including a focus on climate and circular economy obligations.
- Regulations under section 82 and 82A of the Climate Change (Scotland) Act 2009¹⁴⁰ could potentially enhance circular economy opportunities in relation to the procurement of goods, works or services. These powers allow Ministers to make regulations that require contracting authorities to purchase goods with recycled content, recycled or reused products or recyclable products. We are commissioning research in 2024/25 to identify potential candidate products for these regulations.

Skills and training

4. Support greater uptake of green skills, training, and development opportunities.

Around 1 in 10 jobs in Scotland relate to the circular economy. For example, 10,000 tonnes of waste can create up to 296 jobs in repair and reuse, compared to 1 job in incineration, 6 jobs in landfill or 36 jobs in recycling.¹⁴¹ The transition to a circular economy provides a wealth of opportunities to transform our labour market, creating both high quality and entry level jobs and roles, in areas with persistently high unemployment. To realise these benefits, we need to ensure that our education and skills systems will prepare the current and future workforce for a just transition to a fully circular economy.

We will continue to work across government, and with our public bodies and training providers, to ensure circular economy principles are embedded across provisions in the education and skills system. Through strategies such as the Green Industrial Strategy and Just Transition Plans, we will focus on the sectors with high potential for growth, identify emerging employment opportunities, and education and training provision to design and deliver activities that maximise the potential for skills development and education for a circular economy. As part of a systems approach, to create a solid foundation we must ensure knowledge building of circular economy is embedded across the whole education and skills landscape. The delivery of skills to support the jobs and roles of a circular economy will include:

- Support the post-school education and skills reform agenda including the newly formed national and regional skills planning function of the Scottish Government.

- Support career long professional learning (CLPL) opportunities for educators and practitioners with a focus on circular economy.
- Continue to deliver our refreshed Learning for Sustainability Action Plan, which focuses on supporting all education settings across the 3-18 curriculum to become sustainable education settings by 2030.
- Engage through Zero Waste Scotland with circular economy business support and the wider ecosystem to support circular skills and competencies to generate capacity and capability of businesses to deliver circular economy business models.
- Track circular jobs in Scotland and raise awareness and recognition of circular and enabling jobs to support the transition to a circular economy.

Footnotes

¹ The whole-life carbon impacts of Scotland's waste means considering carbon impacts from resource extraction and manufacturing emissions, right through to waste management emissions, regardless of where in the world these impacts occur.

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¹² Scottish Greenhouse Gas Statistics 2022, <https://www.gov.scot/publications/scottish-greenhouse-gas-statistics-2022/>.

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