

Written evidence from the Institute of Environmental Management and Assessment (IEMA) on Scotland's Circular Economy and Waste Route Map to 2030 Consultation

Executive summary

The IEMA Circular Economy Network brings together skilled and experienced experts, operating across a variety of economic sectors to share good practice and case studies, develop tools to assess maturity, and contribute to shaping policy, research, standards and guidance initiatives on the topics of sustainable resource use and waste management. To help inform IEMA's position on this consultation, we have hosted individual discussions with members of the Circular Economy Network to collect perspectives that included practitioners, Chartered Environmentalists and IEMA Fellows who strive to develop and embed circular economy principles into their relevant sectors.

This submission has made recommendations to specific questions where our insights, knowledge and experience of members can add most value.

- We recommend the adoption of the R-Ladder¹ instead of the traditional waste hierarchy so as to prioritise mechanisms to rethink product design and keep products in their highest value for longer, such as, repair, remanufacture and reuse, with recycling further down the hierarchy.
- The location and accessibility of waste hubs and networks is vital and must be made available to Small and Medium Sized Enterprises (SMEs). The Scottish government should complement physical hubs with online portals, so that users such as a builder can check stock availability remotely enhancing reliability of secondary materials.
- Adoption of new business practices to embed circular construction should use compliance levers, such as a voluntary 'comply or explain' approach, with mandatory compliance reserved for the most important drivers to transition to a circular economy.
- Policy measures and interventions to extend the lifespan of buildings and materials, as well as addressing skills gaps, will be fundamental in promoting a circular economy. IEMA recommends extending the Reference Service Life³ (RSL) for building models beyond the standard 50 years.

¹ <https://circulareconomy.europa.eu/platform/sites/default/files/pbl-2019-outline-of-the-circular-economy-3633.pdf> <https://circulareconomy.europa.eu/platform/sites/default/files/pbl-2019-outline-of-the-circular-economy-3633.pdf>

- The Scottish government should embed the proposed hierarchy to reduce soil and stones disturbance, movement and volumes going to landfill into the National Planning Framework. Making sure any movement of soil keeps its highest potential to support biodiversity and carbon sequestration.
- Using a whole life cycle approach on the waste generated from households and businesses will help Scotland further decarbonise disposal by looking at the carbon intensity of materials in the waste stream, capturing more recycling and only sending pure residual waste for disposal.
- IEMA recommends conducting further research to develop and set an ambitious target to reduce the use of virgin materials by 2045, with clear interim targets to reduce unsustainable consumption, carbon footprint and increase resource security against global shocks.
- IEMA recommends identifying the quality of employment risks emerging from the transition to a circular economy and adopting measures to ensure that circular jobs are decent and inclusive for all workers to further support efforts to build a solid foundation for embedding circular economy knowledge across the whole education and skills landscape.

Question 1: To what extent do you agree with the priority actions proposed within the Reduce and reuse strategic aim?

Objective 1: Responsible consumption, production and re-use

Strongly Agree.

IEMA strongly agrees with the proposed Priority Action for Objective 1 to ‘develop and publish a Product Stewardship Plan to identify and tackle the environmental impact of priority products’.

Reducing and reusing waste are the first goals of the waste hierarchy and central to changing our relationship with materials and products. Building an economic system that moves away from being based on items that are designed to be disposable will bring significant environmental benefits. However, we recommend the adoption of the R-Ladder² instead of the traditional waste hierarchy as this prioritises mechanisms to rethink product design at the first instance and keep products in their highest value for longer, such as, repair, remanufacture and reuse, with recycling further down the hierarchy.

² <https://circulareconomy.europa.eu/platform/sites/default/files/pbl-2019-outline-of-the-circular-economy-3633.pdf>

Objective 3: Embed circular construction practices

IEMA strongly agrees with the proposals to develop regional hubs and networks for the reuse of construction materials and assets. To maximise the effectiveness of this objective, we make the following recommendations:

- Making the hubs available to Small and Medium Enterprises (SMEs) builders and citizens as well as large private companies, as citizens' projects, who often require smaller quantities of materials than developers for their renovation projects, will help to reduce stock holding time and could support Government's other objectives such as retrofitting the housing stock.
- To enable access, the location of hubs is important. These should be in areas of local need, to increase the positive social impact of materials distribution. A successful example of this exists through Habitat for Humanity's Restore³, which has existed for 30 years in the United States.
- To increase the use of hubs, the government should complement the physical hub with an online portal, so that users such as a builder can check stock availability remotely. The online portal would also allow donors to register their surplus materials in situ, to facilitate pick up direct from the location where surpluses arise. This would minimise transport emissions by reducing the number of times a product is moved. It will also reduce waste from product breakages.

The Scottish Government should consider increasing the use of the hubs by providing free or subsidised transport because the cost of transporting materials can often outweigh the cost of waste disposal, and lowering this cost would incentivise the donor to send their materials.

Alongside establishing regional hubs, IEMA welcomes the Scottish Government's complementary proposals to prevent waste arising in the first place. Policy measures and interventions to extend the lifespan of buildings and materials, as well as addressing skills gaps, will be fundamental in promoting a circular economy. To support this objective, IEMA recommends extending the Reference Service Life⁴ (RSL) for building models beyond the standard 50 years. Using the anticipated service life instead of the typical 50-year RSL will enable architects, designers and specifiers to reduce the whole life carbon impact of buildings and minimise waste arising from building maintenance.

Question 2: To what extent do you agree with the further actions to 2030 listed across the Reduce and reuse strategic aim?

Somewhat agree.

³ <https://www.habitat.org/restores>

⁴ <https://www.iso.org/obp/ui/#iso:std:iso:15686:-8:ed-1:v1:en>

Objective 1: Responsible consumption, production and re-use

Overall, we somewhat agree with the further actions to 2030 listed across the reduce and reuse strategic aim. We note that currently the two target dates listed for further actions under this section (both related to environmental charging) have relatively short deadlines (2025 and 2025/26). However, we appreciate that environmental charges, including for single-use disposable cups have been included in the Circular Economy (Scotland) Bill with new powers being sought to take action in these areas. The other dates listed (for feasibility studies and restrictions on unsold consumer goods) are ‘from’ dates and the rest of the further actions are listed as ‘ongoing’. We understand that the process of developing workable, evidence-led, just and fair policy interventions takes time, but for the impact of these actions to be felt by 2030, we would recommend that implementation deadlines be placed on these remaining actions as soon as is practicable.

Objective 3: Embed circular construction practices

IEMA somewhat agrees with the action to ‘Develop new and promote existing best practice standards and assess the options for both voluntary and mandatory compliance (ongoing)’. Whilst promoting best practice can provide valuable case studies for the construction industry to learn from, it is our construction sector based members’ experience that wide adoption of new business practices is best achieved through compliance levers, such as a voluntary ‘comply or explain’ approach, with mandatory compliance reserved for the most important drivers to transition to a circular economy. IEMA recommends that the Scottish Government creates an unambiguous roadmap to outline changes to 2030, rolling out new requirements to listed and large companies first, then cascading measures to SMEs to give smaller companies more time to prepare and learn lessons from those companies already implementing the new requirements.

IEMA strongly agrees with the action to ‘Investigate and promote options to incentivise and build capacity for the refurbishment of buildings by 2026/27’.

IEMA supports the refurbishment of buildings with the goal of improving living standards for building occupants, with a caution that when refurbishment is combined with a change of building use, stronger regulation is required to ensure any conversions provide safe and healthy spaces.

IEMA agrees with the action to ‘Investigate and promote ways to reduce soil and stones disturbance, movement and volumes going to landfill by 2026/27’. Recognising that organic matter in topsoil is both a carbon sink and an important biodiversity habitat⁵. IEMA supports the suggested hierarchy:

⁵ <https://eeb.org/wp-content/uploads/2021/10/Carbon-Farming-Report-FINAL-WEB.pdf>

- reduce disturbance as a first principle.
- soil movement on site as the second principle .
- soil movement offsite as the third principle.

However, it is important to consider, soil ecology is often uniquely adapted to a particular area and so removal from site, even if the soil avoids landfill and is used elsewhere, will reduce the soil's capacity to support biodiversity and act as a carbon sink. There is an opportunity to incorporate the soil habitat within the Scottish Biodiversity Net Gain framework⁶, if a procedure to measure soil condition can be agreed upon. We recommend the Scottish government goes further and embeds this hierarchy into the National Planning Framework.

IEMA agrees with the action to 'Consider how devolved taxes can incentivise the use of recycled aggregates and support circular economy practices (ongoing)'.

Question 3: To what extent do you agree with the priority actions proposed within the Modernise Recycling strategic aim?

Objective 1: Modernise household and reuse services

We strongly agree with the proposed Priority Action for Objective 1 to 'develop and publish a Product Stewardship Plan to identify and tackle the environmental impact of priority products'.

Reducing and reusing waste are the first goals of the waste hierarchy and central to changing our relationship with materials and products. However, as outlined in under 'question 1', using the R-Ladder for designing policy and regulation will have a better circular outcome than the traditional waste hierarchy. Building an economic system that moves away from being based on items that are designed to be disposable will bring significant environmental benefits.

Objective 2: Support businesses in Scotland to reduce waste and maximise recycling

We agree with a review of compliance with commercial recycling requirements. Compliance and effective enforcement are necessary to address organisations' non-conformance. However, to drive Circular Economy infrastructure across Scotland, we recommend this should be supported by additional mechanisms such as, financial incentive/disincentives, which will increase businesses engagement.

⁶ [https://www.gov.scot/publications/research-approaches-measuring-biodiversity-scotland/pages/8/#:~:text=Biodiversity%20Net%20Gain%20\(%20BNG%20\)%20targets.driving%20a%20change%20in%20perception.](https://www.gov.scot/publications/research-approaches-measuring-biodiversity-scotland/pages/8/#:~:text=Biodiversity%20Net%20Gain%20(%20BNG%20)%20targets.driving%20a%20change%20in%20perception.)

To ensure strategic join up between the co-design and the measures set out in the 'Decarbonise disposal', including policies incentivising the recovery of more plastics from residual waste, better data collection is required. IEMA recommends introducing requirements for businesses record waste generated which can be converted into carbon equivalent values using Zero Waste Scotland's (ZWS) co-efficient values⁷. The data will support Scotland's Net Zero 2045 target and track progress (by sector) for gap analysis to identify and effectively target where support is required.

To further Scotland's ambitions set out in this route map, increasing the use of recycled content would support and grow the circular economy infrastructure required to drive Scotland's circularity strategy and meet the objectives and cross-cutting priorities set out in this consultation. Where recycling content is used, we recommend that materials are independently validated, for example, through a Recycled Content Verification Scheme⁸.

IEMA agrees with the priority action to 'co-design measures to improve commercial waste service provisions that drive waste prevention and reuse and maximise recycling'. Parallels and good practice can be learnt from the work on circular economy co-design process currently underway by Scottish Water⁹. Parallels and good practice can be learnt through their partner ecosystem approach, working across the value chain (from design through to end of life and including academics and data specialists) to better understand and apply circular economy principles to actively improve environmental outcomes.

Question 6.

To what extent do you agree with the further actions to 2030 listed across the Decarbonise disposal strategic aim?

Agree

IEMA supports measures that increase reuse, recycling and reduce waste disposal and its associated carbon emissions. Understanding and managing how much carbon is produced from how waste is managed is an important action to decarbonise disposal.

We recommend the Scottish government combines the actions in objectives 1,2 and 3 to strengthen ambitions to decarbonise disposal. By conducting compositional analysis of household and commercial waste streams, Scotland will be able to use a whole life cycle approach to calculate the carbon intensity of each tonne of waste produced by applying the carbon equivalent to the materials found in the waste stream. For example, metals (ferrous and non-ferrous), plastic, electrical, textiles which are all high in embodied carbon.

Depending on the waste management route taken for these materials this could increase or decrease carbon emissions. For example, sending residual waste containing recyclable

⁷ <https://cdn.zerowastescotland.org.uk/managed-downloads/mf-eeu88d7q-1678115310d>

⁸ [Sustainably Sourced Plastic - SCG \(scgroupuk.org\)](https://www.sustainablysourcedplastic.com/)

⁹ <https://www.scottishwater.co.uk/About-Us/News-and-Views/2022/08/300822-Dalmarnock>

materials to landfill and energy from waste facility would increase emissions, vs capturing all the recyclable materials to decrease emission from disposal routes. There is an opportunity for the Scottish government to apply a maximum threshold of the CO₂e that Energy from Waste facilities emit per tonne of waste, which helps drive the focus on getting more recyclables out of the waste stream and therefore aiming to only incinerate pure residual waste. Parallels to this approach can be drawn from London's Emission Performance Standard¹⁰ and Eunomia's EPS Ready Reckoner Guidance¹¹.

Question 7: To what extent do you agree with the priority actions proposed within the Strengthen the circular economy strategic aim?

Agree

IEMA supports the Scottish Government's priority action to set new circular economy targets beyond 2025 and agrees that waste and recycling targets will not fully enable resource decoupling from economic growth nor the ambition to deliver system-wide transformation for a fully circular economy by 2045.

Current estimates¹² show that over 98% of Scotland's material use come from virgin resources, representing a key opportunity to reduce unsustainable consumption, carbon footprint and increase resource security against global shocks. Therefore, IEMA recommends conducting further research to develop and set an ambitious targets to reduce the use of virgin materials by 2045, with clear interim targets.

Other countries have already set such ambitious targets. For instance, the Netherlands has an interim objective of a 50% reduction in the use of virgin materials (including minerals, fossil-based raw materials and metals) by 2030¹³. Meanwhile, Spain aims to reduce the national consumption of materials in relation to GDP by 30% by 2030, taking 2010 as a reference year¹⁴. The Scottish Government could build on these examples to develop a target that at least matches such ambition and ideally introduce metrics that deliver an absolute decoupling of resource use from GDP growth, as previously recommended by IEMA¹⁵.

However, the social and environmental implications of such targets and the other strategic interventions set out in this Route Map, which are likely to have ripple effects on those outside Scotland, should be assessed and better understood. Although IEMA welcomes the Government's proposal to take action on waste exports and the wider trade policy as a measure to tackle Scotland's global material footprint, we consider this to be insufficient if

¹⁰ <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/environment-publications/emissions-performance-standard-eps-annual>

¹¹ <https://eunomia.eco/reports/eps-ready-reckoner-greenhouse-gas-guidance/>

¹² [CGR Scotland \(circularity-gap.world\)](#)

¹³ https://circulareconomy.europa.eu/platform/sites/default/files/17037circulaireconomie_en.pdf

¹⁴ [Estrategia Española de Economía Circular y Planes de Acción \(miteco.gob.es\)](#)

¹⁵ <https://www.iema.net/resources/blog/2022/12/19/key-considerations-for-developing-a-resource-productivity-target-for-england>

Scotland is to remain at the forefront of delivering its wider SDGs commitments¹⁶ especially to support a just transition for everyone. Thus, IEMA encourages the Government to assess and address the potential emerging risks and opportunities for other countries, especially those in the Global South, determined by Scotland's transition to a circular economy.

Among the exemplar countries that are leading the transition to a circular economy, the Netherlands has conducted a comprehensive assessment of the social and environmental impacts its transition to a circular economy on low- and middle-income countries¹⁷. The main findings of the study show that without due consideration for the emerging risks, the circular economy policies and strategies adopted by the Dutch Government may prolong the existing environmental and socio-economic impacts from the linear economy. Following this assessment, the Netherlands has identified opportunities to enhance the consistency between national circular economy policies and trade policies and development cooperation.

Question 8. To what extent do you agree with the further actions to 2030 listed across the Strengthen the circular economy strategic aim?

Agree

IEMA supports the Government's efforts to build a solid foundation for embedding circular economy knowledge across the whole education and skills landscape. As IEMA has already suggested¹⁸ we believe that green skills more widely will need to play a key role across all jobs and functions if we are to build a green economy that delivers on the net zero ambition. But it must also be recognised that the transition to a circular economy could displace many workers from polluting industries¹⁹ that need to be reintegrated into the labour market in sectors that are likely to benefit the most from the transition (e.g. repair, waste management, maintenance)²⁰. Although such labour market changes are inevitable, circular jobs do not ensure the quality of employment by design. Without close consideration, adverse labour practices from the linear economy can be perpetuated in a circular economy²¹.

As studies show many of the core circular jobs are labour intensive, manual jobs, low to medium-skilled²² and likely to engage workers that may become vulnerable to poor

¹⁶ <https://www.gov.scot/binaries/content/documents/govscot/publications/progress-report/2020/07/scotland-sustainable-development-goals-national-review-drive-action/documents/scotland-sustainable-development-goals-national-review-drive-action/scotland-sustainable-development-goals-national-review-drive-action/govscot%3Adocument/scotland-sustainable-development-goals-national-review-drive-action.pdf>

¹⁷ <https://www.pbl.nl/uploads/default/downloads/pbl-2022-addressing-international-impacts-of-the-dutch-ce-transition-4322.pdf>

¹⁸ <https://www.iema.net/corporate-programmes/blog/2022/04/28/ema-defining-green-skills>

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²⁰ https://assets-global.website-files.com/5e185aa4d27bcf348400ed82/6399cc007f63ad41fae0b240_CGR%20Scotland.pdf

²¹ University of Cambridge Institute for Sustainability Leadership (CISL). (2023). *Inclusive Circularity: Creating decent and fair jobs in the EU*. Cambridge, UK: CLG Europe

²² <https://doi.org/10.1016/j.respol.2018.08.015>

employment conditions²³. Another recognised risk is that such core circular jobs might not always be attractive for the younger labour force. For instance, Germany's waste management sector struggles to attract young people, leading to a reliance on migrant workers to fill the gaps²⁴.

According to recent data, 19% of all circular jobs in Scotland are already located in core circular sectors such as repair and recycling²⁵ and are likely to increase even further following the implementation of this Route Map. The circular economy policies adopted need to be people-centred. Therefore, IEMA recommends identifying the quality of employment risks emerging from the transition to a circular economy and adopting measures to ensure that circular jobs are decent and inclusive for all workers.

About IEMA

IEMA are the global professional body for over 21,000 individuals and 300 organisations working, studying or interested in the environment and sustainability. We are the professional organisation at the centre of the sustainability agenda, connecting business and individuals across industries, sectors and borders.

We also help and support public and private sector organisations, governments and regulators to do the right thing when it comes to environment and sustainability related initiatives, challenges and opportunities. We work to influence public policy on environment and sustainability matters. We do this by drawing on the insights and experience of our members to ensure that what happens in practice influences the development of government policy, legislation, regulations and standards.

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²³ University of Cambridge Institute for Sustainability Leadership (CISL). (2023). *Inclusive Circularity: Creating decent and fair jobs in the EU*. Cambridge, UK: CLG Europe.

²⁴ https://www.epsu.org/sites/default/files/article/files/Waste%20Management%20in%20Europe_EN.pdf

²⁵ https://assets-global.website-files.com/5d26d80e8836af2d12ed1269/602f9914a0d4b61b91af1d2e_ZWS1543%20Future%20of%20Work%20-%20Emp%20%26%20Skills%20report%20FINAL%20compressed.pdf