

Circular Economy Roadmap Response by EALA Impacts

<https://www.gov.scot/publications/consultation-delivering-scotlands-circular-economy-route-map-2025-beyond/pages/1/>

Package 1: Promote responsible consumption, production and re-use

Question 1. To what extent do you agree with the measures proposed in this package to promote responsible consumption, production and re-use? Please provide evidence to support your answer if possible.

We have listed below what the Scottish Government is proposing to do. Each answer is provided broadly across the economy, but then narrowed into the Construction and Property Sector in which we operate:

1. We will take powers to introduce charges for environmentally damaging items

The Scottish Government Consultation paper sets out the need for and positive impact of the circular economy over the linear economy. Although all parts of the linear economy are damaging, the production stage is most impactful¹¹ since there is no waste if there is no production. The focus of the roadmap must therefore be less weighted towards 'waste management' (including recycling), and more towards reduction in demand, consumption, and production. The primary objective of the circular economy must be to limit consumption, which limits production of new things in the first place. Demand for consumption is a 'lead' measure, contrasting with improved management of waste (including recycling), which is a 'lag'²². The 'waste industry' in itself is damaging, encouraging as it does the idea that continued production and consumption is sustainable³³. The aim should be no waste to manage. Attending to the top tier of the waste hierarchy should therefore be the focus.

Construction of new buildings accounts for around a fifth of emissions linked to the built environment⁴⁴. Construction of new buildings is inherently damaging⁵⁵. The current consents process for construction work includes no requirement to report carbon emissions linked to construction work. The current tax system fails to encourage maintenance to extend the life of new buildings⁶⁶, an act which is much less damaging than demolition and new build. The first step must therefore be on encouraging maintenance, adaptation and improvement of existing buildings and curbs on building new (see Package 5, Proposal 2).

New buildings are 'environmentally damaging items', and so charges based on their construction should be considered. We therefore agree with the outline of the proposal. Our answer to Question 2 gives suggestions how this could be implemented in the construction sector.

2. We will introduce a charge for single-use disposable cups by 2025

Plastic cups play a very small role in the grand scheme of things. Given the 'design life' of buildings is held to be only 60 years⁸⁸, no building should be demolished earlier than

¹ <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>

² http://gemi.org/resources/MET_101.pdf

³ <https://www.forbes.com/sites/amywestervelt/2012/04/25/can-recycling-be-bad-for-the-environment/?sh=7d7e0b9d3bec>

⁴ <https://www.ukgbc.org/climate-change-2/>

⁵ <https://www.willmottidixon.co.uk/asset/9462/download#:~:text=Taking%20into%20account%20both%20direct,the%20greenhouse%20effect%20%5B4%5D>

⁶ <https://www.gov.uk/vat-builders>

Circular Economy Roadmap Response by EALA Impacts

60 years from construction, and ideally should last a lot longer to extend the life of the carbon invested in their construction.

We agree with this proposal, but suggest the ambition of the concept be increased to match the scale of the crisis we are in.

3. We will develop a prioritised approach to charges and bans on other environmentally damaging products from 2025.

'Single use products' in construction terms means products used in only one building. Given the over-arching focus of this whole consultation is to find mechanisms to extend the life of initial use, and then reuse of products, a re-use programme for construction materials arising from buildings at refurbishment or demolition enacted through existing structures such as Planning or Building Standards is clearly necessary. The consultation notes the effect on sectors and concern over loss of jobs by reduction in consumption. The very poor condition ⁷⁷ ⁸⁸ of our existing buildings indicates a great deal of work to be done there, which could replace any loss of activity caused by a reduction in new-build.

We agree with this proposal, but suggest the definition of 'environmentally damaging' be elevated to meet the real impact of our carbon emissions across all activities, not just operational carbon and including our off-shore emissions.

4. We will publish a prioritised approach to product stewardship by 2024

The high carbon intensity materials in construction are cement/concrete, steel, and plastics ¹³¹³. Of these, plastics are the element most easily covered by a product stewardship approach given the nature of them and challenges around circularity ⁹⁹.

The other key area where extended product stewardship can have an impact in construction is mechanical and electrical products. The provision of heat or light 'as a service' ¹⁰¹⁰ rather than as a product can align the commercial interests of the manufacturers with energy efficiency and design for maintenance and adaptation.

We therefore agree with this proposal though think the ambition of it should be increased. Ways this may be achieved are answered in question 2.

5. We will take powers to set statutory consumption reduction targets.

The macroeconomic drivers to a consumption-based economy power the wasteful linear economy ¹¹¹¹. Whilst private ownership of companies is encouraged by the tax system by lower tax on dividends versus salaries ¹²¹², extractive commercial practices

⁷ <https://www.gov.scot/publications/scottish-house-condition-survey-local-authority-analysis-2017-2019/pages/10/>

⁸ <https://www.theccc.org.uk/wp-content/uploads/2022/03/Is-Scotland-climate-ready-Supporting-Charts-and-data.xlsx>

⁹ https://rdmc.nottingham.ac.uk/bitstream/handle/internal/112/Engineering%20Sustainability/312_reuse_materials_at_end_of_life.html

¹⁰ <https://www.climatechange.org.uk/media/4979/cxc-the-potential-of-heat-as-a-service-as-a-route-to-decarbonisation-for-scotland-january-2021.pdf>

¹¹ <https://www.gov.scot/policies/economic-growth/a-fairer-and-more-equal-society/>

¹² <https://www.gov.uk/tax-on-dividends>

Circular Economy Roadmap **Response by EALA Impacts**

that degrade social cohesiveness will drive extractive practices where resources and energy are concerned¹³, hindering the move to a circular economy. Simply put, it's too profitable to take-make-waste and with no social obligations on privately owned organisations, why should they care about the damage they do to the environment in which we all live?

Community interest companies, co-operatives, mutual ownership and other not-for-profit and stakeholder focussed organisations align the interests of end-users with decisionmakers in organisations. The B Corp accreditation gives an accreditation for enterprises with social and environmental aims. With aligned interests comes stewardship and long-term holistic planning which by nature reduces consumption, waste, and environmental damage.

We agree with the outline of the proposal, but suggest that, without a wider focus on how our economy works, defines, creates and distributes prosperity, and the drivers for beliefs and behaviours around production and consumption, any changes will only be shallow and limited in effect.

6. We will investigate the feasibility of setting reuse targets by 2025

In this context, re-use and carbon savings are 'lag' measures indicating how circular our thinking and society is, rather than 'lead' measures to be targeted. The more caring and community-focussed our economy, the less will be wasted and the less will be consumed. These targets should be indicators of a wider shift in society to care about the wider impacts of actions, rather than targets in and of themselves. We therefore agree, but suggest a focus on lead measures rather than lag. Our response to Question 2 sets out how this could be achieved.

7. We will identify ways to expand business models that prolong product lifespan by 2025.

As proposal 5 above, business models which prolong product lifespan are those where the 'business' interests are aligned with extended performance. The longest-lived part of any building is the community which lives in and uses it, so by encouraging community-interest companies who have a vested interests in their buildings lasting as long as possible. Property owning neighbourhood co-ops and community owned commercial building ownership should be encouraged and supported. Where something is in community ownership it will, by default, have a longer life than if owned by private individuals or privately owned companies. We therefore agree with the overall aim but suggest that a more impactful approach be taken by taking the obvious link between shareholder capitalism versus stakeholder not-for-profit organisations, and this impact this has on and management of assets for social good over private wealth, and the knock-on effect of long life of buildings and reduction in waste.

8. We will keep pace with the EU Sustainable Product Initiative.

Agree. Digital passports, as noted elsewhere in this document (See Package 5) are the solution to the logistical hurdle in the circular economy in the construction sector, allowing the 'just-in-time' model of construction procurement to interface with the

¹³ https://neweconomics.org/uploads/files/NEF_SHAREHOLDER-CAPITALISM_E_latest.pdf

Circular Economy Roadmap **Response by EALA Impacts**

variable availability of materials in the circular economy¹⁴. Organisations like Concular 15¹⁵ are already doing this in Europe.

9. We will develop support measures to further improve the reuse experience for consumers

In a construction context there are two groups to win over: specifiers/designers and the end users. Designers and specifiers will be driven significantly by the opinions of the end users, but also by the ease with which they can use the circular economy. Obstacles like Building Regulations, insurances, warranties and guarantees 16¹⁶ need to be overcome if widespread re-use of construction materials is to be achieved.

For the general public, or the commercial sector, the idea of using a 'second hand building' is obviously challenging.

Designing for short life, low quality, un-maintainable, and single use buildings impacts future generations due to the renewal cycles of buildings working over decades. The immediate impact is not felt by those building them, but will be passed to their children. This should be illustrated to change the mindset around the true multi-generational impact of new build.

We therefore agree with the premise of this proposal but note the challenges around it.

10. We will run a national communications campaign focused on sustainable consumption

A circular economy is one where the genuine human experience of the physical world is appreciated and the placebo of the new – a world where everything is clean, fresh, aseptic, and cheap, but ultimately unsustainable, damaging and deeply inauthentic – is avoided. The promotion of that much more genuine and thoroughly rewarding experience of the materiality of things will require a massive paradigm shift, since the petrochemical industry and the cheap energy and production it has brought has enabled a whole society built on the premise of constant cheap consumption of shiny new things. Cheap energy and production has also brought relative material wealth to the more deprived parts of society too, so any shift away from take-make-waste to a circular economy must be just, making sure that high quality but sustainable buildings, infrastructure, goods, equipment, and consumables are provided to all members of society. This can't just be about poor people giving nice things up. The greatest impacts are the activities of the wealthy, so any campaign must be focussed at them primarily.

We therefore agree with the premise of this proposal but note the challenges around it.

¹⁴ <https://www.bamb2020.eu/topics/materials-passports/>

¹⁵ <https://concular.de/en/>

¹⁶ [https://www.mdpi.com/2071-1050/13/23/12989/pdf?version=1637741958#:~:text=The%20barriers%20that%20they%20detail,performance%20focus%20\(Figure%203\).](https://www.mdpi.com/2071-1050/13/23/12989/pdf?version=1637741958#:~:text=The%20barriers%20that%20they%20detail,performance%20focus%20(Figure%203).)

Circular Economy Roadmap Response by EALA Impacts

Question 2. Are there any further measures that you would like to see included in the Route Map to promote responsible consumption, production and re-use?

1. We will take powers to introduce charges for environmentally damaging items

Creation of new building is environmentally damaging. Given we are in the decade the CCC calls the 'critical decade' ¹⁷ this damage must be stopped by halting new build to focus resources on food production and securing water supplies, thereby focussing carbon emissions on those things which are most needed and directly impactful to the most pressing need. Should this be too challenging politically then limiting new building to where it is strictly necessary and justified in carbon terms is the next best thing, though still likely to keep us on a trajectory for +1.5 degrees warming by 2050 ¹⁸. As an attempt at mitigation, we suggest a 'carbon benefit analysis' should be submitted as part of any Planning application, with the carbon calculation based on the RICS Practice Statement for Whole Life Carbon Calculation ¹⁹ and the benefit determined by a range of social impacts from sustainable employment to community value to social cohesiveness using the UN Sustainable Development Goals ²⁰ as a framework. This must be coupled with a check on surrounding buildings to confirm that an existing building does not already exist which would serve the purpose of the new building, given upgrading an existing building is always the lower carbon option to building new ²¹. Linked to encouragement and support for re-use of existing buildings (see other answers) this will limit creation of new buildings and achieve the same utility but at significantly lower carbon emissions.

Within construction projects, the environmental damage of various materials and products ²² should be tracked and reported as part of the consents process (Planning & Building Warrant) through the use of pre-demolition audits and embodied carbon limits. This would encourage the circular economy, since materials arising from an existing building would carry no embodied carbon into their new use, and so reduce the impact of new build by drawing on the circular economy. Though this should not diminish the preference for retaining and re-using existing buildings. An embodied carbon budget should be incorporated into the Building Regulations ²³ ²⁴.

The most carbon intensive materials in construction are cement/concrete and steel⁹. Designs which include significant amounts of either should therefore be specifically penalised. Given they damage the environment, which impacts us all and will result in the need for significant public expenditure to adapt to climate change, there is justification for a Planning Contribution from the most carbon-intensive schemes ²⁵. Given Scottish Futures Trust's aim for all public sector construction to come in under 600kgCO₂e/sq.m ¹¹, perhaps all construction above this should pay per kg based on BEIS updated short-term traded sector carbon values for policy appraisal ²⁶.

¹⁷ Letter: Scottish Government's draft Fourth National Planning Framework (NPF4) - Climate Change Committee (theccc.org.uk)

¹⁸ <https://www.climateneutralgroup.com/en/news/five-future-scenarios-ar6-ipcc/>

¹⁹ Whole Life Carbon Assessment for the Built Environment, 1st edition (rics.org)

²⁰ <https://sdgs.un.org/goals>

²¹ <https://aecom.com/without-limits/article/refurbishment-vs-new-build-the-carbon-and-business-case/>

²² <https://circularecology.com/embodied-carbon-footprint-database.html>

²³ <https://part-z.uk/>

²⁴ <https://www.scottishfuturestrust.org.uk/page/net-zero-public-sector-buildings-standard>

²⁵ <https://www.gov.uk/guidance/planning-obligations>

²⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794186/2018-short-term-traded-carbon-values-for-appraisal-purposes.pdf

Circular Economy Roadmap Response by EALA Impacts

2. We will introduce a charge for single-use disposable cups by 2025

The Government should extend this ambition to a charge for 'single use disposable buildings'. Given the 'design life' of buildings is held to be only 60 years⁸, perhaps a charge for failing to extend the use of a building beyond this would be analogous to a single use plastic cup charge and would have similar effect on much more impactful activities. This charge would be levied at Planning application and be linked to the carbon depreciation²⁷ of the emissions at construction and the remaining carbon to be depreciated over the planned 60-year life, with a rate per tonne of CO₂e set using the BEIS rates¹³.

3. We will develop a prioritised approach to charges and bans on other environmentally damaging products from 2025.

New buildings are environmentally damaging products during their construction²⁸, and so new-build should be halted or severely restricted. A re-use programme for construction materials arising from buildings at refurbishment or demolition enacted through existing structures such as Planning or Building Standards should be implemented. A plan should be put in place to pivot the industry to addressing the very poor condition of our existing buildings²⁹ to replace any loss of activity from a reduction in new-build. Encourage maintenance, discourage new-build, and the sector will shift to a less negatively impactful model.

4. We will publish a prioritised approach to product stewardship by 2024

Encouraging public procurement to only use plastics from producers who have signed up to the UK Plastics Pact and having this governed through the Building Regulations would help, as would having circularity statements³⁰ required for all Planning Applications stating the 'cascade' plan³¹ ³² (movement from one use to the next, from building to building) for all components.

The hurdles in implementing heat or light as a service more widely should be investigated by the Scottish Government and industry groups (like EGG lighting³³) and public procurement should prioritise moving to this framework for facilities management. We're aware some major plant is managed this way at present, but extending this to all systems will prove principle and enable the model to move to the private sector. Ideally this could be applied to building fabric as well, such as roof coverings and cladding systems. In the same way 'lighting as a service' does, maintenance as a service will extend the life of existing building materials and incentivise the re-use economy.

²⁷ <https://www.sciencedirect.com/science/article/pii/S0306261919317945>

²⁸

<https://www.willmottidixon.co.uk/asset/9462/download#:~:text=Taking%20into%20account%20both%20direct,the%20greenhouse%20effect%20%5B4%5D>

²⁹ <https://www.theccc.org.uk/wp-content/uploads/2022/03/Is-Scotland-climate-ready-Supporting-Charts-and-data.xlsx>

³⁰ <https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/london-plan-guidance/circular-economy-statement-guidance>

³¹ <https://www.ceguide.org/Strategies-and-examples/Dispose/Cascading#:~:text=Cascading%20maximizes%20resource%20effectiveness%20by,and%20services%20have%20been%20exhausted.>

³² https://thecirculareconomy.fandom.com/wiki/Cascading_Materials

³³ <https://egglighting.com/>

5. We will take powers to set statutory consumption reduction targets.

The Scottish Government should do more to support the not-for-profit sector and divest economic activity from the for-profit sector to enable more organisations which are rooted in communities and have stakeholders at the heart of their decision-making ³⁴. Financial support/tax cuts for B Corps and not-for-profit organisations would be a simple way to use existing accreditation systems to grow the purpose-led sector. By changing the over-arching framework to an economy driven by organisations owned and controlled by communities, rather than wealthy individuals, the interests of the organisations and the communities will be aligned, elevating the perceived value of exiting materials and reducing consumption, production and waste ³⁵.

6. We will investigate the feasibility of setting reuse targets by 2025

Setting 'lead' measures which lead to care for materials and reduce consumption should be prioritised. Examples would be the number of community interest companies, not-for-profits, B Corps in the construction and property sector, or vacant buildings brought back into use, community ownership of mutual assets, low-carbon loose fit buildings designed for maintenance and existing longer than 60 years, and other lead measures which result in lower consumption values and behaviour. All of these steps align the owners of assets with the management of those assets, resulting in greater valuation of existing fabric, creation of high-quality long life maintainable buildings, and so therefore encourage the reduction of the extractive linear economy and promotion of the circular economy.

7. We will identify ways to expand business models that prolong product lifespan by 2025.

Publication and promotion of the sustainable (socially, environmentally and financially) benefits of social enterprises managing community assets as well as financial support for social enterprises, co-ops, CICs and charities, as well as divestment of public financial support for for-profit organisations will move management of the built environment to those with a vested interest in its longevity and good maintenance and performance, rather than privately owned businesses run for extractive profit with a narrow focus on extracting financial rewards with no vested interest long term holistic social benefit.

8. We will keep pace with the EU Sustainable Product Initiative.

The Scottish Government should extend its current asset registers for its estate to include all built fabric and not just plant and fittings. The use of BIM in this field to create BIM-enabled O&M files ³⁶ is obvious, and the Government should accelerate their programme of creation of digital O&Ms populated with digital material passports incorporating end-of life and cascade planning. The Government should run a triple bottom line research project covering social, environmental and financial sustainability impacts of doing so and publish it to make the case to the public sector ³⁷.

³⁴ <https://www.gov.scot/publications/social-enterprise-action-plan/pages/4/>

³⁵ <https://www.communitylandscotland.org.uk/2021/03/new-report-reveals-leading-role-played-by-community-landowners-in-tackling-the-climate-emergency/>

³⁶ <https://bimportal.scottishfuturetrust.org.uk/level1/stage/8/task/64>

³⁷

https://www.researchgate.net/publication/350367007_Application_of_the_Triple_Bottom_Line_TBL_concept_to_measure_the_maintenance_performance_of_buildings

Circular Economy Roadmap Response by EALA Impacts

9. **We will develop support measures to further improve the reuse experience for consumers**

Testing regimes and qualifications for re-used materials and products, and training schemes for those testing/re-certifying re-used materials could be set up to enable recertification of structural elements (concrete/steel/timber) and mechanical or electrical equipment. A publicly owned version of BRE could do this.

Public awareness of the patina of age of old buildings has completely changed attitudes to historic property in the last fifty years³⁸. A similar push for changing attitudes to the circular economy is clearly needed.

Designing for short life, low quality, un-maintainable, and single use buildings impacts future generations due to the renewal cycles of buildings working over decades. The immediate impact is not felt by those building them, but will be passed to their children. This should be illustrated to change the mindset around the true multi-generational impact of new build.

10. **We will run a national communications campaign focused on sustainable consumption**

A wider change to how our society defines prosperity, creates and distributes it is required. This can't just be about poor people giving nice things up. The greatest impacts are the activities of the wealthy, so any campaign must be focussed at them, ideally by promotion of stakeholder-focussed business models and structures which reward socially focussed activity rather than private reward. When we care about our environment and community we're much less likely to be happy doing things which damage it.

Package 2: Reduce food waste

No comment

Package 3: Improve recycling from households

Question 5. To what extent do you agree with the measures proposed in this package to improve recycling from households? Please provide evidence to support your answer if possible.

Agree. All recycling should be seen as an interim evil³⁹, with the focus being on eliminating the consumption which drives waste arising which requires recycling. Reduce and re-use should be prioritised. Package 1-type approaches should therefore take precedence. By focussing too much on recycling we help grow an industry which just masks the root of the

³⁸ <https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/building-in-context-new-development-in-historic-areas.pdf>

³⁹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

Circular Economy Roadmap Response by EALA Impacts

problem, dealing with the 'lag' issue of waste, rather than the 'lead' issue of reduction of consumption and production⁴⁰.

Question 6. Are there any further measures that you would like to see included in the Route Map to improve recycling from households and incentivise positive behaviours?

The Scottish government would be better focussing refillery-type shops and supporting the use of low-carbon (not-plastic) reusable containers. Unnecessary packaging (plastic on fruit with skins, plastic nets for onions) for instance should be outlawed.

Package 4: Improve recycling from commercial businesses

Question 7. To what extent do you agree with the measures proposed in this package to improve recycling from commercial businesses? Please provide evidence to support your answer if possible.

All recycling should be seen as an interim evil³¹, with the focus being on eliminating the consumption which drives waste arising which requires recycling. Reduce and re-use should be prioritised. Package 1-type approaches should therefore take precedence. By focussing too much on recycling we help grow an industry which just masks the root of the problem, dealing with the 'lag' issue of waste, rather than the 'lead' issue of reduction of consumption and production²³.

Question 8. Are there any further measures that you would like to see included in the Route Map to improve waste recycling from commercial businesses?

Along with the proposals included in our response to Package 1 and Package 5, the Scottish Government should include the following measures to reduce demand/consumption/production:

- Supplier take-back schemes for all plastic products (windows, single ply roofing, gutters etc)
- Provision of heat and light as a service, rather than provision of plant and equipment to ensure maintenance and energy efficiency is aligned with the supplier.

Package 5: Embed circular construction practices

Question 9. To what extent do you agree with the measures proposed in this package to embed circular construction practices? Please provide evidence to support your answer if possible.

We have listed below what the Scottish Government is proposing to do. Each answer is provided broadly across the economy, but then narrowed into the Construction and Property Sector in which we operate:

⁴⁰ http://gemi.org/resources/MET_101.pdf

Circular Economy Roadmap Response by EALA Impacts

1. We will work with industry to accelerate the adoption of best practice standards and explore options for mandatory compliance.

The construction sector is mostly focussed on creation of new buildings for the lowest cost possible to achieve profit margins which, in percentage terms, are low compared to other industries ⁴¹⁴¹. This creates a frantic, panicked approach to any idea of elevated costs. Despite the massive damage caused by new building ⁴²⁴², the financial attraction of new construction ⁴³⁴³ and a tax structure which incentivises new build over refurbishment ⁴⁴⁴⁴ means that the industry is commercially committed to a take-make-waste economy. The Scottish Government is therefore unlikely to get an impartial view from the majority of the industry on this subject.

Reduction in consumption is required to reduce carbon emissions ⁴⁵⁴⁵. This means making the buildings we have at present last as long as possible, designing and refurbishing for long-life, loose-fit to enable easy maintenance using flexible design ⁴⁶⁴⁶ to enable buildings to outlast their use-case and reduce new-build to only where absolutely necessary. None of these activities rewards the current profit-driven new-build sector. We agree with this proposal, but suggest that the professions, bound by ethical codes and largely removed from commercial self-interest by them, should be consulted above the commercially conflicted trades-based pressure groups which typically give the loudest advice to government.

2. We will investigate options to incentivise refurbishment of buildings by 2023.

This is very welcome and core to a truly circular economy. We therefore agree. Stopping the need for new buildings is at the heart of ceasing consumption of new products and so slowing their production.

Vacant buildings roughly equal housing demand in Scotland ⁴⁰ ⁴⁷⁴⁰ ⁴⁷. On average 50 tonnes of carbon is emitted in the construction of a house ⁴⁸⁴⁸. Significantly less is emitted in renovating an existing building ⁴⁹⁴⁹. The Scottish Government should mandate repurposing all vacant buildings ⁵⁰⁵⁰ based on Shearing Layers ⁵¹⁵¹ principle, to ensure repurposing is based on material life span and local regenerative practices and so avoiding high-carbon petrochemical-based products manufactured in the Global South and offshoring our carbon emissions. We agree with this proposal, but the execution must bring holistic positive impacts, not just an increase in 'business as usual' polluting activity.

⁴¹ <https://constructingexcellence.org.uk/profit-dirty-word-construction-latham-missed-egan-not-answer/>

⁴² <https://www.willmottidixon.co.uk/asset/9462/download#:~:text=Taking%20into%20account%20both%20direct,the%20greenhouse%20effect%20%5B4%5D>

⁴³

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/210060/bis-13-958-uk-construction-an-economic-analysis-of-sector.pdf

⁴⁴ <https://www.gov.uk/vat-builders>

⁴⁵ <https://www.mdpi.com/2071-1050/13/21/12153/pdf?version=1636002516>

⁴⁶ <https://www.be-st.build/accelerate-to-zero/modern-methods-of-construction/portal/>

⁴⁷ <https://www.independent.co.uk/news/uk/scotland-homes-scottish-government-covid-b2032539.html>

⁴⁸ <https://citu.co.uk/citu-live/what-is-the-carbon-footprint-of-a-house>

⁴⁹ <https://aecom.com/without-limits/article/refurbishment-vs-new-build-the-carbon-and-business-case/>

⁵⁰ Households and Dwellings in Scotland, 2021 | National Records of Scotland (nrscotland.gov.uk)

⁵¹ Shearing layers - Wikipedia

3. We will coordinate a Scottish Programme for Reuse of Construction Materials and Assets by 2025

As above, stopping materials arising in the first place by maintaining buildings must take priority. Emphasis of the real value of the material already in use must be the first step to illustrate what we have and convince why it should be protected. The Scottish Government must make it mandatory for the construction industry to 'value' all activities on a triple bottom line basis: people, prosperity, planet. This will illustrate that nothing is 'cheap', and everything comes with a 'cost.' A triple bottom line approach will be key in developing the Scottish Government Circular Economy action plan and a Social Enterprise action plan 52⁵². A mandatory triple bottom line will demonstrate the case to keep materials in cascades 53⁵³ of use for as long as possible to realise the true 'value' of a material over its lifetime.

Any programme must deal with all hurdles to the circular economy, from cataloguing the materials arising, to limiting the energy and disruption of transportation, storage, remanufacture/refurbishment, and design for incorporation of recovered materials 54⁵⁴. It must address the needs of providers all the way through the chain. It must address the image problems associated with 'second hand' things. Insurances, warranties and building regulation hurdles must be overcome.

We therefore agree, but recommend the approach be end-to-end of the circular economy, with reduction in materials arising in the first place being the focus.

4. We will investigate the potential use of recycling bonds to divert material from landfill.

Recycling is just another form of waste management. The main carbon intensive materials must all have a route which avoids recycling: masonry should be re-used as non-structural elements; steel can be re-used; plastic should be taken back by the manufacturer and re-formed. Timber is very dangerous if left to rot as it emits methane, and so particular care for it at the end of each use should be mandated in the circularity plan which should be in the digital O&M in the material passports.

We therefore neither agree nor disagree with this proposal.

5. We will consider how devolved taxes can incentivise the use of secondary aggregates and support circular economy practices.

The focus should be on not turning usable masonry into aggregate in the first place by incentivising re-use over recycling. Pre-demolition audits should be mandated for all planning applications where demolition is proposed. All works should provide a circularity statement setting out re-use at the end of the building's life, and design for deconstruction should make recovery of whole units as easy as possible.

We therefore disagree with this proposal.

⁵² Stimulating Social Enterprise - Social enterprise: action plan - gov.scot (www.gov.scot)

⁵³ https://thecirculareconomy.fandom.com/wiki/Cascading_Materials

⁵⁴ [https://www.mdpi.com/2071-1050/13/23/12989/pdf?version=1637741958#:~:text=The%20barriers%20that%20they%20detail,performance%20focus%20\(Figure%203\).](https://www.mdpi.com/2071-1050/13/23/12989/pdf?version=1637741958#:~:text=The%20barriers%20that%20they%20detail,performance%20focus%20(Figure%203).)

Circular Economy Roadmap Response by EALA Impacts

6. We will work with industry to identify ways to reduce soil and stones going to landfill by 2023.

No comment.

7. We will facilitate the development of a soil symbiosis programme by 2025.

No comment

Question 10. Are there any further measures that you would like to see included in the Route Map to embed circular construction practices?

1. We will work with industry to accelerate the adoption of best practice standards and explore options for mandatory compliance.

Truly 'green' jobs are those which extend the life of existing buildings. The industry lobbying groups often use 'jobs' as a carrot or stick to get what they want (secure, simple, profitable work and return on investment for the wealthy private owners). Given the enormous maintenance requirement ⁵⁵55 of our existing stock and large number of vacant units ⁵⁶56, there is huge work to be done which is much less harmful than new-build and with greater social benefits. Yet the financial environment makes repair and refurbishment more difficult unpredictable and therefore often less profitable. To pivot the industry away from take-make-waste new-build and towards green circular care for existing buildings, either the profit motive must be removed from the sector through elevation and support for not-for-profit organisations (see answer to Package 1 above), or the economic pressures must be rebalanced to make work on existing buildings more rewarding than creation of new, for instance by changing the tax structure and availability of funding for maintenance. Once this is the case, the best practice, tools and processes will follow.

2. We will investigate options to incentivise refurbishment of buildings by 2023.

The consultation notes that changes to VAT would take time. De-incentivising new build should be tackled in the mean-time, by setting embodied carbon targets (such as Scottish Futures Trust's aim for all public sector construction to come in under 600kgCO₂e/sq.m ¹¹¹111) through the Building Standards system, such as Approved Document Z in England ⁵⁷57. Penalties for high carbon emissions, which are inevitable from new build, would move calculation of return on investment away from polluting practices to more sustainable activities such as refurbishment.

Changes to ownership structures for buildings by aligning the interests of the owners with the long-life, energy performance, and ease of maintenance of the building would also achieve this, and to community ownership of community buildings, co-operative ownership of mutual fabric, and other similar mechanisms should be investigated.

Refurbishment itself should be done in a sustainable, low impact way, and carried out along the Shearing Layers model to encourage ease of maintenance. Again, the

⁵⁵ <https://www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/pages/2/>

⁵⁶

[https://archive2021.parliament.scot/parliamentarybusiness/currentcommittees/111620.aspx#:~:text=National%20Records%20of%20Scotland%20data,3%25%20of%20all%20dwellings\).](https://archive2021.parliament.scot/parliamentarybusiness/currentcommittees/111620.aspx#:~:text=National%20Records%20of%20Scotland%20data,3%25%20of%20all%20dwellings).)

⁵⁷ <https://part-z.uk/>

Circular Economy Roadmap **Response by EALA Impacts**

Building Standards process should be used to bring these principles into refurbishment activity.

3. We will coordinate a Scottish Programme for Reuse of Construction Materials and Assets by 2025

A programme of digitisation of existing buildings to record where materials are needed to establish a catalogue of potentially available materials. Digital material passports can avoid the cost of logistics and storage often used as a hurdle to the circular economy in construction. Pre-demolition audits at end of life can be linked to Planning applications to not only check the reason for demolition, but to ease the entry of materials arising into the circular economy. Re-use of the materials listed in the audit can then be made a condition of the Planning Consent and evidencing that the aims of the audit were achieved required before the new building is put into use.

On the 'demand' side, embodied carbon limits in the building regulations will create a demand for recovered materials as they arrive at their second (or third, or fourth) use with zero embodied carbon, having expended it in their original use and thereby helping achieve the carbon budget of the project.

With these steps a digital platform like Zero Waste Scotland's Construction Materials Exchange will have buyers and suppliers looking to use it. Examples from Europe such as Concular ⁵⁸, or ROTOR ⁵⁹ in Belgium should be looked into.

One hurdle often put in the way of working circularly with materials arising from a site is the lack of space on that site. The Government should require at Planning application stage a Construction Phase Circularity Plan, based on the Circularity Statement, showing how the site logistics will provide for meeting the targets of the plan. This would work similarly to how an Outline Construction Phase Plan is currently provided at Planning stage for constrained sites ⁶⁰.

4. We will investigate the potential use of recycling bonds to divert material from landfill.

Reduction of 'waste' materials arising in the first place should be prioritised by extending the life of buildings along the lines of Point 3 above and using the Planning and Building Standards processes to encourage re-use as noted elsewhere.

A circularity plan should be included in the digital O&M linked to material passports for all public buildings so care for materials is included for the full life of the building and not just focussed on at construction.

5. We will consider how devolved taxes can incentivise the use of secondary aggregates and support circular economy practices.

All O&Ms should be digital and include material passports which give instruction on recovery and re-use. Tax incentives for re-use of whole units would be welcome; tax

⁵⁸ <https://concular.de/en/>

⁵⁹ <http://rotordb.org/en>

⁶⁰ <https://cmpconstruct.com/what-is-a-construction-management-plan>

Circular Economy Roadmap Response by EALA Impacts

incentives for recycling would send the wrong message and incentivise crushing of masonry for aggregate and losing embodied carbon.

6. We will work with industry to identify ways to reduce soil and stones going to landfill by 2023.

No comment.

7. We will facilitate the development of a soil symbiosis programme by 2025.

No comment

Package 6: Minimise the impact of disposal

No comment

Package 7: Cross-cutting measures

Question 13. To what extent do you agree with the measures proposed in this package to support action across the circular economy? Please provide evidence to support your answer if possible.

1. Introduce duty to develop a Circular Economy Strategy.

The circular economy is the answer to rampant uncaring extractive consumption. It would be preferable if the Scottish Government established a 'sustainable consumption' or 'sufficiency' strategy, of which the Circular Economy was part of the roadmap. So while a duty to have a circular economy strategy is welcome and we agree with the proposal, we believe the Scottish Government can go further and be more effective by tackling the root causes of extractionism and unsustainable consumption using the circular economy as a tool.

2. Develop a monitoring and indicator framework.

The circular economy is one part of the overall consumption and production framework in our overall economy. The Consultation suggests a focus on monitoring waste. This is wrong as it focusses on a 'lag' metric, not the 'lead' metric of reduced consumption. So we agree with the proposal, but the indicators to monitor must be the lead measures, rather than lag.

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

We agree with the measures proposed, noting that support for not-for-profit organisations based in their communities with long-term interests is the key driver in reducing consumption and a move to a circular economy.

4. Develop public procurement opportunities to reduce the environmental impact of public spending.

The most impactful thing the Scottish Government can do is to cease building new buildings and maintain the ones already in existence. A 'reuse first' policy for whole

Circular Economy Roadmap Response by EALA Impacts

buildings, and also for the elements of those buildings. Digitisation of O&Ms, PPMs, and material passports focussing on maintenance and material cascades⁶¹ at end of each stage of life to extend usefulness of the initial extraction and processing should be invested in. This can be driven by documenting the 'value' across a triple bottom line of all materials currently in the estate.

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

Agree, with the caveat that retrofit training must include repair training. Repair is a part of building energy efficiency. Green skills are those which preserve the 'value' already in existence, not those which facilitate extraction of new resources.

Question 14. Are there any further measures that you would like to see included in the Route Map to support action across the circular economy?

1. Introduce duty to develop a Circular Economy Strategy.

The Scottish Government should establish a 'sustainable consumption' or 'sufficiency' strategy, of which the Circular Economy is part of the roadmap. So while a duty to have a circular economy strategy is welcome, we believe the Scottish Government can go further and be more effective by tackling the root causes of extractionism and unsustainable consumption using the circular economy as a tool.

2. Develop a monitoring and indicator framework.

Monitoring and indicator frameworks should be put in place, but to track the number of community interest companies, not-for-profits, B Corps, vacant buildings brought back into use, community ownership of mutual assets, low-carbon loose fit buildings designed for maintenance and existing longer than 60 years, and other lead measures which result in lower consumption. All of these steps will result in greater use of the circular economy.

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

We agree with the measures proposed, noting that support for not-for-profit organisations based in their communities with long-term interests is the key driver in reducing consumption and a move to a circular economy.

4. Develop public procurement opportunities to reduce the environmental impact of public spending.

Triple bottom line impact monitoring should be implemented, focussing on social, environmental and financial sustainability. The UN SDGs should be used as a framework, along with Doughnut Economics⁶² for social and financial calculations. Carbon calculation must be truly 'net' calculations, including Whole Life calculation and avoiding high up-front carbon emissions given we do not have any 'payback' period left in the global carbon bearing capacity. Off-shore emissions must be included.

⁶¹ https://thecirculareconomy.fandom.com/wiki/Cascading_Materials

⁶² <https://doughnuteconomics.org/about-doughnut-economics>

Circular Economy Roadmap Response by EALA Impacts

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

Retrofit training must include repair training. Retrofit training must include understanding of up front carbon impacts along with operational carbon. Social sustainability of skills training should be incorporated, so the positive benefits of community interest companies over privately owned companies, or community ownership of community buildings over buildings owned for private profit, and thereby aligning the performance of the building over the long term with the communities they serve.

Joanne McClelland

Conservation Accredited Architect RIBA RIAS ARB

Aythan Lewes

Chartered Building Surveyor MRICS BSc(Hons)