Perth and Kinross Council

Circular Economy Strategy

2026-2031

Consultation Document

Perth & Kinross Council

September 2025

1. INTRODUCTION

1.1. Circular Economy Strategy Consultation

Welcome to this consultation, which seeks your views on the draft vision, priorities and actions for the first Perth and Kinross Council Circular Economy Strategy (CES) and accompanying 5-year Action Plan (2026-2031).

The Perth and Kinross CES is driven by the Scottish Government's vision to 'deliver a fully circular economy in Scotland by 2045, driven by responsible consumption, responsible production, and maximising value from waste and energy'.

The CES will set out our priorities and action for the period 2026-2031, with an accompanying action and delivery plan.

We have developed draft CES priorities and delivery areas for action. Before the final strategy is developed, we want to make sure that local people, communities, businesses and stakeholders have their say.

Following this consultation, we will draft our CES strategy, incorporating responses, for formal approval by Perth & Kinross Council in early 2026.

The views of residents, the local community, businesses and stakeholders are crucial in ensuring that the first Circular Economy Strategy (CES) truly reflects the issues faced by local people and includes the correct priorities and actions to address these issues.

> The circular economy is an approach that aims to reduce waste and keep products and materials in use for as long as possible. It focuses on designing out waste and pollution, reusing and recycling materials, and helping nature recover. This approach not only helps the environment but also boosts the economy and promotes fairness for everyone.

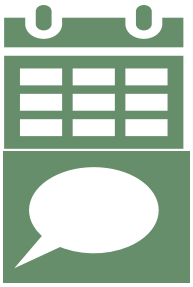
1.2. Why your views matter?

We encourage and welcome your feedback on the vision, priorities, and actions set out in this draft Perth and Kinross Circular Economy Strategy (CES).

This consultation document poses a number of questions we would like you to consider.

Please do not feel you have to answer all questions.

1.3. How to use this document



The draft CES priorities and actions will be subject to public consultation until 14 October 2025.

Consultation questions are contained within the document.

Alternatively, you can email your question response to ClimateChange@pkc.gov.uk or post to: Climate Change Team, 35 Kinnoull St, Perth PH1 5GD.

1.4. Structure of the Consultation

This Consultation is broken down into nine topics with consultation questions through the documents following appropriate sections

1. **Introduction**
2. **What is a Circular Economy?**
3. **National policy landscape**
4. **Alignment with local policy and strategies**
5. **Strategic Priorities and Delivery Areas**
6. **Delivery Area 1 – Waste and Recycling Operations**
7. **Delivery Area 2 – Council Services**
8. **Delivery Area 3 – Consumers and Society**
9. **Delivery Area 4 – Business and Industry**
10. **Prioritising Action, Delivery and Implementation**
11. **References**
12. **Glossary**

Appendix A – Detailed overview of National Policy

The most relevant associated documents are available for review on the PKC's Consultation Hub.

For details on the latest updates on the CES consultation process, please visit our Facebook and Twitter pages:

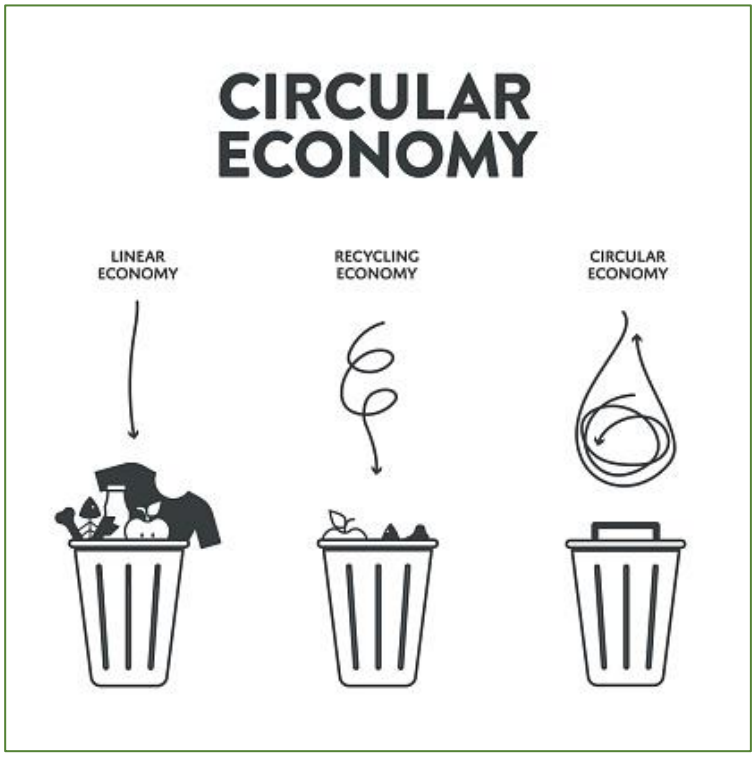
- Facebook: Perth and Kinross Council
- Twitter: @PerthandKinross

2. What is a Circular Economy?

> *"*The circular economy is a system where materials never become waste and nature is regenerated. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources.*"* [1] Ellen MacArthur Foundation (2025)

A circular economy promotes reduced consumption and production whilst maintaining the highest value of materials and products by keeping them in use for as long as possible (Figure 1.) to minimize waste.

Figure 1. Circularity Principles and Strategies



2.1. What does this mean in practice?

To reduce the amount of finite materials that are consumed by production processes (for example fossil fuels) and maintain the highest value of materials and products that have already been produced and/or consumed, a number of initiatives can be utilised (Figure 2.).

Figure 2. Practical CE initiatives [2]

CE initiatives		Definitions
Prioritise renewable inputs	1 Circular sourcing	Replace finite resources / materials with renewable, bio-based, or recycled materials in the production process
	2 Sustainable design	Design products - and select raw materials - such that they can be effectively disassembled, reused, repaired and up-cycled
	3 Resource efficiency	Optimise usage of raw materials / resources – minimise waste – in the production process
Maximise product use	4 Product as a service	Provide a service in areas that were traditionally sold as products; increases the product lifecycle through repurposing at the end of usage
	5 Sharing/ virtualising	Share durable assets such as cars, rooms, appliances, and digitise products to increase their lifetime (e.g., books, music, shopping, autonomous vehicles etc.)
	6 Usage optimisation/ maintenance	Increase performance / efficiency of a product and prolong life through maintenance
	7 Reuse/ redistribution	Purchase and sell second-hand and previously owned products to increase product lifecycle
Recover by-products and waste	8 Refurbishing/ remanufacture	Remanufacture products or components for a new usage, instead of down-recycling
	9 Industrial symbiosis Recycling from manufacturing	Waste or by-products from manufacturing become the inputs for another product
	10 Recycling from consumption	Recycle discarded materials after the end of consumption

2.2. Why shift towards a Circular Economy?

> *"A circular economy, based on sustainable consumption and production, is essential to power Scotland's transition to a fair, green and sustainable economy, and critical to meeting our obligations to tackle the twin climate and nature emergencies. Material consumption and waste are primary drivers of nearly every environmental problem Scotland currently faces, from water scarcity to habitat and species loss".*
>
> Scottish Government. (2024). Scotland's circular economy and waste route map to 2030.

In the UK, we are consuming raw materials at an unprecedented rate, which has an impact on our environment, personal health, overall economy and our wallets.

- Around 80% of Scotland's carbon footprint comes from the products and materials we manufacture, use and throw away.
- There are an estimated 1.6 billion items of unworn clothing in people's closets (a quarter of overall clothing) [3]
- The average annual value of food wasted by Scottish Households is estimated at £440 per household [4]
- As a region (not including the UK), in 2022 the EU's consumption of goods and services led to 4.8 billion tonnes of global greenhouse gas emissions, which was about 9% of worldwide emissions.[5]
- The average Scot also consumes more than double the sustainable level of material use at around 8 tonnes per person per year.[5]
- In 2022, only 1.3% of the resources used in Scotland were cycled back into the economy, with over 98% of Scotland's material use coming from virgin resources.[6]

- The circular economy has the potential to create over **500,000 new jobs** across the UK.[7]

Although many people are becoming more aware of their consumption habits and are actively seeking to buy more sustainably, choices are often unavailable and they are often unaware of the hidden impacts involved in making and transporting the items they buy every day. Of the overall hidden impacts from consumer purchases, 86% come from the processes of production and transport. [8]

Local businesses and industries have a large part to play in adopting circular business models - offering products as a service through leasing or subscription schemes, promoting sharing platforms to reuse and share existing products, or take-back programs to encourage the of return products for refurbishing and recycling.

Business and industry also have a key role in leading through collaboration and innovation – working together with knowledge-based learning and development organisations to promote learning and skills to enable action for a circular economy, and with local government to support and implement circular regulations and practices.

> *"The transition to the circular economy requires systemic change and asks for collaboration. A local government can set the ambition (urgency), define boundary conditions and nurture experimentation. Researchers and knowledge institutes can develop new insights and tools, validate ideas and boost awareness. Local entrepreneurs have the guts and imagination to take risks, accelerate change and deliver scale. Meaningful participation by citizens and residents is also crucial, as is educating the leaders, employees and consumers of the future."*
>
> Netherlands Enterprise Agency & Holland Circular Hotspot. (2020). Circular Economy and SDGs.

2.3. Why do we need a Perth and Kinross Circular Economy Strategy

With the publishing of the Circular Economy (Scotland) Act 2024, and Scotland's Circular Economy and Waste route map to 2030 [9] in December 2024, the Scottish Government has demonstrated its commitment to a circular economy based on sustainable consumption, production, and resource management. The route map lays the foundation to support sustainable public services, in particular to modernise recycling, reuse and waste services, co-designed with communities and local government.

Perth and Kinross Council policy and strategy needs to reflect this new legislative and national policy framework. The existing Perth and Kinross Council Waste Management Plan 2010 - 2025 [10] was developed to work towards delivering Scotland's Zero Waste Plan targets at a local level. The Plan mapped out how the Council would at the local level: achieve the national recycling and composting rates; develop initiatives to control waste arisings and waste growth; determine the strategy for the procurement of residual waste treatment; determine the future financial implications for waste management; promote the circular economy where products and materials are kept in high value use for as long as possible; and address the greenhouse gas emissions associated with the waste sector.

The implementation of the waste management plan has seen the successful introduction of many of the planned improvements in service and associated waste and recycling infrastructure. This has resulted in improved recycling and reduced levels of non-recycled waste. In 2009/10 the recycling rate was 42%, with the average weekly waste collected per person of 10.4kg and total waste to landfill of 54,208 tonnes, compared to 51.7%, 5.8kg and 23,178 tonnes in 2023. Emissions from waste have fallen from 209,000 tonnes of carbon dioxide equivalent in 2011/12 to 135,557 tCO2e in 2023.However, as with the national picture, recycling rates have stagnated over recent years, and the national target of recycling 70% of waste by 2025 has not been met. In part, this is due to delays in implementing national policy initiatives such as the Deposit Return Scheme (DRS)[11] and Packaging Extended Producer Responsibility (pEPR)[12]. Variable levels of public

engagement with waste services are also a cause for concern. Whilst there has generally been a good response to the twin-stream recycling service that was rolled out across Perth and Kinross in 2024, there are households who do not use the system correctly. Also, in the urban and semi-urban localities where we provide a kerbside food recycling service, recycling rates remain stubbornly low, even though there is ample container provision.

With the waste management plan due to expire at the end of 2025, and in recognition of the national focus on the circular economy, the opportunity has been taken to incorporate and include the functions of the waste management plan within the scope of a wider circular economy strategy for Perth and Kinross. This will ensure that the Council is aligned to legislation and government policy and will provide a fresh impetus for further service improvement, including the provision of new services and a greater emphasis on public engagement and behaviour change.

2.4. What is our Strategic Vision for the Circular Economy?

Our vision for this wider Circular Economy Strategy is:

> *"In Perth and Kinross, we aim to build communities where everyone understands how to use resources responsibly and reduce waste. We take pride in making thoughtful choices that support the environment and improve our quality of life, by protecting nature, growing the economy, creating jobs, and strengthening our communities. Together, we are working toward a greener and more sustainable future."*

The framework for delivering this vision is set out in Section 5 below.

3. Policy landscape

3.1. National Policy

There are several national policies in place or expected in the near future that help shape our targets and govern our proposed approach. A summary of these is detailed in Table 1, with more detail provided in Appendix A.

Table 1. Relevant national policies and strategies

Policy/Strategy	Impact on Circular Economy
Scotland's Zero Waste Plan (2010)	Recognised that a zero waste Scotland has an important role in helping to achieve the targets set in the Climate Change (Scotland) Act 2009 Set the following specific targets including: • recycling 70% of all waste by 2025 • a ban on biodegradable waste to landfill by 2025. • no more than 5% of waste going to landfill by 2025.
Scotland's Climate Change Plan (2020)	The Plan sets out a vision for a Circular Scotland and identifies a range of actions needed to ensure Scotland meets its duties under the Climate Change Act. These cover the following related areas: • Building the Circular Economy • Driving down food waste • Reducing waste sent to landfill • Improving waste data • Reducing emissions from closed landfill sites

	• Promoting efficiency of energy from waste plants, • Encouraging reprocessing investment and Preventing waste
Scotland's circular economy and waste route map to 2030 (2024)	The route map identifies the priorities to 2030 that will help Scotland to progress to a circular economy and maximise the positive impact of the Circular Economy (Scotland) Act 2024 for communities across Scotland. (Described in more detail below)
Scotland's National Strategy for Economic Transformation (2022)	Identifies the Circular Economy as an area of new market opportunity for the wellbeing economy - 'generating new, well-paid jobs from a just transition to net zero - where resources are kept in high-value use, creating new market, innovation and job opportunities that will be key to achieving our targets for net zero and nature'. This will help with a Community Wealth Building (CWB) approach to promote local economic development through more productive and innovative businesses, industries, regions, communities and public services
Procurement Reform Act (2014)	Includes a requirement for contracting authorities to consider how they can improve economic, social and environmental wellbeing through regulated procurement and to act in a way to secure this.

3.2. Scotland's circular economy and waste route map to 2030

Scotland's circular economy and waste route map to 2030 [9] was published in December 2024. It was developed following extensive collaboration and engagement with the public, private and third sectors through two consultations since 2022. The route map identifies the priorities to 2030 that will help Scotland to progress to a circular economy

and maximise the positive impact of the Circular Economy (Scotland) Act 2024 for communities across Scotland.

The overall Scottish Government vision seeks to:

> *"Deliver a fully circular economy in Scotland by 2045, driven by responsible consumption, responsible production, and maximising value from waste and energy."*
>
> Scottish Government. (2024). Scotland's circular economy and waste route map to 2030.

This vision is underpinned by four strategic aims, each with a vision statement and associated key objectives:

1. Reduce and reuse

"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".

- Challenging the current approach to consumption and production
- Focus on reducing food waste
- Focus on embedding circular construction practices.

2. Modernise recycling

"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. […] 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".

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

3. Decarbonise disposal

"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".

- Understand the best environmental outcomes for specific wastes
- Ensure there is an appropriate capacity to manage waste
- Improve environmental outcomes for waste through innovation
- Incentivise decarbonisation of the waste sector

4. Strengthen the circular economy

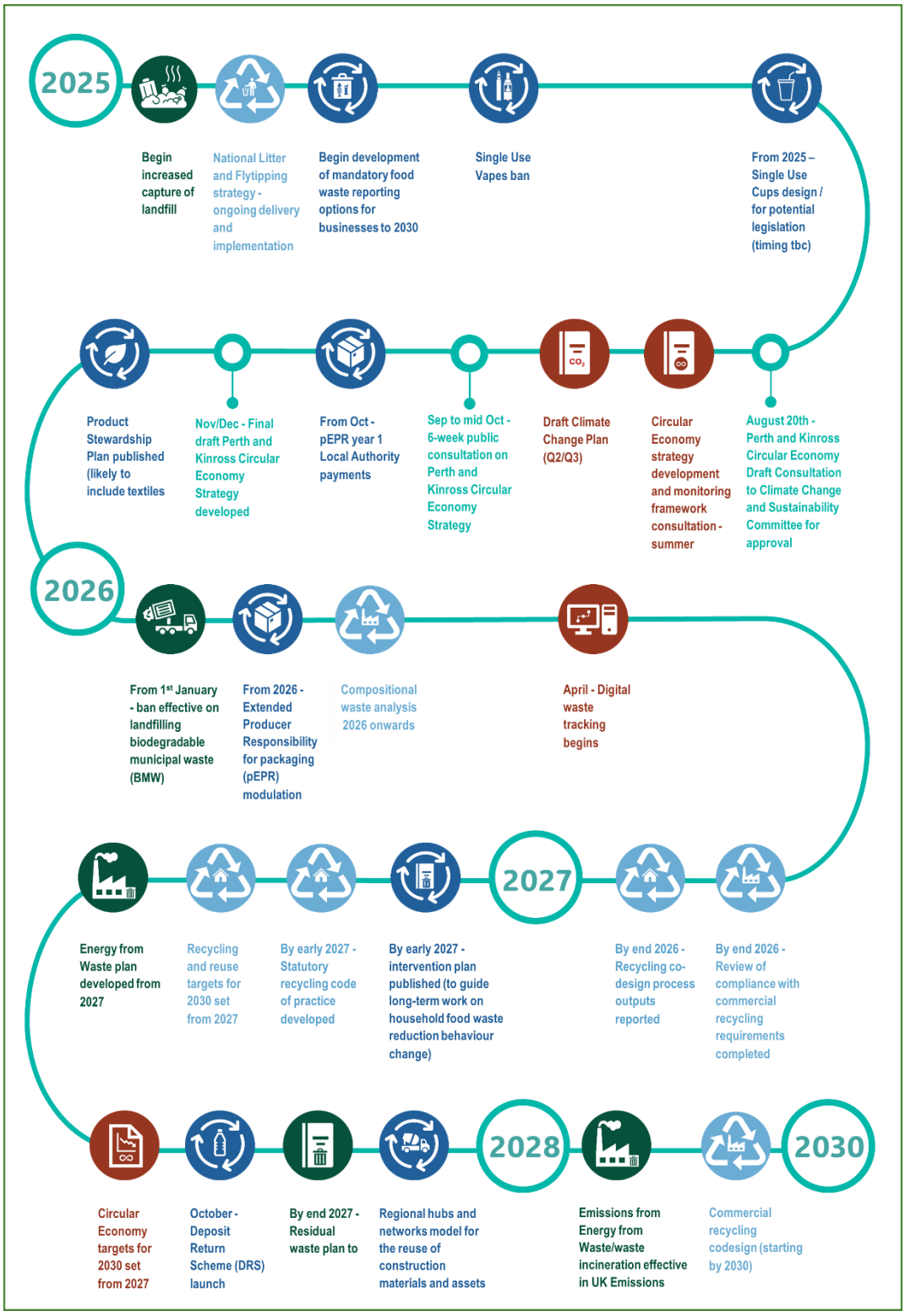
"Delivering a circular economy requires sustained transformational system change, and a range of actions that are both complementary and coordinated to drive sustainable management of our resources. If we are to maximise the opportunities that a circular economy brings to Scotland, we must maintain a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

- Setting strategic direction and maximising impact
- Coordinating action across cross-cutting areas
- Robustly monitoring and evaluating progress.

The circular economy is a rapidly changing environment, and as such, the proposed strategy and action plan will need to be constantly evolving to account for moving national agendas, regulations and timelines.

Based on the timeline knowledge to date, the latest key national deadlines are displayed in Figure 3.

Figure 3. Scotland's Circular Economy and Waste Road Map to 2030 timeline



3.3. Impact Screening

The UK and Scottish Governments have statutory impact screening processes that apply to this Strategy, as detailed in Table 2.

Table 2. Statutory Impact Assessments

Requirement	Relevance to the Circular Economy Strategy
Environmental Assessment (Scotland) Act 2005 - Strategic Environmental Assessment	Under the guidance, this strategy requires a Strategic Environmental Assessment (SEA). A SEA Scoping Report is being prepared to assess the effects of the proposed strategy on the environment and will be sent to the SEA Consultation Authorities (SEPA, NatureScot and Historic Environment Scotland) in August to allow for adequate consultation and feedback in-line with statutory SEA timelines. A copy will be published on the Council's SEA page in August. Feedback will be considered when preparing the final strategy, alongside the preparation of an SEA Environmental Report.
The Equality Act 2010 -Equality and Fairness Impact Assessment	The Council is required to eliminate discrimination, advance equality of opportunity, and foster good relations between equality groups. Under Part 1 of the Act 'The Fairer Scotland Duty', the Council is required to actively consider how it can reduce inequalities of outcome caused by socioeconomic disadvantage, when making strategic decisions. The Council's Equality and Fairness Impact Assessment (EFIA) process ensures all significant Council strategies have as a minimum an EFIA screening inbuilt as part of the risk assessment process.

The Consumer Scotland Act 2020 - Consumer Duty	The Consumer Duty is a statutory duty introduced by the Consumer Scotland Act 2020 that places a duty on relevant public bodies in Scotland. Decisions of a strategic nature must have due regard to: • The impact of those decisions on consumers in Scotland • The desirability of reducing harm to consumers in Scotland. The definition of a consumer is an individual or small business who buys, uses or receives goods or services in Scotland, or could potentially do so, supplied by a public authority or other body.

4. Alignment with local plans and strategies

4.1. Perth & Kinross Council Corporate Plan 2022 - 27

Perth & Kinross Council's Corporate Plan [13] sets out a vision for a Perth and Kinross, 'where everyone can live life well, free from poverty and inequality'. To transform this vision into action, seven interdependent corporate priorities have been established:

- Working in partnership with communities
- Tackling poverty
- Tackling climate change and supporting sustainable places
- Developing a resilient, stronger and greener local economy
- Enabling our children and young people to achieve their full potential
- Protecting and caring for our most vulnerable people
- Supporting and promoting physical and mental wellbeing

The Circular Economy Strategy will set the path for working in partnership with communities to scale up reuse and resource sharing options to support the wellbeing economy and tackle poverty. It will facilitate working with business and industry to develop a stronger and greener local economy, all whilst tackling climate change and supporting sustainable places.

4.2. Transformation and Change Strategy

The Council's Transformation and Change Strategy (TCS) [14] was developed in 2022/23 with the aim to 'support the delivery of services to the people of Perth and Kinross, particularly those in greatest need'.

The TCS sets out the phase of transformation needed over a five-year operational period up to 2027/28 over 15 targeted projects, sitting within the Council's wider strategic framework and acting as an enabler to deliver on the Council's corporate objectives. 'Project 15 - Zero Waste & Operations' involves a review of waste strategy and waste

management arrangements to deliver national initiatives, improved outcomes and realise best value and service efficiencies. It has a number of workstreams including: commercialisation review; operational asset review; circular economy strategy and service design beyond twin stream; schools recycling improvement and fleet transformation. Alongside this, the programme also includes a review of the delivery of our operations to ensure we are maximising opportunities for efficiency and effectiveness

Workstream 4 focuses on developing a Circular Economy Strategy to inform the future transformation of the Council's waste and recycling operations and associated infrastructure and/or major contracts expenditure, together with sustainable economic development activity with local businesses.

4.3. Perth and Kinross Waste Management Plan 2010-2025

The Waste Management Plan (WMP) [10] was adopted in November 2010 to promote and implement sustainable municipal solid waste management policies for Perth and Kinross, while minimising the overall environmental impact of waste by managing it in the most environmentally acceptable and economically efficient way, through the provision and co-ordination of appropriate wastes management facilities and services.

4.4. Perth and Kinross Climate Change Strategy and Action Plan 2021 - 26

The Climate Change Strategy and Action Plan [15] (adopted December 2021) contributes to several of the Corporate Plan priorities, with particular focus on 'tackling climate change and supporting sustainable places' and 'developing a resilient, stronger and greener local economy'. It outlines the initial route map to take us to a net zero carbon and climate resilient Perth, with focus on the following areas of the Waste and Circular Economy Theme:

- Ensuring alignment with the Scottish Government Climate Change Route map
- Promoting a rapid transition to a Circular Economy

- Developing and delivering thematic action plans for the high carbon emissions materials
- Improving our recycling services
- Maximising value from waste by reducing waste sent to landfill

In addition to a number of existing waste management and recycling operations actions already included in the Action Plan from 2019 onwards, the specific actions (Table 3.) were added in 2021 to address the requirements of the Scottish Government's Circular Economy Routemap.

Table 3. Climate change strategy actions towards the circular economy

Action to be delivered	Status
Undertake a Perth & Kinross Circular Scan to establish a baseline for the Circular Economy Route Map	Partially completed
Develop a Food Waste Action Plan	Partially completed
Maximise value from waste through reduction of greenhouse gas emissions via diversion of organic waste from landfill into recycling and energy production	Partially completed
Develop a Circular Economy Route Map including an action plan for Circular Textiles & Sustainable Fashion	Begun
Develop a Circular Economy Route Map including actions to reduce consumption of products and materials and make better use of existing products including tackling single use items	Begun
Development of a Resource Management Plan for Education & Children's Services to improve the reduction and recycling of waste, energy efficiency and environmental messaging within schools	Partially completed
Work with the Resources Management Association (RMAS) to decarbonise sector and liaise with the Business & Industry Group	Partially completed
Establish a Stakeholder Advisory Group to review & develop the Waste & Circular Economy Action Plan.	Begun

4.5. Perth and Kinross Economic Action Plan 2025 - 2030

The Perth and Kinross Economic Action Plan [16] was approved in February 2025, setting out the approach Perth and Kinross Economic Partnership will take over the next five years (2025-2030) to grow a stronger, greener, fairer and more sustainable economy for Perth and Kinross, with the key objective of:

- Supporting local businesses to grow and attract jobs and investment
- Tackling inequalities
- Supporting the transition to net zero

As with the Climate Change Strategy and Action Plan, the Economic Action Plan also supports the delivery of Perth and Kinross Council's Corporate Plan's seven priorities, focusing predominately on:

- Developing a resilient, stronger and greener local economy by promoting business creation and growth, skills development and job creation.
- Tackling poverty by promoting access to training and jobs to people experiencing, or at risk of, experiencing poverty.

4.6. Perth and Kinross Council Sustainable Procurement Strategy

The Perth and Kinross Council Sustainable Procurement Strategy 2024 to 2029 [20] was approved in June 2024. It reflects the Council's dedication to 'sustainability, economic growth, and the well-being of the people in Perth and Kinross', putting sustainability at the heart of public procurement. Though sustainable procurement processes, it commits the Council to providing additional economic, social and environmental benefits to the people of Perth and Kinross. The strategy has 6 key aims, the two most relevant include:

- Economy and local wealth building - *using our buying power to promote local economic growth, to then create jobs and help tackle poverty within our area*
- Protecting our Environment - *supporting a fair transition to net zero and minimising our environmental impact.*

4.7. Perth and Kinross Council Best Value Sustainable Development Duty

Alongside helping to deliver the priorities and objectives of the Corporate, Climate Change, and Economic Action Plans, a Circular Economy Strategy for Perth and Kinross will also contribute to the achievement of Sustainable Development through the Council's Best Value Duty and how this contributes towards the United Nations Sustainable Development Goals – with particular focus on:

- SDG 7 - Affordable and Clean Energy
- SDG 8 - Decent Work and Economic Growth
- SDG 9 - Industry, Innovation and Infrastructure
- SDG 11 - Sustainable Cities and Communities
- SDG 12 - Responsible Consumption and Production
- SDG 13 - Climate Action
- SDG 15 - Life on Land.

4.8. Tayside Circular Economy Strategy

A Tayside Circular Economy Strategy (commissioned by Zero Waste Scotland) is being developed to create value, build resilience and deliver a fairer, more inclusive economy for the Tay Cities Region, with the strategic objectives to:

- Showcase the Tay Cities Region as a UK leader in circular food, drink, and agriculture by building on our local strengths and innovative businesses.
- Position the region as a hub for smart and sustainable waste and resource management.
- Make circular thinking part of everyday practice in public services, education, workforce training, and business support.

- Build a strong network of partners across research, innovation, finance, and delivery to scale up new circular solutions and infrastructure.

The strategy (due to be published later in 2025) prioritises a small number of high-impact actions which are expected to deliver the following tangible benefits for the Tay Cities Region:

- Local economic value and resilience
- Job creation and future-ready skills
- Revitalised town and city centres
- Stronger circular innovation ecosystem
- Environmental impact and climate action.

5. Framework for delivering the Strategy

5.1. Strategic priorities and delivery areas

"In Perth and Kinross, we aim to build communities where everyone understands how to use resources responsibly and reduce waste. We take pride in making thoughtful choices that support the environment and improve our quality of life, by protecting nature, growing the economy, creating jobs, and strengthening our communities. Together, we are working toward a greener and more sustainable future."

In order to develop a strategy to deliver the above vision, a circular economy working group was established in February 2025 with members from across key Council Services. The focus of the group is to develop and set the strategic direction and priorities, provide baseline information to establish the Council's current position in relation to these priorities, set key objectives for each theme and develop future actions, and prepare the consultation and final strategy and action plan.

The Working Group identified that there was benefit to aligning the strategic priorities of the Perth and Kinross Council Circular Economy Strategy with those adopted in Scotland's Circular Economy and Waste route map to 2030 [9]. The objectives (Table 4.) have been reviewed and modified from those at a Scottish level to be appropriate to Perth and Kinross and associated Council levers of influence. The background information used in selecting and forming these objectives is presented in Sections 6 – 9. Section 10 presents the draft Action Plan.

Table 4. Proposed strategic priorities and objectives

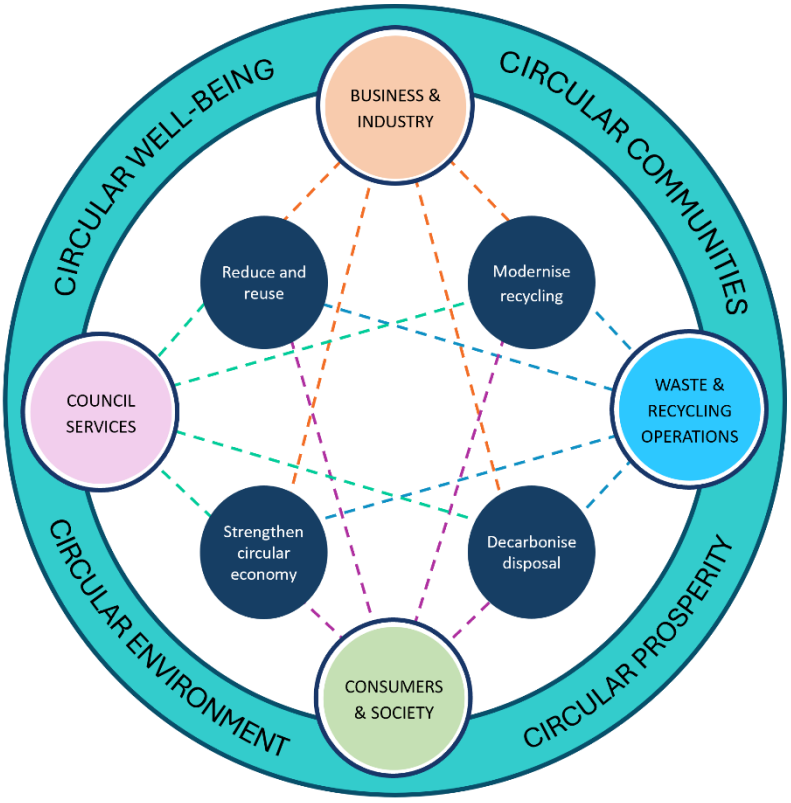
Strategic Priority 1 - Reduce and reuse	
Objective 1.1	Work with our residents and businesses to change patterns of production, consumption and disposal
Objective 1.2	Improve circularity of the Tayside Food System to promote local, healthy eating and reduce food waste and food poverty
Objective 1.3	Reduce textile waste
Objective 1.4	Ensure Council services, including schools, model best practice to lead by example
Strategic Priority 2 - Modernise recycling	
Objective 2.1	Modernise household recycling and reuse services to maximise performance and meet evolving needs
Objective 2.2	Support businesses and commercial premises to reduce waste and maximise recycling
Strategic Priority 3 - Decarbonise disposal	
Objective 3.1	Understand the best environmental outcomes for specific wastes
Objective 3.2	Ensure there is an appropriate capacity to manage waste
Objective 3.3	Improve environmental outcomes for waste through innovation
Objective 3.4	Support the incentivisation of decarbonising waste
Strategic Priority 4 - Strengthening the circular economy	
Objective 4.1	Set the strategic direction and act as a regional catalyst for change
Objective 4.2	Grow the enabling environment to support and attract circular businesses
Objective 4.3	Encourage circular construction practices
Objective 4.4	Coordinate action across cross-cutting areas and robustly monitor, evaluate and report progress

In delivering these priorities and objectives, the Council identified four key delivery areas that we have control or influence over:

- Delivery area 1 - Waste and Recycling Operations
- Delivery area 2 - Council Services
- Delivery area 3 - Consumers and Society
- Delivery area 4 - Business and Industry

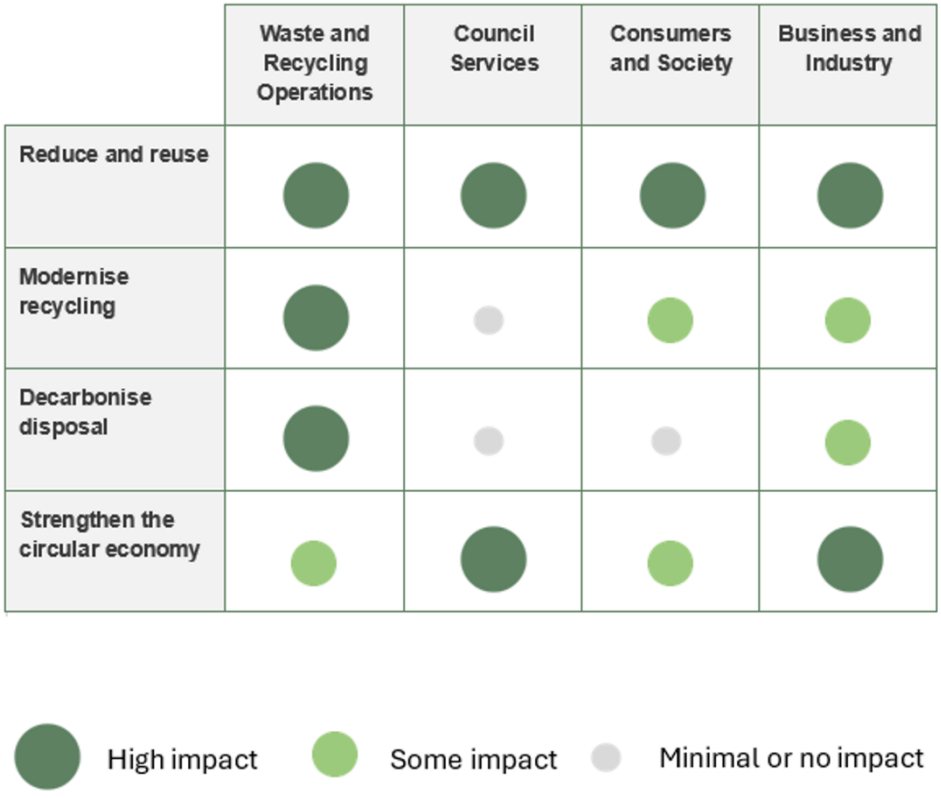
Sub-groups have been established to provide expert knowledge and input into developing actions across the delivery areas. Collectively, these areas will drive the delivery of the four strategic priorities as shown in Figure 4.

Figure 4. Strategic Priorities and Delivery Areas



Due to the interconnected nature of circular economy principles, in many cases the delivery areas will work with and across each other to deliver action with varying levels of impact (Figure 5.). Many of the actions from the final action plan will rely on input and support from more than one delivery area for success to be achieved. Whilst delivery areas 1, 2 and 4 will set the framework for delivering action, delivery area 3 ‘Consumers and Society’ will be key to the ongoing roll out and continued success of such action.

Figure 5. Delivery Area level of impact on Strategic Priorities



Consultation question 1

Do you agree with the proposed vision?

If not, what would you change?

Consultation question 2

Do you agree with the proposed Strategic Priorities for this strategy?

If not, what would you change them to, and why?

Consultation question 3

Do you agree with the proposed Objectives for this strategy?

If not, what would you change them to, and why?

Consultation question 4

Do you feel the 4 delivery areas adequately cover the sphere of action needed to deliver the strategic priorities for the CES?

If not, what further delivery areas would you include, and why?

5.2. Developing actions to assess potential opportunities and challenges.

In May 2025, an internal workshop was held to begin the prioritisation and development of potential actions to help deliver the final strategy. Output from the workshop highlighted existing gaps and potential opportunities and challenges facing the delivery areas, and based on this, actions for delivering a circular economy are being developed.

Sections 6 to 9 describe the connections typically associated with each key delivery area and the circular economy, and for each delivery area, provides an overview of:

- how each delivery area can help deliver the circular economy

- a baseline position (where available) of the current circular economy understanding and practices throughout Perth and Kinross
- findings of a gap analysis to assess potential opportunities and challenges.

This information will be used to develop the final strategy and action plan, alongside a monitoring and delivery framework. The framework will set the targets required for achieving and delivering action towards the circular economy in Perth and Kinross.

The rapidly evolving national circular economy agenda is such that national targets for both household recycling and the strengthening of the circular economy have yet to be set. The recycling co-design process currently running until the end of 2026 will establish a framework for future recycling measures, shaping a future statutory household recycling Code of Practice and aid in meeting local statutory recycling and reuse household waste targets from 2030, set from 2027 onwards. The first national circular economy strategy is due to be developed in 2026, with circular economy targets being set by 2027. As both sets of targets will be 'set and delivered through a joint action focused improvement programme between Scottish and Local Government', the Council will adopt a watching brief on national target setting before finalising those within the CES monitoring and delivery framework. Although targets are still to be developed, a wide range of activities and actions are already taking shape locally towards the circular economy. These can viewed in Section 10.2, Table 8.

6. Delivery Area 1 – Waste and Recycling Operations

6.1. How can this area help deliver a circular economy?

Waste and Recycling Operations includes services provided by the Council directly, such as household and business waste and recycling collections and reuse facilities; and those we contract to other service providers, particularly in the recycling and waste processing sector.

These have a major role in facilitating and promoting a shift to a circular economy through:

Reducing waste
• Work with our businesses and residents to change patterns of production, consumption and disposal • Provide leadership and capacity to support all services in Perth and Kinross to improve their management of materials and to review policies and practices through the lens of circularity
Promoting recycling and re-use
• Setting recycling and reuse targets to improve performance • Making it easier for households and businesses to reuse and recycle and to manage their residual waste in a responsible way
Modernising waste management
• Investing in modern recycling and reuse infrastructure and services, to better manage waste and to create economic opportunities in the local reprocessing market • Using digital technologies to improve business insights and enhance communications to improve customer service and influence customer behaviour

Decarbonising disposal
• Incentivising more sustainable reprocessing and disposal practices and infrastructure, through procurement processes and economic development activities
Providing strategic oversight and coordination
• Developing new policies and strategies in line with national legislative and policy requirements • Monitoring and evaluating progress of targets and actions across a range of sectors and responding accordingly
Community engagement
• Engaging with communities and individuals to help them to understand the key role that they play in the circular economy, and to take responsibility for their own waste impact • Encouraging participation in reuse and recycling initiatives to foster a culture of sustainability.

6.2. What is the current position across Perth and Kinross?

Service provision

Table 5 shows the range of collection services currently provided by Perth and Kinross Council.

Table 5.

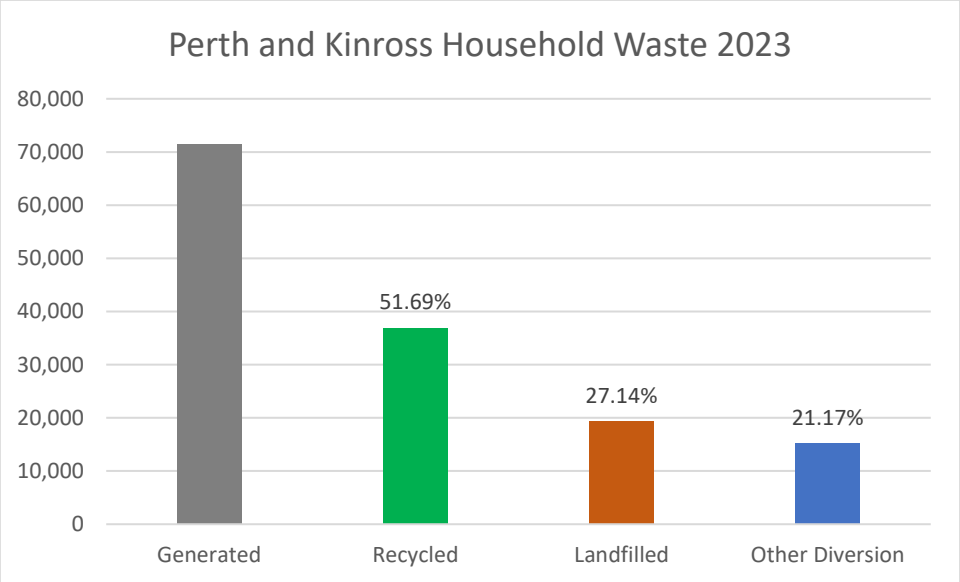
Kerbside	Household Waste Recycling Centres
• Non-recyclable black bag/general waste • Recycling - Plastic, cans and cartons container mix.	• All kerbside listed (except co-mingled food and garden waste)

• Recycling - Paper and Card • Recycling - Food and garden waste in urban and semi urban locations	• Non-recyclable – non recyclable black bag/general waste, bulky waste, Waste Upholstered Domestic Seating (WUDS) • Recyclable – glass, green waste, wood, scrap metal, car batteries, inert waste, plasterboard, tyres, cooking oils, engine oils • Reuse – Textiles, bikes, books, mattresses (Friarton only), plus reuse containers at Kinross, Crieff, Inveralmond and Friarton.

Household Waste

In 2023, 470kg of household waste were generated per person in Perth and Kinross, totalling 71,456 tonnes of household waste by Perth and Kinross households (Figure 6.). 51.7% of household waste was recycled in Perth and Kinross, compared to the Scottish average of 43.5%. The carbon impact per person (tCO2e) from household waste in Perth and Kinross remains steady and consistently below the Scotland average. In 2023, 0.9 tonnes of Carbon dioxide equivalent (tCO2e) were generated per person in Perth and Kinross, compared to 0.98 (tCO2e) for the Scotland average.[17]

Figure 6. Perth and Kinross Household Waste 2023



In 2023, 20,256 tonnes of organic waste was collected by Perth and Kinross Council. The total carbon impact of household organic waste per person in Perth and Kinross was 179.4 tCO2e. Of this, 169.5 tCO2e were from organic garden waste and 9.9 tCO2e from organic food and drink waste.

The Council's Residual Waste Contract Award provides a long-term solution ahead of the ban on landfilling municipal waste before 31 December 2025. This has resulted in the diversion of approximately 39,000 tonnes of non-recyclable waste being sent to landfill, reducing carbon emissions by an estimated 11,868 tCO2e, in the first year of the contract. The planned completion of a new Energy from Waste facility at BINN EcoPark will secure a reliable, local, treatment solution for PKC waste whilst also generating energy to the existing private renewable energy grid and servicing the development of the Binn Eco Park. There is also the potential to export energy to local businesses and public bodies.

Although still high, the proportion of adults satisfied with local refuse collection in Perth and Kinross shows a declining trend, mirroring the trend for the average across Scotland. For the period 2021-24, 82% of adults surveyed were satisfied with local refuse collection, compared to 78% for the Scotland average.[18]

Business Waste

Generated business waste comprises waste from commerce and industry such as factories, utility and transport companies, shops, offices, hotels, restaurants, schools and hospitals and public sector organisations. It also includes waste from the mining and quarrying industries and estimates for the generation of agricultural waste.

In 2021, 121,552 tonnes (t) of business waste were generated in Perth and Kinross, with the following five waste types accounting for 80% (97,276 t): Household and similar

wastes 19% (23,335 t), Wood wastes 18% (22,228 t), Vegetal wastes 17% (20,661 t), Mixed and undifferentiated wastes 14% (16,586 t) and Common sludges 12% (14,466 t.[19]

Consultation question 5

Do you feel this adequately addresses the current position in relation to Waste and Recycling Operations?

Are there any other areas you feel should be addressed or any missing data you feel would be beneficial?

If so, please provide details.

Case Study 1

Perth and Kinross Council Twin-Stream Service

The Council was successful in securing £2.7M from the Scottish Government Recycling Improvement Fund (RIF) to introduce a twin-stream service. The overarching benefits were to provide a more equitable service, better quality material, reduce waste contamination (by households disposing of additional waste streams at the kerbside) and promote a circular economy whilst benefiting the environment. The new grey bins brought the Council in line with the Charter for Household Recycling, which seeks to bring consistency to recycling services across the country.

71,000 households (approximately 97% of households) were issued with an additional grey bin (for plastics, metals & cartons) to allow for additional materials to be recycled (including soft plastics and foil) and repurposing of the blue bin (now paper, card and cardboard) service.

The award also included funding for the expansion of recycling services to properties in Perth City Centre, whereby approximately 1000 properties had their existing communal bin hubs enhanced by the introduction of blue and grey bins, as well as a food waste recycling unit. Another factor required to support twin stream were upgrades to numerous road end facilities which the Waste Services Team co-ordinated in order to incorporate the additional grey bin.

The introduction of the recycling collections to the city centre and the addition of the grey bin has produced the desired outcome, with increased quality of materials collected due to separating paper and cardboard from plastics, metals and cartons. In the year before the grey bin service, the contamination rate in the blue bin was 18.7%. Recent data shows the average contamination rate for the blue bin to have reduced to 2.3%.

The success of the ‘twin stream’ rollout secured an Association Public Service Excellence Bronze award in the Waste and Recycling category.

Case Study 2 Transforming Waste Management at Crieff Hydro

Over the years, the Commercial Waste Team has played a pivotal role in managing waste services for one of Perthshire’s most prestigious hotels at Crieff Hydro. Known for its

expansive estate and high guest turnover, particularly in its self-catering accommodation, the hotel required a flexible and responsive waste management solution.

In 2019 the Commercial Waste Team took over full waste management for the entire estate. Due to the dynamic nature of the hotel's operations, with frequent guest turnover and seasonal fluctuations in occupancy, waste volumes varied significantly. This presented a challenge and coordinating collections across a large estate with multiple access points required careful planning and adaptability.

Other challenges (Figure 8.) on site included:

- High levels of contamination in recycling streams.
- Missed collections caused by multiple collection points across the site.
- Access issues, particularly trolleys blocking the compactor area.
- Damage to customer property during collections.
- Overflowing waste containers.

Figure 8. Challenges encountered at the outset

In 2023, by adopting a proactive approach to the various challenges, the commercial waste team invited representatives from Crieff Hydro to visit Gleneagles Hotel (another PKC customer) to review the effective waste collection practices implemented there. During this exercise, the commercial waste team demonstrated the strategic waste management setup at the hotel, highlighting the following benefits of a well-structured waste collection system:

- Clean and efficient use of space via a centralised waste compound.
- Streamlined collection processes.
- Reduced contamination and improved recycling rates.

Working together with Crieff Hydro, the commercial waste team presented a business case for investing to establish a business waste compound for the hotel, highlighting the long-term value through continued access to and use of the infrastructure.

Collaboration between the commercial waste team and Crieff Hydro resulted in the creation of a reliable waste compound (Figure 9.). This intervention not only streamlined the waste management process but also significantly improved Crieff Hydro's operational efficiency.

Figure 9. Improvements observed as the waste compound was being established

The close working relationship with Crieff Hydro played a key role in supporting the Commercial Waste Team's success in:

- Designed and implemented a dedicated waste compound on-site.
- Consolidated all waste collection points into a single, accessible area.
- Provided guidance on best practices for segregation and storage.

The transformation delivered significant improvements:

- Zero customer complaints since the new system was implemented.
- Reduced disposal costs through better segregation and fewer missed collections.
- Increased recycling rates, contributing to the business's sustainability goals.
- Improved collaboration between the Commercial Waste and the Operations team.

The Crieff Hydro project is now a benchmark for future commercial waste partnerships.

Consultation question 6

Are there any other case studies you feel also reflect the Waste and Recycling sector's contribution to the Circular Economy in Perth and Kinross?

If so, please provide details.

6.3. Challenges and opportunities

The following key challenges have been identified for the Council's waste and recycling operations in transitioning to and delivering a circular economy:

Investment Challenges
• Reuse scale-up projects are capital-intensive, requiring significant property and financial investments • Introduction of Energy Trading Scheme to EfW presents a significant cost risk, linked to emissions from hydrocarbons (plastics) • The changing policy and legislative landscape over the next 1-3 years introduces a level of uncertainty, which impacts on investment planning
Competition Among Reuse Organisations
• Despite good networking, reuse organisations compete for materials and funding.
Lack of Awareness
• There is insufficient awareness about the reuse potential of key materials and their benefits. • Traceability of materials. People are unaware of where waste ends up, resulting in a mistrust that recycling is actually happening.
Process and Procurement Obstacles
• Tendering on price alone can make it difficult to secure local suppliers. More consideration needs to be given to local production and other sustainability criteria when tenders are being specified.
Audience Engagement and Communication Costs
• Difficulty in reaching and engaging new, sometimes uninterested, audiences. • Accessing mainstream communication networks (e.g. TV) is expensive.
Recycling Challenges
• Issues include poor engagement in schools, inconsistent internal bin frameworks, and non-compliance with recycling practices.
Waste Management Issues

- Problems with recycling certain plastics, confusion among new residents, lack of coordinated food waste plans, and increasing fly-tipping.

The following key opportunities have been identified for the Council's waste and recycling operations in transitioning to and delivering a circular economy:

AI and Digital Solutions
• Digital solutions can help transform existing processes, for example it can help improve in-cab technology to provide up-to-date collection info to householders and businesses, including feedback on contamination / poor recycling practice in waste contamination identification.
Waste Hierarchy
• Maximise upstream waste hierarchy (see Figure 12.) interventions to reduce as much plastic as possible from residual waste streams.
Technological developments
• Support emerging technology that can process hard to treat plastics to form raw material for further production uses, creating value and reducing the incineration of hydrocarbons.
pEPR funding
• The funding will enable necessary investments to be made to improve service delivery and recycling infrastructure.
Deposit Return Scheme
• This has the potential to improve the quality and value of recyclate, increase recycling rates and reduce roadside litter significantly.

Consultation question 7

Do you agree with these identified opportunities and challenges for Waste and Recycling Operations?

Are there any additional opportunities and/or challenges that you think should be addressed through the CES?

7. Delivery Area 2 – Council Services

7.1. How can this area help deliver a circular economy?

Council services have a major role in facilitating and promoting a shift to a circular economy through:

Resource efficiency and waste reduction
• Designing buildings that are energy-efficient and have a lower environmental footprint, utilising renewable energy sources (such as solar panels and energy-efficient lighting systems) and improving insulation and heating systems in housing and property. Also helping to improve living conditions and promote social equity • Implementing procurement practices that promote whole life decision making and optimise the use of natural resources by reducing material waste, energy consumption, and water usage throughout the supply chain • Promoting resource efficiency through increased use of electric, hybrid and other low-carbon vehicles in the Council's fleet, reducing emissions and reliance on fossil fuels

Responsible consumption through reuse, repair and recycling

- Designing and constructing for durability, repair and upgradability so products and materials are kept in use for as long as possible, leading to reduced waste. For example, by reducing the need for improvements/renovations or new construction of buildings and spaces; adopting modular building design for easier disassembly, reuse and repurposing for different uses over time; innovation in medical equipment across the health and social care sector

- Improved and joined up project planning to optimise the use of materials and resources to reduce excess and waste – for example, on-site recovery and reuse of road surface materials or off-site road patching or verge filling

- Promoting circular construction practices through reusing building components and materials from demolition projects, repurposing old or discarded materials, and recycling of building construction waste materials (such as concrete, steel, wood)

- Adopting maintenance and repair regimes to extend the lifespan of existing equipment and exploring business models that promote the leasing and sharing of equipment and materials or offer Product-as-a-Service (PaaS). This helps avoid upfront costs of purchasing equipment and technology and offers a wider range of smart energy efficient solutions (such as smart street lighting, smart bin sensors for bins in public spaces and smart irrigation systems for greenspaces).

Community Engagement and Education

- Organising, supporting and promoting local events and initiatives that help inform local communities how to implement circular practices through behaviour change, for example - upcycling projects, repair cafes, recycling drives, sharing surplus produce from community food growing initiatives.

- Promoting increased participation in recycling and positive behavioural change by residents through waste management campaigns such as ‘Stick to the Six’.
- Improving knowledge and skills development around the circular economy by hosting workshops and educational programs to raise awareness of circular economy principles and how they can be incorporated into daily life.
- Promoting alongside the curriculum provides opportunities to learn for future careers in sustainable engineering and construction, environmental science, and green business practices.
- Providing opportunities for volunteering, for example – litter picks, park clean-ups, tree planting, biodiversity and conservation activities, community food growing and gardening.
- Fostering collaboration among local businesses, organisations, and residents in support of circular projects and initiatives – for example, tool and equipment sharing networks.

7.2. What is the current position across Perth and Kinross?

This section provides an overview of some of the areas of activity already taking place within Council services towards the circular economy. Consultation with services is ongoing and a number of internal engagement sessions are planned to run alongside this consultation.

Procurement

As part of the Council’s Transformation and Change Strategy (TCS) [14] (developed 2022/23), Project 11 ‘Strategic Procurement & Commissioning Project’ aims to optimise the public value of the procurement function and consolidated relevant skills and expertise across the organisation. One of the agreed project outcomes is to ‘support and promote sustainable procurement and a circular economy model’.

Elements of the circular economy have been embedded into many Council contracts on an ad hoc basis from environmental or cost consideration. In 2025 the Council's Procurement and Climate Change Teams are working to explore the full climate and circularity potential in select pilot contracts.

Restricting choices through contracts on the basis of circularity also presents an opportunity to reduce the total amount of goods and services being procured and consumed. Where purchase is still required, focus on local procurement spend helps minimise the emissions associated with supply chain logistics, manufacturing, and distribution, as well as promoting local suppliers and manufacturers who have established circularity practices, such as minimal or renewable, recyclable or biodegradable packaging, and share and repair models.

Since 2014-15, the percentage of total procurement spend that is spent on local businesses by Perth and Kinross Council has remained between 18-24% but continues to fall consistently below the Scotland average. In 2023-24, 21% of Perth and Kinross Council's procurement spend was on 'core trade'[1] local enterprises, compared to 31% for the Scotland average.[18]

Analysis carried out in 2023 by CO2Analysis on the Council's procurement and finance spend data, found the top 5 suppliers in terms of carbon emissions (tonnes) were responsible for just under half of all emissions from the top 100 organisations. Carbon is a good indicator of overall resource input and is a priority area of focus for circular economy interventions. Table 5 lists the actual carbon emissions (tonnes) for each of the top 5 suppliers.

[1] Core trade refers to Council spend over £1000 (Source: Improvement Service, LGBF)

Figure 10. % share of carbon emissions by Top 10 supplier organisations

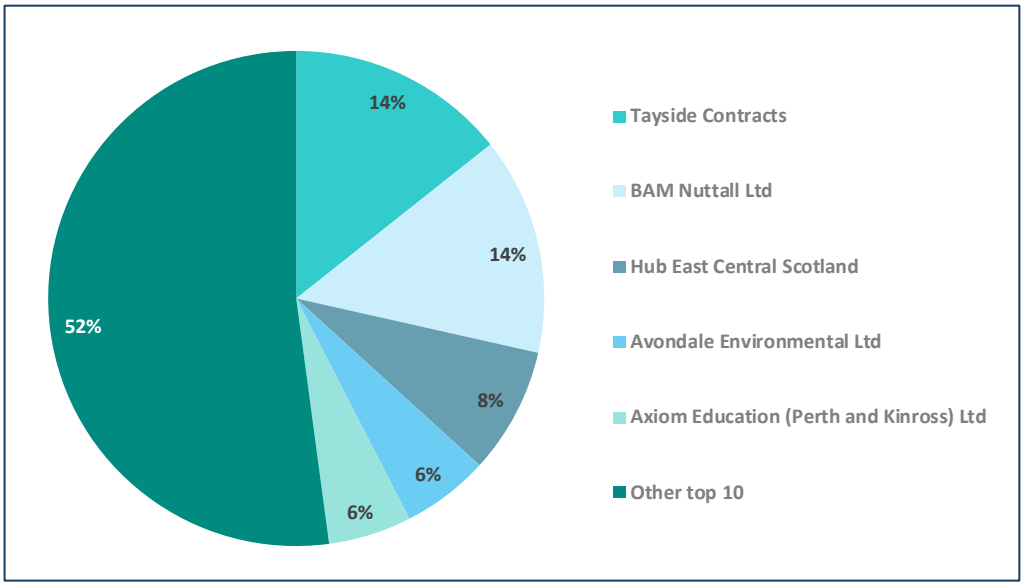


Table 5. Carbon emissions (tonnes) from top 5 suppliers

Supplier	Type of business	Carbon tonnes (t)
Tayside Contracts	Commercially based local authority contracting organisation providing catering, cleaning, roads maintenance, vehicle maintenance and winter maintenance throughout Perth and Kinross.	15,769
BAM Nuttall Ltd	BAM Nuttall Ltd is the main contractor for the Cross Tay Link Road, part of the Perth Transport Futures infrastructure upgrade programme.	15,644

Hub East Central Scotland	Hub East Central Scotland (hubco) is a public/private partnership organisation delivering new community infrastructure across Perth and Kinross. Projects include the multi-million pound Passivhaus design and building contracts Riverside Primary School, Perth High School and replacement Blairgowrie Recreation Centre. The tier 1 and Tier 2 supply chain is managed directly by hubco.	9,073
Avondale Environmental Ltd	Organisation responsible for the landfill site near Falkirk where our residual waste was sent until July 2023	6,269
Axiom Education (Perth and Kinross) Ltd	Private consortium responsible for the design and construction of six new learning campuses (including schools and community facilities) and their operation and maintenance over a 30-year period.	5,972

Community Food Growing

Perth and Kinross Council has produced a Food Growing Strategy setting out how it intends to increase the provision of food growing sites, especially in areas that are experiencing socio-economic disadvantage, and to protect and support existing sites. The strategy aims to create opportunities and improve skills for people to grow their own fruit and vegetables across Perth and Kinross to promote healthy, sociable and sustainable lifestyles.

There are 31 listed Community food growing sites in Perth and Kinross, which include Allotments, Community Gardens & Fields, Community Orchards & Woodlands, Urban Farms, Institutional /Organisational growing spaces, Edible hedges, Herb and vegetable boxes, and Home Growing. The Perth and Kinross Food Growing Story Map highlights existing food growing sites and projects, plus opportunities and advice for those who are interested in setting up a new food growing initiative.

In the climate change engagement survey referred to previously, when asked if they would be interested in getting involved in community food growing initiatives in their area - 70% of respondents expressed an interest in potential community food growing[21]

Energy and Buildings

Energy makes up the largest share of Perth and Kinross Council's own direct emissions (44%) and 12% of Perth & Kinross's overall emissions. Work is focused on both the Council's own domestic and non-domestic estate and helping our residents and businesses to decarbonise and drive the energy transition.

PKC has committed to building all new non-domestic buildings to Passivhaus Standard. This has led to completion and occupation of Perth and Kinross Council's (and Scotland's) first certified Passivhaus primary school - Riverside Primary School in North Muirton. Recent analysis has shown that the schools energy performance is currently 40 kWh/sqm/pa which is well below the energy target of 67 kWh/sqm/pa for core use. Construction is close to completion for a further two Passivhaus projects for the replacement of Perth High School and Blairgowrie Recreation centre.

Passivhaus helps to both reduce operational resource need and promote durability of design. More widely the design specifications, repairability, maintenance and longevity of materials are all important considerations.

Under the Council's Climate Change Action Plan and Local Heat and Energy Efficiency Strategy, the Council has plans for energy retrofit of both its domestic and non-domestic estate.

Within buildings themselves, the Council has utilised the Kinross Wooden Products Company for office furniture reuse. This has helped to reduce waste to landfill, support the local economy and save the Council £143,000 annually in new furniture spend.

Roads Maintenance

The Roads Maintenance Partnership is working to maximise reuse and minimise the need for new materials. The recovery of road surface materials such as road planings are currently being used in the resurfacing of B, C and D classified roads. Where possible, and as a first choice, recovered asphalt is being reused on-site to form lower road layers. Where this is not an option, the recovered asphalt is reprocessed by Tayside Contracts at Collace Quarry for use as a sub-base added to a 5% asphalt mix. This can be used for reconstructed patching, or when there is an excess of material it is sold on to other contractors.

For category B, C and unclassified roads where historically asphalt has been added on top of unsurfaced tracks, there is potential for using regraded old, crushed stone, subject to SEPA licensing conditions for holding and storage at local sites. The stone can also be used to fill roadside verges.

Materials from drainage ditches currently go to landfill as they are mixed with saturated soil and there are currently no storage facilities to dry them out for repurposing. If storage facilities and drying equipment become viable there is potential for future reuse of repurposed materials as topsoil for verges.

Tayside Contracts, in partnership with Perth and Kinross, Angus, and Dundee City Councils has recently introduced Warm Mix Asphalt (WMA) materials into the range of low carbon materials produced at Collace Quarry for more sustainable road surfacing. Warm mix asphalts are manufactured, supplied and laid at temperatures lower than conventional hot mix asphalts (20 to 40°C less).

Benefits of WMA include:

- Reduced greenhouse gas emissions due to reduced energy in the asphalt manufacturing process – with a reduction in CO_2 emissions of between 5% to 15%, dependant on asphalt plant settings and other factors.

- Based on projected sales for 2025/26, potential to reduce annual CO_2 emissions at Collace Quarry by 109.8 tonnes - equivalent to taking 25 cars off the road for a year, or 60 round trips from London to New York, or the annually electricity to power 70 homes.[22]

Tayside contracts is now using vegetable-based fuels for plant and heavy vehicles instead of diesel, with most of the small fleet vans now electric.

Case Study 3

U38 Stanley to Newmiln Road - Road Edge Strengthening Project.

The U38 from the A9 to 5 Mile Wood was upgraded whilst the A9 Luncarty to Birnam road was being dualled. The road edges on the remaining section from 5-mile wood to the railway bridge at Stanley were in very poor condition with motorists driving along the verges when encountering oncoming traffic. In the past this was repaired by removing the soil and laying asphalt.

A contract was prepared to widen the road and trial pits were excavated to determine the quality of the underlying material, with cores taken to determine the depth of the current asphalt and whether there was coal tar present.

From the trial pits it was determined that the excavation would require to be 250mm deep, and specification was made for 100mm of sub-base and 150mm of asphalt material. Analysis of the cores advised that there had been coal tar used when the original surfacing was carried out (1940/50s). In view of this, the design was revised to only step joints at 100mm depth to avoid disturbing the coal tar and overlay the full width of carriageway.

The planing operation produced 620 tonnes of planings. The usual procedure is for planings to be transported to Collace Quarry for processing and reuse in new asphalt materials. The vehicles taking planings to Collace then pick up new sub-base material for reuse.

The reuse of planing material as sub-base reduced HGV lorry journeys by 928 miles and reduced the tonnage of new sub-base material by 620 tonnes (representing a cost saving of £8170). Revised specification to avoid disturbing the coal tar saved hgv lorry journey by 1280 miles (representing a cost saving of £5400). Reuse of the sub soil material as verge fill reduced hgv lorry journeys by 600 miles and prevented the original material from being landfilled. It also reduced the tonnage of new material by 300 tonnes (representing a cost saving of £2400).

Total savings made - 400 gallons of diesel fuel, 920 tonnes of new quarried construction materials and cost savings of £15,170.

Education and Schools

A review is underway to look at the current arrangements for recycling within 11 clusters of schools in Perth and Kinross, with a view to improving the recycling infrastructure and reducing residual waste in all Perth & Kinross Council learning establishments. This will form part of a planned Resource Management Plan for Education & Children's Services.

In February 2025, Bertha Park High School hosted a workshop with the aim of bringing together representatives from different organisations in Bertha Park and Perth and Kinross Council to develop a pilot research circular clothing project in Bertha Park. The workshop showcased a 10-minute film produced by the Bertha Park High pupils on attitudes of pupils towards fast fashion and circular clothing models, as part of the “Festival of Social Science” completed in November 2024. A representative from the Perth-based clothing reuse organisation ‘Social Flock’ also gave a presentation outlining the role their organisation plays in redistributing clothing to families in need, including the different package options for reusing and redistributing school uniforms.

Work is underway to promote and support school food growing projects, including a new project in association with Meigle and Ardler Development Trust.

Health and Social Care

In 2022, the census estimated over 37,226 people aged 65 years and over in Perth and Kinross, accounting for 24.7% of the population (Scotland: 20.1%). This signals a significant demand for health and social care services across the Council. Consideration is needed to address the economic impacts of the increasingly dependent population alongside a falling proportion of the under 15-year population and the impact this will have. [23]

The Health and Social Care Partnership (HSCP) is one the main spend areas for the Council. Initial review identified limited existing practice in this area, but a willingness to explore opportunities going forward. One example of this is the widening out of the mattress reuse project (Case Study 4 below) to encourage HSCP colleagues to purchase the cleaned mattresses instead of buying new.

Consultation question 7

Do you feel this adequately addresses the current position in relation to Perth and Kinross Council Services in relation to activity around the Circular Economy?

Are there any other areas you feel should be addressed or any missing data you feel would be beneficial?

Consultation question 8

Are there any other case studies you feel accurately reflect Perth and Kinross Council's Services contribution to the Circular Economy in Perth and Kinross?

If so, please provide details.

7.3. Challenges and Opportunities

The following key challenges have been identified for Council Services in transitioning to and delivering a circular economy:

Skillset and capacity
• Many internal teams lack understanding of circularity principles and the associated benefits do not have the technical/industry knowledge/contacts to recognise all opportunities.
Material flow data gap
• We have limited internal visibility of our own material usage and disposal.
Materials storage
• The Council does not have large storage facilities and associated licences needed to store items in the gap between uses (e.g. asphalt, soil, furniture). There is also the issue between teams and partner organisations who would maintain liability and guarantees for the quality of materials.
Financial pressures
• Budgets available mean it is not always possible to prioritise longer lasting, but more expensive items and cheaper, shorter life items often win.
Need for guidance
• There is a lack of guidance/policy for procuring and tendering for sustainable construction and purchasing to reduce single use items.

The following key opportunities have been identified for the Council's Services in transitioning to and delivering a circular economy:

Sustainable Procurement
• Opportunities have the potential to drive change. For example, including the environmental impact of haulage into the Residual Waste contract can be extended to future procurements to reduce emissions and help make local suppliers more attractive.
Good Food Nation
• The need to develop a Good Food Partnership and prepare a Good Food Strategy & Action Plan for Perth & Kinross by the end of 2026 will help bring many different strands of this work together.
Cost Savings
• Through increased sharing, reuse and redistribution of materials.
Sharing Good Practice
• The public sector as driver for industry change through tendering for construction and there is the opportunity to share more good practice.

Consultation question 9

Do you agree with these identified opportunities and challenges for Perth and Kinross Council Services in delivering a Circular Economy?

Are there any additional opportunities and/or challenges that you think should be addressed through the CES?

8. Delivery Area 3– Consumers and Society

8.1. How can this area help deliver a circular economy?

Consumers and society have a major role in shaping and driving the success of the circular economy through:

Responsible consumption through reuse, repair and recycling
• Buying/using second-hand and pre-owned items or participating in swap events. Repairing and fixing items instead of replacing them and avoiding them being disposed of. • Reducing waste by only buying new products when they are needed and consciously ensuring these products are durable, repairable, made from sustainable materials, and use minimal or recyclable packaging. • Appropriately recycling and managing waste correctly
Supporting Circular Businesses
• Consciously choosing sustainable brands and companies that practise circular economy principles and choosing to support and use those who offer take-back schemes and return used products for recycling or refurbishing.
Community engagement and education
• Raising awareness of circular economy practices and products with friends and family and supporting initiatives that promote the circular economy. • Participating in local events and initiatives such as community clean-up events, repair cafes, and recycling drives.

8.2. What is the current position across Perth and Kinross?

Scotland's Census 2022 estimated the population of Perth and Kinross to be 150,953. This is an increase of 4,301 (2.9%) from Census 2011 (Scotland 2.7%).[19]

In 2022, the Circularity Gap Report Scotland [6] detailed the following seven key societal needs and wants and which products and services they include, as well as the volume of materials it takes to fulfil them:

- Nutrition – food and drink production and consumption (26%)
- Manufactured Goods (18%)
- Housing and Infrastructure – construction and maintenance (17%)
- Services – use of commercial buildings, professional equipment, office furniture, computers and more (14%)
- Mobility – materials used to build transport technologies and vehicles and fossil fuels to power them (13%)
- Healthcare – construction and maintenance of buildings, equipment products such as X-ray machines, pharmaceuticals, hospital outfittings (beds), disposables and homecare equipment (10%)
- Communication (2%).

There is a strong community reuse network in Perth and Kinross. The network was previously coordinated by PKC but has now been passed over to Remake as the lead for the zero waste strand of the newly formed Climate Connect Hub. The reuse network allows reuse organisations across Perth and Kinross to share ideas and resources and work collaboratively where possible.

The Scottish Government considers that over 60% of the emissions reductions required to meet net zero in Scotland will require some kind of individual or societal behavioural change. Zero Waste Scotland has estimated that in Scotland around four fifths (80%) of our carbon footprint comes from all the goods, materials and services produced, used and thrown out, often after minimal use. A Zero Waste Scotland awareness survey undertaken in 2021 showed only one fifth of the population were aware that buying new products contributes to climate change.[24]

A survey of adults (aged 16+) commissioned by Consumer Scotland in 2024 on consumer behaviour and the transition to a circular economy, found:

- Many consumers (80% of those surveyed) want to reduce the carbon emissions from their everyday activities, but cost and convenience still drive purchasing decisions:

- Current levels of consumer concern about climate change are not resulting in action that matches the pace and scale of change required
- Consumers are open to circular economy measures, but they require more support to move beyond low impact changes
- There is some consumer support for measures relating to reducing consumption, buying second hand, or increasing repair and re-use

When asked for their views on a range of measures related to the use, reuse or disposal of household goods, respondents showed broad support for a range of measures to help promote more environmentally friendly behaviours, with:

- 92% of respondents agreed there should be more promotion of repair and reuse services, as well as recycling services
- 90% agreed products should be made so that they are easy to repair, and their components can be re-used
- 80% agreed companies that sell products should be responsible for taking them back for recycling or disposal at the end of product life

With the environment in mind, for respondents under the age of 35:

- 65% were more likely to consider buying second hand (compared to 49% of all respondents)
- 61% were more likely to consider repairing worn or broken goods (compared to 52% of all respondents)
- 34% were more likely to consider leasing or borrowing rather than buying (compared to 22% of all)

Women are also more likely to consider their action based on environment concerns with:

- 56% were more likely to consider buying second hand
- 58% were more likely to consider repairing worn or broken
- 26% were more likely to consider leasing or borrowing rather than buying[25]

In the 2020/21 Perth and Kinross climate change engagement survey, when asked about shopping habits:

- 44% of respondents said they preferred buying second-hand items
- 48% of respondents said they do not mind buying from second-hand stores, but would prefer to buy new items
- Only 7.6% of respondents said they do not like shopping at second-hand stores

When questioned about their eating habits and diet:

- 85% of respondents showed a clear willingness to make changes to their eating habits and shift to a more sustainable and healthy diet - with 54% very willing and only 2% being very unwilling to make changes
- Respondents commented that cost, availability of local produce, lack of reliable information, skills and knowledge are the main things that limit them from changing their eating habits and shifting to a more sustainable and healthy diet[17]

In the Perth and Kinross climate change engagement survey referred to above, when questioned on waste and recycling, the survey found 91% of respondents answered that they can easily access recycling points in their area. Positive feedback from the waste themed virtual session found there was a strong interest in community groups in refurbishment and upcycling, with best practice local examples given for 1) Remake Crieff - offering employment and skills development in relation to recycling and reusing items, while being locally focused and beneficial to the community, 2) The Reuse container at Friarton Recycling Centre. Attendees also suggested encouraging more repair shops along Perth High Street in order to meet demand for more recycled materials.

When asked about how food poverty impacts food waste, respondents raised the need for more work to be done on this area by the Council, on both food poverty and food security.

Consultation question 10

Do you feel this adequately addresses the current position in relation to Consumers and Society and activity around the Circular Economy?

Are there any other areas you feel should be addressed or any missing data you feel would be beneficial?

Case Study 4

Mattress Reuse from the Recycling Improvement Fund (RIF)

Perth & Kinross Council currently accepts approximately 700 mattresses every month at recycling centres that the public no longer require. The third sector organisation PUSH (Perth & Kinross) Ltd has reported a high demand for mattresses (which they currently cannot meet) to sell at their busy re-use shop in Perth.

Following a successful bid for grant funding through the Recycling Improvement Fund (RIF) - Small Grants Scheme, Waste Services has partnered with PUSH allowing

residents to drop off unwanted good quality mattresses at one of two enclosed 20yd containers at Friarton Recycling Centre. These are collected by PUSH and taken to their warehouse to be cleaned, disinfected and sold in their re-use shop in Perth city centre.

Benefits of the project include:

- Extending the life of mattresses to avoid disposal or recycling - therefore moving this up the waste hierarchy
- Decreasing the requirement for virgin material extraction by avoiding the production of new mattresses
- Decreasing carbon emissions related to the extraction, production, transport and recycling and disposal
- Creating training and employment opportunities for local young people facing barriers to work
- Offering a low-cost alternative for those seeking mattresses on a budget
- Bringing increased custom to PUSH through the mattress marketing, leading to increased sales of other re-used items.

Future development of the project will include housing colleagues purchasing the cleaned mattresses instead of buying new and using the cleaning equipment to increase the number of other types of items (such as upholstered seating) that can be cleaned and re-sold, that would previously have been too dirty to sell.

Consultation question 11

Are there any other case studies you feel accurately reflect Consumer and Society's contribution to the Circular Economy in Perth and Kinross?

If so, please provide details.

8.3 Challenges and opportunities

The following key challenges have been identified for helping consumers in transitioning to a circular economy:

Food poverty and food waste
• While there is a lot of impactful community led work going on, there are still high levels of food wastage and food poverty in our communities.
Unsustainable consumption and production patterns
• Fast fashion is a common example but covers all aspects of people's lives. These patterns have become so mainstreamed that there are often not easy to change and affordable alternatives are not available.
Recycling education
• There is uncertainty over what can be recycled and what should not be recycled, with waste compositional analysis showing there is significantly more that can be recycled and contamination of recycling by things that cannot be recycled.
Incorrect disposal of waste from fly tipping
• This is a growing problem in Perth and Kinross.
Bin confusion
• New residents often confused about function of different waste and recycling bins when moving from different location.

The following key opportunities have been identified for helping residents transition to a circular economy:

Existing community networks
• There is a strong network of community reuse organisations, now coordinated by Climate Connect.
Communications and engagement

- Participate in initiatives and events that promote second hand purchasing and repair e.g. Share Repair Aware Week

Community willingness
• There is a desire from many residents to make more sustainable choices, if it is made easy and simple to do. ‘Preloved’ clothing market is a growing sector.
Awareness
• There is growing awareness of the inequality/human rights issues associated with ‘disposable’ clothing

Consultation question 12

Do you agree with these identified opportunities and challenges for Consumers and Society in delivering a Circular Economy for Perth and Kinross?

Are there any additional opportunities and/or challenges that you think should be addressed through the CES?

9. Delivery Area 4 – Business and Industry

9.1. How can this area help deliver a circular economy?

Business and industry have a key role in facilitating and promoting a shift to a circular economy through:

Reduced use of primary resources
• Adopting processes that prioritise resource efficiency and waste minimisation • Improving energy efficiency by implementing energy-saving measures and utilising renewable energy sources • Reducing waste production by recycling and recovering materials.
Maintaining the highest value of materials and products
• Designing products that last and are easily repairable and upgradable • Using recycled and renewable materials to reduce waste • Remanufacturing, refurbishing, and reusing products and components • Operating circular supply chains so materials are continuously reused • Investing in technologies and systems for recycling and recovering materials • Promoting product life extension through maintenance and repair services
Changing utilisation patterns
• Offering products as a service rather than for new sales (for example, leasing or subscription schemes). • Adopting sharing models such as reuse and sharing platforms • Creating take-back programmes to encourage consumers to return products for recycling and refurbishing • Engaging with consumers to inform and encourage their participation in the circular economy.
Leading through collaboration and innovation

- Working in partnerships to collaborate with other businesses, government, and organisations to innovate and implement circular practices.
- Investing in new technologies and business models that support the circular economy
- Supporting and advocating for regulations that foster a circular economy.

9.2. What is the current position across Perth and Kinross?

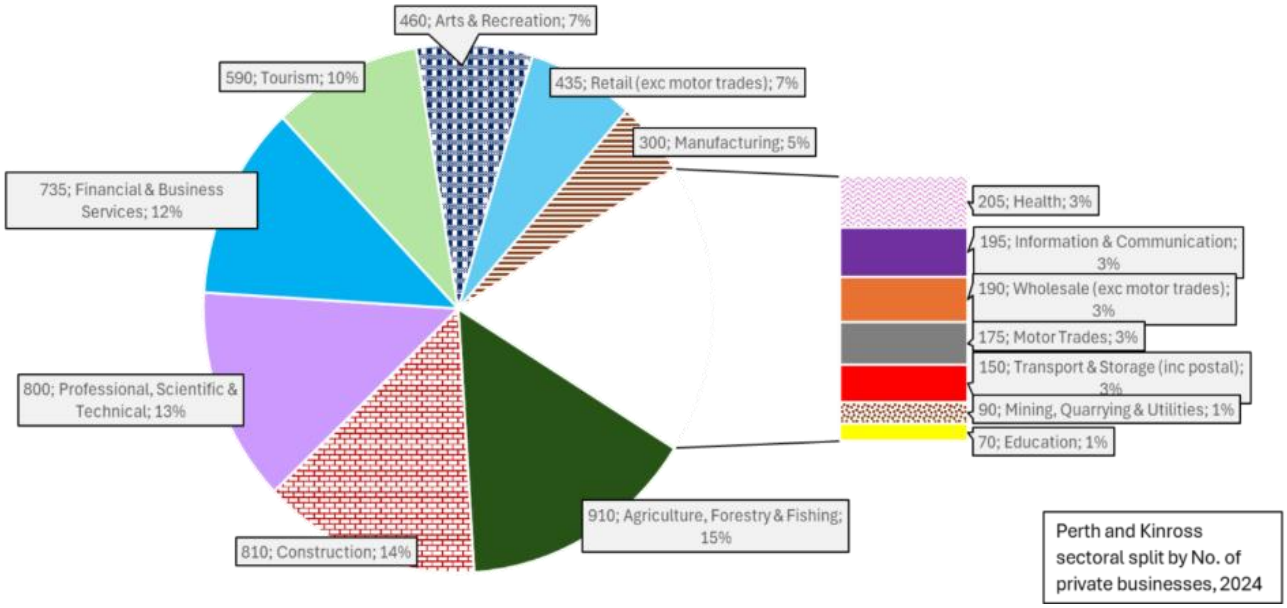
In 2024, there were 6,175 registered businesses in Perth & Kinross, employing a total of 54,932 people. The private sector employs 83% of the Perth & Kinross workforce. Perth City has been identified as an innovation cluster of electricity, energy, storage, agri-tech, water and waste.

The top five private sector industries accounting for 70% of **total employment** in Perth and Kinross were: Primary industries [2] (19%); Wholesale, retail and repairs (17%); Accommodation and food service activities (15%); Education, human health and social work activities (11%); and Manufacturing (8%). Agriculture, Forestry and Fishing accounted for 90% of all Primary industries in Perth and Kinross (17% share of all).

It is important to recognise that Perth and Kinross has a relatively diverse economy with no one sector dominating (see Figure 11). This emphasises that a circular economy can be adopted by most of the sectors represented in the Perth & Kinross economy.

[2] Primary industries refer to Agriculture, Forestry and Fishing; Mining and Quarrying, Electricity, gas, steam and air conditioning supply; and Water supply – sewerage, waste management and remediation activities.

Figure 11: The Perth & Kinross Economy by Business Count and Sector (2024)



The top five private sector industries accounting for 96% of **total turnover** in Perth and Kinross were: Primary industries (44%); Wholesale, retail and repairs (20%); Manufacturing (20%); Construction (8%); and Accommodation and food service activities (4%). 10% of the businesses in Perth and Kinross each had a turnover of at least £1M. [26]

The Green Economy

In a 2025 study by waste management experts at BusinessWaste.co.uk, Perth ranked 5th out of 76 cities across the UK and 1st in Scotland as one of the most sustainable places to operate a business. [27]

Between October 2020 and January 2021, Perth and Kinross Council conducted an online survey for climate change engagement in Perth and Kinross. 480 responses were

received from a wide demographic across the Council area. There were also nine online engagement sessions that attracted over 240 virtual attendees.[15]

When questioned on their awareness of education, skills and funding support offered by Government or non-Governmental agencies to help businesses/organisations manage waste: 51% of respondents were not aware, 39% were somewhat aware, and 10% were fully aware.

When asked to rank different strands of the Circular Economy in order of importance to their role in having an impact on climate change, respondents ranked from the most important 1) Recycling, 2) Reuse of resources/materials, 3) Prevention (for example, resource and product sharing, design for disassembly, servitisation and maintenance, leasing models, to the least important 4) Refurbishment and remanufacturing. This contrasts with the new waste hierarchy as seen in Figure 12. and is perhaps a reflection on where businesses feel they have most influence in their day-to-day activities. However, it may also reflect a lack of awareness of alternative interventions that may help them to reduce their environmental impact and potentially provide competitive advantage.

Figure 12. Waste hierarchy

Respondents expressed interest in appropriating land for food production and looking at agroforestry, and the issue of bio regionalism for Tayside and working in harmony with nature. Respondents also felt that as neither forestry nor agriculture are subject to planning control, and the Council is limited in its involvement with food production and agroforestry but seeks to support the sector alongside other sectors of the economy.

When asked to provide details of what support respondents felt was required from both Government and non-Government agencies, to help the agricultural and forestry sectors to become more sustainable, respondents replied with suggestions for:

- Funding/subsidies
- Legislation and byelaws to protect nature and enforcement officers
- Land value tax – encourage the split of larger farms to allow new entrants
- Penalties for bad practice
- Incentives for climate and biodiversity friendly practice and activities
- Rural support squads.

When asked for suggestions/projects on how the agriculture and forestry sectors can help to protect and develop our local natural capital (e.g. biodiversity, water, soil), respondents suggested:

- Research – use techniques and tools developed by JHI and RSGS
- Environmental improvement grants
- Increase biodiversity
- Managed wildlife areas
- Reduce the use of inorganic fertilisers.
- Changed and adaption to current farming methods and practices, including – Permaculture, Hydroponics and Aquaponics, Renewable energy sources, Crop rotation, and Polycultures v. Agroforestry.

Consultation question 13

Do you feel this adequately addresses the current position in relation to Business and Industry in Perth and Kinross?

Are there any other areas you feel should be addressed or any missing data you feel would be beneficial?

If so, please provide details.

Case Studies

While there is yet to be wide-spread adoption, there are excellent examples in Perth and Kinross where businesses have benefitted from embracing circular principles. Examples of these include:

- Located in Glenfarg, the circular economy cluster at BINN Eco-park (previously a landfill site which is still generating methane gas), consists of several waste processing companies including Binn Group; SUEZ wood recycling/biomass fuel production and dry mixed recycling materials recovery facility; Earnside Energy anaerobic digestion plant, processing 30,000 tonnes of food waste per annum; and GAP Group's new £15M fridge recycling facility. Planning permission is in place for the development of a new Energy from Waste facility and a new advanced plastics sorting and Upcycling facility (APSuF). The eco-park also generates green energy from wind turbines, which benefits the businesses and local communities and a solar PV project is at an early stage of development. Green Cat Hydrogen are developing a hydrogen production and storage facility which will be directly connected to renewable energy sources, producing around 1,000 tonnes of low-carbon hydrogen per year-some of which may, in future, be used to fuel refuse collection vehicles.

- The Blair Atholl Estate engaged in a trial of a new biofuel technology created by Oakland Biofuels. The new technology allows bracken to be converted into biofuel at a high rate of efficiency. Bracken is a toxic pest plant that damages woodland, agricultural land, and watercourses. Thousands of tons of bracken are removed from Scottish farms and estates each year typically either by use of pesticides or manual extraction which is typically burned as harvested bracken currently has limited commercial value. The conversion to biofuel presents an environmentally friendly alternative to petrol which can allow estates and farms to new generate value from what is currently only an expense by either selling the fuel or using it for on-site heat and power generation.

- The Tayside Upcycling Centre is home to numerous independent artisans who collect old or damaged furniture from households and businesses to reinvigorate them for re-sale. The initiative has been a roaring success with demand outstripping supply. They have generated wide awareness of their business from their recurring segment on the BBC's "Money for Nothing" program.

- The Wild Hearth Bakery is a traditional rural bakery that uses waste wood from timber milling to power their ovens. They are also exploring plans to capture waste heat from these ovens to heat their premises as well as installing solar panels to generate electricity on site too.

- The agricultural business, Robert Bell and Partners, are engaged in a project to reduce their plastic waste by transitioning to a pit silage storage system. This entails storing their silage in covered ground pits which eliminates the large quantity of soft plastic waste produced by wrapping sage in plastic bales.

- DAS Signs have recently streamlined their production process with the acquisition of a new vinyl printing machine, part funded by Perth and Kinross Council's Green Capital Development Grant. Their new process allows them to produce high quality signs with significantly reduced plastic input and energy use. This project will reduce their waste profile by over 450kg of plastic per year.

- Comrie Croft is a farm that has recently acquired a new biomass burning system that enables them to convert their excess agricultural waste into heat. All heat for their farm and events buildings is now generated from their own agricultural waste.
- Home Economics are a small company that take good quality white goods from Friarton and Inveralmond Recycling Centres and repair and sell them.

Consultation question 14

Are there any other case studies you feel may also reflect the Business and Industry sector's contribution to the Circular Economy in Perth and Kinross?

If so, please provide details.

9.3 Challenges and Opportunities

The following key challenges have been identified for Perth and Kinross businesses and industry in transitioning to a circular economy:

Terminology
• ‘Circular Economy’ is not a well understood term and businesses often do not see the benefits and competitive advantage that it can provide.
Resources
• With the higher number of SMEs in Perth and Kinross and the associated the small workforces many businesses do not have dedicated people/resources to explore new areas. • Access to finance needed to implement new products or processes.
Food and hospitality
• There is a lack of widespread awareness of available food redistribution infrastructure. • Standards around time-bound barriers limit efficient sharing while food is still edible.
Construction
• There is a lack of incentives for the construction industry to move away from a demolition/new build approach to one of refurbishing existing buildings, or constructing ones that are designed to be disassembled at the end of life (housing in particular).
Landing Strip for Circular Economy
• The Council is establishing an on-line ‘Landing Strip’ ecosystem that fosters the development of a regenerative and climate resilient economy through a focus on circular materials, remanufacturing, repurposing and bioeconomy (including advanced food and crop production), but will not exclude other low carbon or clean technology developments where opportunities arise.

The following key opportunities have been identified for Perth and Kinross businesses and industry in transitioning to a circular economy:

Established partnership working
• Strong relationships with circular economy expertise – JHI, BINN, CERECO, RMAS, Highland Spring and the local environmental consultant base. • Established demonstration sites and projects where the principles of a Circular Economy can be seen and utilised as a basis to attract other businesses and investment • Maximise on well-established relationships with JHI and other Agri-sector leaders to encourage more engagement with farmers and Agri-sector.
Best practice
• There are numerous Perth and Kinross exemplars to learn from, including manufacturers and producers to agencies that help to redistribute food and recycle waste. • The Circular Economy Tayside study of 2018 highlights potential food and agriculture opportunities such as valorisation of unused fruit and potato residues and starch production from by-products. Also highlights a range of opportunities in plastics recovery and remanufacturing, tackling food waste across the value chain and in the construction and the built environment sector.

Consultation question 15

Do you agree with these identified opportunities and challenges for Business and Industry in delivering a Circular Economy for Perth and Kinross?

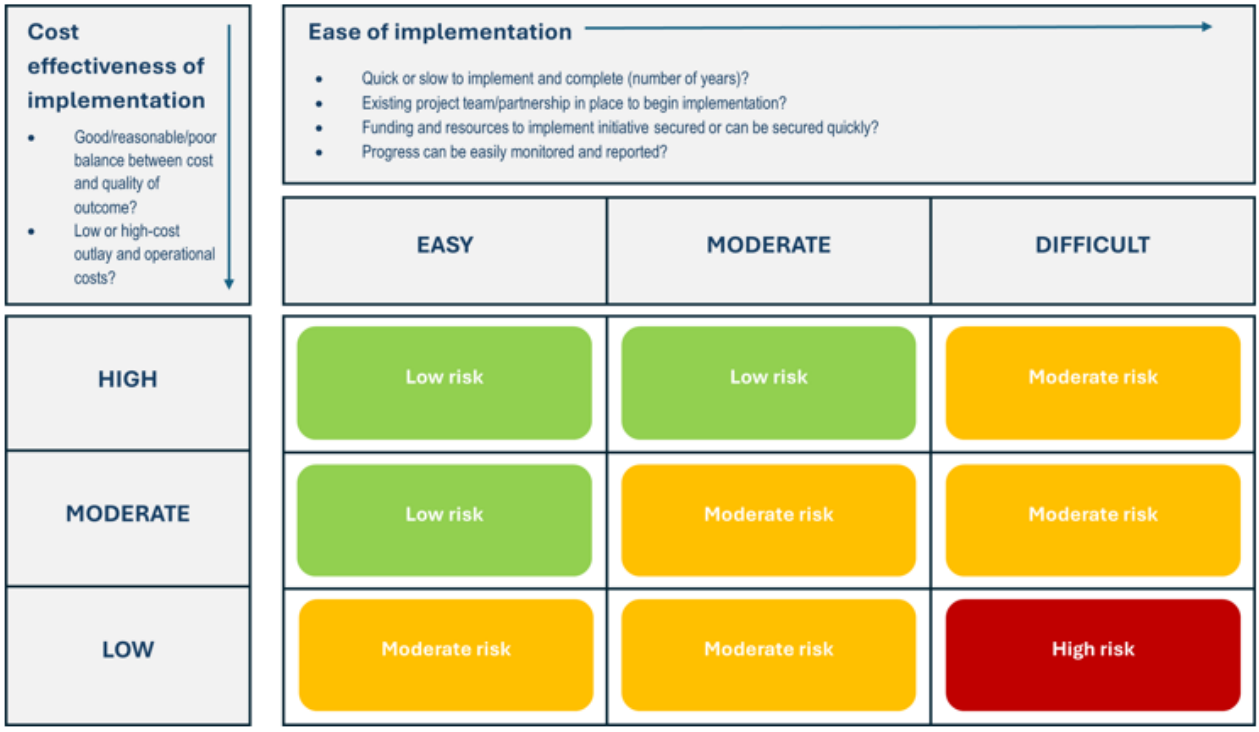
Are there any additional opportunities and/or challenges that you think should be addressed through the CES?

10. Prioritising Action, Delivery and Implementation

10.1. Prioritising action

The delivery of the CES will be supported through prioritisation of actions using a risk-based matrix approach. This approach is commonly used in risk management to assess, prioritise, and manage risks based on their likelihood and impact. Figure 13. provides an example of the assessment criteria that may be used.

Figure 13. Example Risk Assessment Matrix



Actions to deliver the CES are currently being developed based on the opportunities and challenges outcomes highlighted from the May workshop. Participants of the workshop were asked to identify opportunities and challenges based on the following criteria:

- Legislation
- Cost and savings

- Delivery timeline
- Efficiency
- Innovation
- Buy-in and alignment with corporate priorities
- Engagement
- Resources
- Logistics
- Networks / partnerships
- Performance monitoring

Feedback from this consultation, along with comments from the SEA Consultation Authorities, will be used to inform and develop actions to deliver the CES.

Consultation question 16

Do you agree with the criteria and approach to developing actions based on the opportunities and challenges highlighted in the sections above?

Are there any additional criteria you think should be considered?

10.2. Delivery and Implementation

The draft CES Delivery Plan in Table 6 focuses on the four delivery areas highlighted above to take forward actions, both in the short term (within one year) and medium term (2-3 years) or long term (4+ years), with Delivery Plan priorities and target dates being developed with key stakeholders through a series or future workshops and engagement sessions.

Table 6. Draft Delivery Plan

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	Develop a Food Waste Action Plan alongside an awareness campaign to show the financial and carbon value of food Roll out more food waste hubs, as part of the Food Waste Action Plan Develop baseline data of knowledge, participation and barriers to reducing food waste	Reduce and reuse	Waste and recycling services	Easy	High
	Invest pEPR funding in a range of improvement actions including improved infrastructure, frequency of service, education and behaviour change campaigns, support for community reuse organisations and improving data flow and business insights.	Modernise recycling	Waste and recycling services	Moderate	High
	Design and deliver fly-tipping communications campaign to reduce the number of fly-tipping incidents and raise awareness with householders of their legal Duty of Care obligations. Promote special uplifts and other support mechanisms	Reduce and reuse	Waste and recycling services	Easy	Medium

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	Prepare for forthcoming legislative and policy changes by engaging in research, consultations and co-creation workshops for the following: • Digital waste tracking • Waste and recycling code of practice • Organic waste (food and green waste) • Deposit Return System • Regional hubs and/or networks for construction material reuse • Emissions Trading Scheme	Modernise recycling	Waste and recycling services	Moderate	High
	Improve public engagement approaches as follows: Provide new residents with a PKC welcome pack via estate agents/landlords, Council Tax etc. which includes information on bins Continue Recycle Right awareness across multiple channels Adopt video and social media communications to better connect with the public - for example to demonstrate where	Reduce and reuse	Waste and recycling services	Easy/ Moderate	Medium

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	their waste and recycling goes, improve understanding of the fees/costs of processing waste, the risks of fire from batteries etc Explore AI powered app to assist people to know what bin to put materials into				
	Continue and enhance partnership working with reuse organisations, and map Perth and Kinross Reuse Network activities to support information sharing network across the sector	Reduce and reuse	Waste and recycling services	Easy	Medium
	Commission a circular scan of PKC activities to identify opportunities for impactful circular solutions	Strengthening the circular economy	Council services	Moderate	Medium
	Review PKC procurement processes to embed circular economy principles to reduce consumption of products and materials, for example reducing single use items and specifying sustainable construction criteria Develop category strategies for high emission categories that consider climate change	Strengthening the circular economy	Council services	Moderate	Medium

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	Develop standard specifications and tender questions for climate change				
	Asset Management Review of Waste & Recycling Infrastructure - to establish investment requirements to support a sustainable (monetary & carbon) operational asset base in line with the approach set out in the Councils approved Property Asset Management Strategy	Modernise recycling	Council services	Difficult	High
	Development and implementation of a Resource Management Plan for Education & Children's Services to improve the reduction and recycling of waste, energy efficiency and environmental messaging within schools (CAP action 111)	Reduce and reuse	Council services	Difficult	High
	Promote learning for sustainability and create fun/challenging STEM subject initiatives to encourage young people to improve school recycling	Strengthening the circular economy	Council services	Moderate	Medium
	Develop a digital platform to highlight resources that can be shared or reused across Council services	Reduce and reuse	Council services	Easy	Moderate

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	Investigate potential for using regraded old, crushed stone – begin discussions with SEPA for potential storage licensing solutions	Reduce and reuse	Council services (roads maintenance partnership)	Difficult	Moderate
	Explore the creation of a goods depot for use by different PKC projects - could this be an initial employment opportunity for upskilling (Castle Huntly)	Reduce and reuse	Council services	Moderate	High
	Develop a Textiles campaign to reduce consumption, reuse and repair of textiles and recycle correctly at end-of-life Develop campaigns to promote sustainable clothing choices	Reduce and reuse	Consumers and society	Moderate	Medium
	Develop a Good Food Partnership and prepare a Good Food Strategy & Action Plan for Perth & Kinross	Reduce and reuse	Consumers and society	Moderate	Medium
	Invest in a digital reuse platform to link businesses / public sector / third sector / reuse organisations to share unwanted items and monitor associated carbon saving	Reduce and reuse	Consumers and Society/Business and Industry	Moderate	Medium

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	Undertake a Perth & Kinross Circular Scan to establish a baseline for the Circular Economy Route Map (CAP action 106)	Strengthening the circular economy	Business and Industry	Moderate	Medium
	Work with the Resources Management Association (RMAS) to decarbonise the sector and liaise with the Business & Industry Group (*CAP action 112*)	Decarbonise disposal	Business and Industry	Difficult	High
	Establish a Stakeholder Advisory Group to review & develop the Waste & Circular Economy Action Plan (*CAP action 113*)	Strengthening the circular economy	Business and Industry	Moderate	Medium
	Work with and influence businesses to highlight benefits, cost savings, new income streams and promote and reward 'green' credentials	Strengthening the circular economy	Business and Industry	Easy	Medium
	Develop and launch the Circular Economy Landing Strip/ Clean Growth Axis – a platform and support system integrating PKC, relevant statutory bodies, funding organisations, and private sector to drive large scale circular economy projects into Perth and Kinross	Strengthening the circular economy	Business and Industry	Difficult	High
	Encourage the effective collection of consumable surplus food from all stages in the supply chain, from farms to retail, and redistribute it to community food organisations	Reduce and reuse	Business and Industry	Moderate	Medium

ID	Strategic Action	Strategic Objective(s)	Delivery Area(s)	Ease of implementation	Cost effectiveness
	while working to raise the nutritional standards of the food being offered				
	Support the development of Project beacon – a Tay Cities Deal project aimed at removing hydrocarbons from residual and recycling waste streams.	Decarbonise Disposal	Business and Industry	Difficult	High

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12. Glossary

CES (Circular Economy Strategy) - This document which presents the Council's strategic approach to circular economy

tCO_2e (tonnes of carbon dioxide equivalent) - A standard unit for measuring carbon footprints. It expresses the impact of different greenhouse gases in terms of the amount of CO_2 that would have the same global warming effect.

DRS (Deposit Return Scheme) - A recycling system where consumers pay a small deposit on drinks containers, which is refunded when the container is returned for recycling.

pEPR (Planned Extended Producer Responsibility) A policy approach where producers are given significant responsibility—financial and/or physical—for the treatment or disposal of post-consumer products, especially packaging.

TCS (Transformation and Change Strategy) – The Council's Transformation programme for improving the efficiency and impact of our services and systems.

PaaS (Product as a Service) - A business model where customers pay for the use of a product rather than owning it outright. This encourages manufacturers to design longer-lasting, repairable, and recyclable products, supporting a circular economy.

HGV (Heavy Goods Vehicle) - A large vehicle used for transporting goods, typically over 3.5 tonnes in weight. These are often targeted in emissions reduction strategies due to their high fuel consumption.

APPENDIX A Detailed overview of national policy landscape

Scotland's Zero Waste Plan 2010

Scotland's Zero Waste plan was published in 2010 to 'create a stable framework to provide confidence for the investment necessary to deliver a zero waste Scotland over the next 10 years.' The Zero Waste Plan recognised that a zero waste Scotland has an important role in helping to achieve the targets set in the Climate Change (Scotland) Act 2009 to reduce Scotland's greenhouse gas emissions. The Plan set the following specific targets to work towards delivering zero waste at a local level:

- recycle 60% of household waste by 2020, progressing to 65% municipal waste by 2035, in line with EU targets
- recycling 70% of all waste (includes commercial & industrial) by 2025
- a ban on biodegradable waste going to landfill (the implementation date of the ban was previously 2021 which has now been postponed until the end of 2025).
- no more than 5% of waste going to landfill by 2025.

Scotland's Progress on Zero Waste Plan 2010

2025 TARGET	PROGRESS
Reduce **total waste arising** in Scotland by 15% against 2011 levels	**On track**: 15% (2022) 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.
Reduce **food waste** by 33% against 2013 levels	**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. 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.
Minimum of 60% **recycling of household waste** by 2020	**Missed** : 43.5% (2023) 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%.
Minimum of 70% **recycling of all waste** by 2025	**At risk**: 62.3% (2022) 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.
Maximum 5% of **all waste to landfill** by 2025	**Off track**: 23.2% (2022) 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.
Ban on all **biodegradable municipal waste** going to landfill by 2025	**On track**: 554,000 tonnes (2023) Overall trend is a 57% decrease since 2011.

Scotland's Climate Change Plan 2018 - 2032

Scotland's Climate Change Plan was published in 2018 and updated in 2020 to account for new and ambitious targets set by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. The 2019 Act introduced new emissions reductions targets for 2020, 2030 and 2040 of 56%, 75% and 90% respectively against 1990 levels, and set the date for net zero emissions by 2045.

The Plan recognises that there is still a significant challenge ahead in meeting these ambitious emissions reduction targets. In 2020, emissions in the sector were around 1.9 megatonnes per year; with the aim of reducing these emissions to 1.2 megatonnes by 2025, and 0.8 megatonnes by 2030.[8]

Chapter 5 of the Plan focuses on Waste and the Circular Economy, with the vision:

> *"… that by 2045 Scotland's cultural, social and business norms will be driven by a focus on:*
>
> *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.*
>
> *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.*
>
> *Maximising Value from Waste and Energy, where the environmental and economic value of wasted resources and energy is harnessed efficiently".*
>
> Scottish Government. (2020). Update to the Climate Change Plan 2018 – 2032 Securing a Green Recovery on a Path to Net Zero.

To achieve this vision, Scotland's Climate Change Plan sets several actions relating to Waste and the Circular Economy:

Action	Action areas
Building the Circular Economy	• *Tourism and hospitality* • *Intensifying work with industry and businesses* • *Setting the framework for planning policy to reflect new opportunities arising from a shift towards a circular economy (supporting development which reflects the waste hierarchy, prioritising the reduction and reuse of materials)*
Driving down food waste	• *Delivering Scotland's Food Waste Reduction Action Plan* • *Reducing food waste by one third against a 2013 baseline by 2025* • *Considering a mandatory national food waste reduction target and mandatory reporting of Scotland's food surplus and waste by food businesses*

Reducing waste sent to landfill	• *Ending landfill of biodegradable municipal waste by 2025, reducing the percentage of all waste sent to landfill to 5% by 2025 and recycling 70% of all waste by 2025* • *Investing £70 million to improve local recycling collection infrastructure* • *Evaluating the Household Recycling Charter and reviewing its Code of Practice* • *Consulting on requirements to separately collect garden waste (by 2023), textiles and hazardous elements of household waste* • *Extending the forthcoming ban on sending biodegradable municipal waste to landfill to include biodegradable non-*
Improving waste data	• *Developing and implementing an electronic waste tracking system*
Reducing emissions from closed landfill sites	• *Accelerating landfill gas capture and landfill legacy management by scaling up the existing landfill gas capture programme to mitigate the negative effects of landfill and the environmental impact of closed landfill sites*
Promoting efficiency of energy from waste plants	• *Consider measures to ensure new energy from waste plants are more efficient and how waste infrastructure can be 'future-proofed' for carbon capture and storage*

Encouraging reprocessing investment	• *Through the Deposit Return Scheme (DRS), explore options that will unlock reprocessing investments, including pricing and incentive schemes, to create jobs and a ready supply of recycled material for new packaging*
Preventing waste	• *Banning problematic single use items* • *Packaging reform through the Extended Producer Responsibility (EPR) regime* • *Environmental charging measures (for example single use disposable cups) to encourage people to shift toward reusable products and to encourage more sustainable consumption* • *Increase fiscal incentives for producers and consumers to reduce waste and move up the waste hierarchy (for example DRS, EPR and charge on single use cups).* • *Develop a post-2025 route map to identify how the waste and resources sector will contribute towards Scotland's journey towards net zero in the period to 2030 and beyond.*

Scotland's National Strategy for Economic Transformation

Scotland's National Strategy for Economic Transformation was published in 2022 with the vision to:

> *"Create a wellbeing economy: a society that is thriving across economic, social and environmental dimensions, and that delivers prosperity for all Scotland's people and places."*
>
> Scottish Government. (2022). Scotland's National Strategy for Economic Transformation

The Circular Economy is identified within the strategy as an area of new market opportunity for the wellbeing economy - 'generating new, well-paid jobs from a just transition to net zero – where resources are kept in high-value use, creating new market, innovation and job opportunities that will be key to achieving our targets for net zero and nature'. Such opportunity has potential for ensuring fair access to resources for all, more sustainable ref check business practices, and promoting community wellbeing through inclusive and sustainable policies and practices. [9]

Another opportunity area identified within the Strategy is the adoption of a Community Wealth Building (CWB) approach to promote local economic development through more productive and innovative businesses, industries, regions, communities and public services - using public and private investment through procurement and other means to create new employment opportunities, help local businesses to expand, and place more assets in the hands of local people and communities. Shifting to a circular economy has the potential to significantly enhance CWB, for example through keeping resources and wealth within the community by promoting materials recycling and reuse alongside sustainable business models, supporting local businesses and social enterprises whilst providing local employment through more local production and consumption, and creating new jobs and skills opportunities related to recycling, repair, sustainable manufacturing, innovative sustainable practices and technologies.[10]

Strategic Environmental Assessment

In accordance with the requirements of the Environmental Assessment (Scotland) Act 2005 (due to the Waste related nature of the proposed strategy), a Strategic Environmental Assessment (SEA) Scoping Report has been prepared to assess the effects of the proposed strategy on the environment. The scoping report will be sent to the SEA Consultation Authorities (SEPA, NatureScot and Historic Environment Scotland) in July to allow for adequate consultation and feedback in-line with statutory SEA timelines. Feedback with be considered when preparing the final strategy, alongside the preparation of an SEA Environmental Report towards the end of 2025.

Equality and Fairness Assessment

Under the Equality Act 2010, the Council is required to eliminate discrimination, advance equality of opportunity, and foster good relations between equality groups. Under Part 1 of the Act 'The Fairer Scotland Duty', the Council is required to actively consider how it can reduce inequalities of outcome caused by socioeconomic disadvantage, when making strategic decisions.

The Council's Equality and Fairness Impact Assessment (EFIA) process ensures all significant Council strategies have as a minimum an EFIA screening inbuilt as part of the risk assessment process. A screening assessment will be undertaken prior to submission of the CE strategy to Committee for approval. If any positive or negative impacts are highlighted, a full EFIA will be undertaken in consultation.