

***Making things last: Consultation on
creating a more circular economy in
Scotland***

Response Analysis Report

Background and Summary

'Making things last: Consultation on creating a more circular economy in Scotland' closed on the 30 October 2015. A total of 78 responses to the consultation were received.

The consultation explored the priorities for building a more circular economy in Scotland – where products and materials are kept in high value use for as long as possible and built on Scotland's progress in the zero waste and resource efficiency agendas, with a new focus on a much broader set of business and industry opportunities.

The document set out the Scottish Government's ambition and sought views on potential actions in the key areas of design, reuse, repair, remanufacture, recycling, and recovering value from biological resources. It also put forward proposals to support change in these areas through communications, skills and measuring progress.

The consultation was undertaken through the Scottish Government consultation portal, which encourages responses online against each specific question. A number of responses were submitted by letter or email, structured around the priorities and comments of the respondent rather than the questions asked.

Of the 78 responses:

- Four were from academic or research bodies;
- One from a community organisation;
- Eight from local government;
- Fifteen from the private sector;
- Six from government/public bodies;
- Twelve from third sector organisations;
- Sixteen from trade associations;
- Five from the resource/waste management industry; and
- Eleven from individuals.

From the 78 responses received, eight respondents did not wish their response to be published.

Overall there was support for the ambition expressed in every area; and positive feedback from several organisations on the clarity and coherence of the Scottish Government's propositions in an area often buried by jargon.

All of the individual proposals were generally welcomed but many, particularly the more technical ones, received little feedback.

Following the review of responses received and feedback from events held during the consultation period, the Scottish Government in conjunction with our delivery partners from the Enterprise Agencies, SEPA and Zero Waste Scotland have revisited the ambitions and proposed actions contained within the consultation document, taking on board comments as appropriate.

Design

Extract from consultation

Ambition - We want Scotland to be recognised as a centre of excellence in design for a more circular economy. We want to see more Scottish products designed with their full life-cycle in mind: for long lifetimes, ready to be disassembled and repaired, and eventually recycled. And we want an increasing number of companies to find profitable ways to keep hold of valuable products and components: increasing revenue through leasing, servicing, repair and re-sale.

61. To bring together action on design, and to stimulate and co-ordinate circular design thinking we want to explore the scope for a **Scottish centre of expertise on circular design, and the skills required**, with Zero Waste Scotland and through the Scottish Funding Council, academic partners and design organisations.

62. We will explore scope for local or EU actions to drive the manufacture of goods to **last longer**, including minimum warranty requirements.

63. Zero Waste Scotland and the Enterprise Agencies will build on existing support for business growth and innovation, to help businesses exploit circular economy opportunities. In particular, this will include a new **circular economy business development service** for developing technologies and business models.

64. We intend to undertake further research, in partnership with the packaging industry, to determine where compostable or recyclable **packaging** could be the best option for Scotland's developing collection and reprocessing infrastructure – and scope to design out packaging creating the greatest leakage of materials.

65. We will work with international networks to seek opportunities for innovations in circular design to be **trials in Scotland**.

The ambition above received broad agreement, although one respondent disagreed with this (and with the consultation as a whole). Some comments mentioned the limit of Scotland's influence on product design and the need to act internationally at an EU level, linked to a concern to avoid extra costs for Scottish manufacturers or consumers.

Most comments received on the proposal at paragraph 61 on a centre of expertise on circular design generally agreed, with two exceptions by individuals. While no clear picture emerged of how such a centre might operate, comments included offers to collaborate or support; the need to involve all design institutions; and a plea for a virtual centre rather than a central belt location.

Responses to the proposal at paragraph 62 on action to promote longer lasting goods were generally supportive. The main comments received again highlighted the importance of acting at an EU level. Feedback also included support for eco-labelling and for the inclusion of building materials.

The proposal at paragraph 63 to build on existing support for business growth and innovation was generally supported. Some responses made offers to collaborate while others emphasised support for innovation. One response was critical that Business Gateway had not been mentioned.

Several businesses and trade associations commented on the proposal at paragraph 64 about packaging design, generally emphasising the primary importance of

packaging being able to protect goods and need to involve industry. Other comments called for more rigorous labelling criteria; and prioritising reuse over recycling.

While responses to the proposal at paragraph 65 on trialling design innovations, few substantive comments were received. One response highlighted the need to focus on business benefits and sectors with the biggest potential for Scotland.

Additional suggestions on influencing design included support for:

- eco-labelling;
- using the influence of producer responsibility;
- economic incentives;
- using procurement; and
- reducing toxic materials which limit recyclability.

Reuse

Extract from consultation

Ambition - We want the sale and use of second hand goods to be seen as an attractive, mainstream, good value option for an increasing range of products. We want reuse businesses and community organisations to thrive, on the back of a growing reputation for quality and value for money for their goods.

We want our major industrial sectors in Scotland to learn from best practice to optimise the value of used equipment and infrastructure.

79. We propose to further **expand the availability of the Revolve standard** to include a wider range of reuse organisations, and to develop the standard to provide further confidence for consumers in the products they are purchasing.

80. We will explore scope for **large scale, collaborative approaches to reuse** in specific sectors to maximise the capture of products for reuse. For example:

- work with Decom North Sea, DECC and Oil and Gas UK to help develop and **support protocols and standards for the reuse of key components**.
- raise awareness amongst key stakeholders in the offshore oil and gas sector through **further development of evidence** on potential and implemented savings; including typical business cases for key components and processes that champion the benefits of circular approaches.

81. We will explore with the reuse sector how to improve the quality of **reuse data** to capture relevant impacts and help strengthen business cases for action.

82. Linked to our Better Environmental Regulation programme we will consider what improvements can be made to the **regulatory and licencing framework** to provide greater clarity on where activities are subject to regulation, and to support and promote greater levels of reuse.

83. We will explore the role of reuse as an aspect of relevant **producer responsibility schemes**.

84. We will, building on the work of the Zero Waste Taskforce, **support local authorities and local reuse organisations** to improve reuse collection, storage, retail and communications, including at Household Waste Recycling Centres and through bulky waste services.

Over half of responses provided feedback on the ambition set out within for reuse, with most agreeing. Support for reuse was widespread with agreement that it requires a range of actions across different organisations. Two respondents

disagreed, one who disagreed with the consultation as a whole and one respondent from the waste/resource management industry. Concern was highlighted about costs and the requirement to fully capture benefits.

General support was received for the proposal at paragraph 79 to improve consumer confidence. Some respondents were also unaware of the Revolve standard and others registered uncertainty over its use or if it required strengthening.

There was a limited response to the proposal at paragraph 80 on large scale, collaborative approaches for reuse, but those who replied generally agreed. Comments included support for action in the Oil and Gas sector as a priority with additional sectors being to be identified.

A limited response was also received to paragraph 81 on improving the quality of reuse data. Those who commented were generally supportive, with recognition that better data would help improve and focus interventions.

The proposal to look at the regulatory framework at paragraph 82 received broad agreement. Suggestions on areas for consideration included the definition of waste around reuse activities, waste transfer and licencing. There was also a concern about the risk of criminal activity or environmental harm if controls relaxed too much.

The proposal at paragraph 83 for the role of reuse to be explored as an aspect of producer responsibility was generally welcomed. Comments included the suggestion that reuse should be a primary consideration for both existing and new schemes with mention of extending into construction.

There was also general agreement to the proposal at paragraph 84 to help improve communication and handling of reusable goods with recognition of the role of community recycling centres and bulky uplift in collecting items and engaging people. Concerns were mentioned about costs for local authorities and additional space requirements.

Additional suggestions on increasing reuse included:

- mainstreaming reuse at the same location as other shopping
- financial incentives such as VAT and through public procurement
- a new, separate reuse target;
- communication campaigns;
- consumer facing labelling;
- research exploring future hotspots for reuse (e.g. Solar panels);
- improvement of infrastructure such as reuse hubs in each town; and
- deposit return to encourage returning items for reuse.

Repair

Extract from consultation

Ambition - We want to empower Scotland's repair sector to grow, both business and community organisations. For an increasing range of items, we want repair to be the first choice when they develop a fault on the basis of quality, reliability and value – both for business and individuals.

91. We want to explore the potential for a comprehensive **repair-finding service** or network to make it easy to find where items can be repaired.

92. We will continue to provide opportunities to increase the **repair skills** of the third sector and householders through training and self-repair workshops and infrastructure.

93. We will encourage manufacturers and retailers located in Scotland to trial and increase **repair services to their customers** to increase the lifetime of their products.

94. We will continue to support **repair infrastructure** for domestic and commercial products within the private, third and public sector, reducing the need for new purchases and saving money.

95. We will explore how to best support open access to **technical manuals** to help facilitate greater levels of repair by householders and organisations.

96. We will investigate relevant products commonly purchased by the public sector and identify the opportunities for **public contracts to support greater levels of repair**, e.g. by requiring technical manuals to be provided for some products.

97. We will continue to **work with the procurement professional community** and will draw on circular economy principles in building upon previous and current programmes of capability building, such as The Marrakech Approach to Sustainable Public Procurement.

98. SEPA will produce guidance to clarify the circumstances in which actions to prolong the life of goods, including repair are subject to **waste regulation**.

Responses broadly agreed with the ambition for repair. One respondent disagreed with this (and with the consultation as a whole).

The proposal at paragraph 91 on a repair-finding service or network received broad support from those who responded. Comments highlighted the importance of networks to the repair economy; and of support for independent repairers.

The proposal on repair skills at paragraph 92 was generally welcomed. Comments included the need for collaboration across sectors, especially the third sector.

The proposal at paragraph 93 on commercial repair services received broad agreement from those who responded. Comments highlighted the need to look at best practice as well as support mechanisms to make this a viable option; support for leasing models where repair services are included; and for public procurement to encourage small business to repair items.

Broad agreement was received to the proposal to support repair infrastructure as detailed in paragraph 94. Comments emphasised the need for products to be designed for repair in the first instance, and the role of legislation.

The proposal to support open access to technical manuals at paragraph 95 also received broad support, with comments reinforcing the importance of such manuals to enable products to be dismantled and repaired.

The remaining proposals on public procurement at paragraphs 96 and 97 and on regulatory guidance (paragraph 98) also received general support.

Remanufacture

Extract from consultation

Ambition - We want Scotland's strategically important remanufacturing sector to fulfil its potential for growth: to raise the profile of remanufacturing, develop new markets and strengthen Scotland's international reputation for quality remanufactured products.

107. The Scottish Manufacturing Advisory Service will enhance its support to companies in relation to remanufacturing as part of the forthcoming **Manufacturing Action Plan**.

108. We will work with relevant bodies such as British Standards Institute (BSI) to ensure that **remanufactured products are properly recognised** and distinguished from second hand or refurbished products.

109. We will work with the EU and other partners to support the **promotion and recognition of remanufactured products** as comparable or equivalent to new products.

110. We will explore evidence to identify areas in which remanufactured products should be an option in relevant markets for **public procurement**.

111. We will work with the Scottish Institute for Remanufacture to develop efficient and cost effective **methods for returning end of life products** to remanufacturers.

112. We will work with the EU to **identify legal issues** that act as a potential barrier to greater levels of remanufacturing and explore options to address these.

113. We will explore the barriers and opportunities to greater use of **remanufactured medical devices** in the NHS.

The proposed ambition for remanufacture was generally welcomed. One respondent disagreed with this (and with the consultation as a whole). Another response commented that the ambition falls short and requires targets.

The proposal on enhancing support for remanufacture through the forthcoming Manufacturing Action Plan was also welcomed with a number of trade associations looking forward to this.

There was support from those who commented on the proposals at paragraphs 108 and 109 to improve recognition of remanufactured products. Comments emphasised the importance of standards for buyer confidence, and raised the possibility of building in a quality accreditation and guarantee system.

There was broad agreement from those who commented for the proposals at paragraph 110 on public procurement and 111 on capturing end-of-life products.

Proposals for work on EU-level legal issues were welcomed, with a number of perceived legal barriers highlighted.

A limited response was received regarding the proposal at paragraph 113 on medical devices.

Responses provided a number of additional suggestions, including:

- clear terminology so not to confuse consumers;
- communications to makes remanufactured goods socially acceptable;
- sharing expertise; and
- promoting innovation.

Recycling

Extract from consultation

Ambition - We want businesses, councils and householders to work together so that recycling becomes routine in every business and household - with more consistent local services and more packaging designed for recyclability - and we want every household in Scotland to have access to a food waste service.

We also want to improve the quality of recyclate to enable more materials to be returned to the same use, and for greater benefit to be retained in Scotland.

126. We intend to build on the collaborative approach to recycling service delivery successfully pioneered through the Zero Waste Taskforce. To complement that, we propose to **extend collaboration to the waste and packaging industry**, broadening the focus into markets, communication and packaging design.

127. We intend to **align Scottish Government and Zero Waste Scotland support for recycling activity with the new Household Recycling Charter**, if agreed by COSLA.

128. We would also like to open up a discussion with local government on their view of how their duties are currently defined as **Waste Disposal and Collection Authorities**, rather than resource management or similar authorities.

129. We would like to explore scope for early adopter councils of the proposed recycling charter to participate in pilots for the World Economic Forum and Ellen MacArthur Foundation's **Project Mainstream**.

130. We intend to explore funding mechanisms to **support new re-processors where supply chains are not yet fully developed** to create an effective financing and support network.

131. Because of the impact on quality of recyclate from contamination, we intend to review the specific circumstances in which **contamination arises in collection systems** - in particular mixed collections including glass; food waste collections; and contamination of dry recyclables by food - so that we can take appropriate action.

132. We intend to **review the rural exemption for food waste** in the Waste (Scotland) Regulations 2012 in partnership with local government as part of the process to develop best practice to support the proposed Household Recycling Charter, as well as businesses and the waste management sector.

133. Over the next year, we intend to focus attention and **support on small food businesses** that will come into the scope of our waste regulations in January.

134. In parallel, **SEPA** will engage and support waste producers to ensure compliance with the Waste (Scotland) Regulations 2012 and use appropriate enforcement procedures, including fixed penalty powers, on waste producers that persistently fail to take all reasonable steps to segregate material for recycling.

135. We intend to explore the potential for **regulations on recycled content of materials in public procurement**, initially to build on existing Scottish Government policy on recycled paper – extending the requirement across the public sector.

136. As part of our evidence work on opportunities for a more circular economy, the **chemicals, construction and agricultural** (with regard to plastics) sectors were identified as worthy of further consideration for the opportunities that could arise from recycling materials. We propose to do further work on these sectors during the period of this consultation.

137. We intend to **explore the issues raised in the call for evidence on a deposit return system for Scotland**, in liaison with other parts of the UK.

Respondents who provided feedback on the ambition for recycling generally agreed although one respondent disagreed with this (and with the consultation as a whole). Comments included general support for a more holistic approach to the circular

economy and the role of waste prevention; and scope for financial measures such as VAT and business rates.

There was a limited response to the proposal at paragraph 126 to extend collaboration with the waste and packaging industry. The responses received showed strong support for the principle, if not the action itself. General comments highlighted the importance of looking at packaging in parallel with recycling.

Again, limited responses were received to the proposal at paragraph 127 to align support for recycling activities with the new household recycling charter. Responses generally supported the charter or standardised collections more generally, with local authorities making reference to flexibility and level of funding.

There were also limited responses to the proposals at paragraph 128 on local authority duties and paragraph 129 on recycling pilots. Responses mainly came from local authority bodies and showed general support.

Few responses were received to the proposal at paragraph 130 on supporting new re-processors. Apart from one respondent who disagreed (and with the consultation as a whole), no-one else disagreed, with comments focusing on the supply chain and the balance between demand and supply measures. A mixture of comments also supported domestic reprocessing while others preferred an international market.

The responses to the proposal on contamination at paragraph 131 mainly focused on contamination issues, primarily concerns about the circumstances identified in the proposal. However, some respondents took the view that 'contamination' had not yet been proven. An additional comment also mentioned the role of householders rather than collection systems regarding contamination with a call for charging.

The proposal at paragraph 132 on reviewing the rural exemption for food waste collections received broad agreement from those who responded. Those in the organics sector were keen for the exemption to go, while local authorities cautioned about the need to for this to be carefully thought, including resource implications.

The proposal at paragraph 133 on support for small food business received limited responses. Those received either supported the proposal or expressed support for small business in other ways.

There was also a limited response to the proposal at paragraph 134 on SEPA action on compliance with the Waste (Scotland) Regulations 2012. There was general agreement from those who replied, with consensus on the importance of good enforcement, particularly from the perspective of contamination. One response on behalf of small businesses welcomed the planned approach but emphasised the scale of the task ahead for them on food waste.

Broad agreement was received to the proposal at paragraph 135 on recycled content of materials in public procurement. A number of responses also wanted the proposal to go beyond public procurement.

There was a poor response to the proposal at paragraph 136 on work in particular areas. Feedback outlined opportunities within the listed sectors although some respondents felt that all recycling materials from all sectors should be considered.

The action on deposit return systems at paragraph 137 generated a large response. These fell into three categories: those who opposed deposit return, believing no more time should be spent on the idea; those in support, wanting to move forward; and those undecided who would welcome further work to explore the issues.

Producer Responsibility for reuse and recycling

Extract from consultation

Ambition - We believe that producer responsibility offers an opportunity to drive innovation and greater circularity for certain products – to influence product design as well as increasing recycling and reuse.

140. We intend to explore proposals for **extended producer responsibility schemes for tyres, furniture and bed mattresses**. These are potential candidates for the following reasons:

- **Tyres:** to address the negative environmental, health and safety impacts of inappropriate disposal; incentivise greater recycled content; and retain the value of materials.
- **Furniture, including mattresses:** for the social and economic benefits from greater levels of reuse including local employment opportunities.

141. We also intend to examine the scope for extended producer responsibility schemes for other materials and products.

Over half of respondents gave feedback on the ambition for producer responsibility with general agreement. One respondent disagreed (and with the consultation as a whole), and a trade association also disagreed. There was general consensus that this should be used in parallel with other interventions. Some concern was noted about increasing costs to consumers and a lack of focus on voluntary approaches.

Responses generally supported the proposal at paragraph 140 to explore producer responsibility schemes for specific items. Comments suggested including a strong reuse focus; incorporating the third sector; targets and reporting. A concern was raised about the inclusion of tyres, pointing to existing outlets and increased costs.

The proposal at paragraph 141 on extended producer responsibility schemes for other products received general support from the responses received, although a few also highlighted opposition to deposit return. Respondents also suggested products to consider, including paint, carpets, duvets, plastic film, pharmaceuticals, nappies, electricals, packaging and the built environment. One comment emphasised optimising existing schemes before creating new ones.

Other comments on producer responsibility included highlighting the French bonus-malus system as good practice; learning from existing schemes; and considering the burden of reporting requirements.

Recovering Value from biological resources

Extract from consultation

Ambition - We want Scotland to be recognised as an international leader in the efficient use of biological resources. We want production of high value materials and chemicals from biological resources to increase, replacing non-renewable chemical feedstocks. When high value uses have been exhausted, we want to see increased production of renewable fuels, heat, and fertilizer products.

155. Zero Waste Scotland will investigate and pilot ways to help the economics and the environmental footprint of anaerobic digestion:

- **adding more value to digestate** from food waste recycling systems;
- **improving the quality of digestate and compost** in line with PAS standards, making these fertilizer products more acceptable for more markets;
- and to **utilise more of the heat** produced by the facilities.

156. We will explore the scope to **phase out the purchasing of non-renewable biological materials, such as peat**, by the public sector in Scotland through changes to Public Procurement requirements. This will help to stimulate greater domestic demand for renewable based fertilizer products produced from the network of anaerobic digestion and in-vessel composting facilities in Scotland.

157. To support cross-sector awareness of circular economy opportunities, we will work with the IBioIC to help deliver the industry-led National Plan. There are particular opportunities to explore, for example:

- how we can best support investment in research and development and innovation to **develop and commercialise processes** which address technical barriers for the use of biological waste;
- the potential for data collection systems for specific industry sectors to help **understand material flows** and the opportunities they present; and
- the potential for “**regional hubs**” for **biorefining** processes.

Little substantive comment was provided on the ambition for this chapter, although feedback that was received, generally agreed. One respondent disagreed with this (and with the consultation as a whole).

The proposals at paragraph 155 on anaerobic digestion were generally supported. Some respondents also emphasised the importance of efforts to avoid food waste, rather than simply endorsing anaerobic digestion and composting.

Limited comment was received on the proposal at paragraph 156 on phasing out purchasing of materials such as peat. The only significant comment highlighted the need for the full value of bio-waste to be identified. The view was also expressed that current incentives focus mainly on renewable energy production but should extend to increasing demand for high quality compost and digestate.

Respondents supported the proposal to support delivery of the industry-led National Plan at paragraph 157, and highlighted the significant potential of biotechnical industry in Scotland.

Overall, comments received for this chapter focused on food waste, highlighting that more could be done to reduce the amount of food waste and to extract the greatest benefit from our biological resources.

Energy recovery

Extract from consultation

Ambition - Our ambition is to have an energy from waste infrastructure that effectively manages the “leakage” from a more circular approach to the economy in Scotland without creating demand for materials that could otherwise be kept in higher value use. We want to ensure that energy recovered from waste supports, directly, high quality heat and power schemes.

165. We want to ensure that long term decisions on waste infrastructure are as well informed as possible. We will explore, with SEPA and Zero Waste Scotland, how best to improve the way that we provide and present **information on the anticipated capacity requirements for future waste infrastructure**, for use by planning authorities and industry - helping ensure the capacity of waste infrastructure developed, such as thermal treatment facilities, is appropriate.

166. Zero Waste Scotland will produce an **Economic Assessment Report**, modelling how the changing composition of residual waste, and other factors, will affect residual waste treatment options in Scotland in an international context, to 2025. This information will also be made available to guide infrastructure investment.

Little substantive comment was provided on the ambition for energy recovery, although feedback received generally agreed. One respondent disagreed with this (and with the consultation as a whole).

There was general agreement that the proposal at paragraph 165 on waste infrastructure capacity information was a sensible approach. A concern was raised that local authorities entering into long term contracts guaranteeing waste tonnage for energy recovery plants would discourage alternatives addressing the CE agenda.

There were few comments about the study on future residual waste treatment options noted at paragraph 166, although those received, were generally supportive.

Overall, comments received for this chapter opposed energy-from-waste with fears that a need to fill the energy recovery capacity would limit recycling. There was also support for action to minimise capacity, including mention of an incineration tax.

Landfill

Extract from consultation

Ambition - The Scottish Government is the only administration within the UK to introduce a statutory ban on municipal biodegradable waste going to landfill as part of our transition to a more circular economy. As landfilling decreases, we now want to manage the legacy of landfill sites around Scotland, minimising emissions from operational and closed sites.

Current action/Proposals

170. The Scottish Landfill Tax provides a strong financial incentive to keep materials out of landfill and in higher value uses. It also provides a new deterrent to illegal dumping by bringing this activity under the scope of the tax.

171. Scottish Landfill Tax rates are in line with UK Landfill Tax rates for 2015-16. We have also committed that Scottish Landfill Tax will be no lower than prevailing UK rates, meaning the standard rate will not fall below £80 a tonne before 2020. In setting these rates, Scottish Government is also acting to avoid any incentive to move waste between Scotland and England.

172. SEPA already requires landfill operators to demonstrate that funds are available to cover environmental obligations including restoration and aftercare requirements when sites are closed. SEPA will shortly be consulting on an improved approach in this area to better ensure that funds are adequate, secure and available when needed.

173. Former landfill sites are still a significant source of greenhouse gas emissions. Innovative flaring technology which removed the equivalent of more than 20,000 tonnes of carbon dioxide from two sites in the Borders - roughly equal to 14,000 passengers making return flights between Edinburgh and New York – is to be rolled out to two further sites in Glasgow and East Lothian, supported by £500,000 of Scottish Government funding. SEPA is identifying further sites across Scotland where the same technological approach could be applied.

Slightly over half of respondents gave feedback on the overall ambition on landfill and almost all agreed. Respondents were strongly of the opinion that we should continue to deter disposal to landfill as an option. One respondent disagreed with this (and with the consultation as a whole).

Relatively few respondents commented directly on the current and proposed actions reproduced above. Comments were generally supportive, emphasising the importance of preventing waste going to landfill and highlighting their own approaches. Picking up on the reference at paragraph 171 to Scottish Landfill Tax rates, some respondents argued that the rate should not differ from that in the rest of the UK.

Communications

Extract from consultation

Ambition - We want the behaviours and practices that will support a circular economy to be increasingly mainstream within Scottish society and our economy – ending our ‘throwaway culture’ and allowing people and businesses to see the inherent value in the products and materials they use. We want people to be motivated to make changes in their lives and for Scotland to be recognised as a global leader.

183. We want to work with local authorities and others in the recycling supply chain to deliver high profile, **national communications** to drive increased levels of recycling and re-use.

184. We will build on the success of the **#MakeThingsLast** initiative and develop new ways to engage people in the benefits of a circular economy.

185. We will further support **community-based initiatives** which facilitate sharing and the exchange of goods and services, and help to normalise alternative modes of consumption, such as leasing or performance-based models.

186. Reflecting the priority given to addressing circular economy opportunities in Scotland’s Economic Strategy we will work with the Enterprise Agencies, Business Gateway, local authorities, Innovation Centres and others to embed it within their mainstream **economic development functions**.

187. By the end of 2015, we intend to launch a ‘**Scottish Circular Economy Network**’, a network of businesses and supporting organisations to help achieve a more circular economy, through collaboration and business-led initiatives.

Just over half of respondents gave feedback on the ambition for communication with almost all agreeing. Strong communication was viewed as vital with a focus on tackling a throw-away culture. One respondent disagreed with this (and with the consultation as a whole).

The proposal on national campaigns at paragraph 183 received mixed opinions, but was broadly agreed, with differing views on whether local or national campaigns were the priority. The household recycling charter was also seen as important to back up such campaigns.

There was general agreement to the public engagement proposal at paragraph 184. Comments included recognition and importance of young people but also the need to engage with others; and the suggestion that the proposal should be part of an integrated communications strategy.

The proposal at paragraph 185 on community based initiatives received broad support. Comments recognised that local networks are important and engaging "facilitators" or influencers in a community can have substantial impact.

General agreement was also received from responses to paragraph 186, regarding embedding circular economy thinking within mainstream economic development functions. Comments recommended that other sector specific organisations need to be engaged as well.

The proposed circular economy network for business at paragraph 187 was welcomed. Comments suggested communicating network outputs to a wider audience; and a regional level network, including the third sector.

Other comments on this chapter included concern that current circular economy terminology is a barrier; a call for action in education; joining up between various partners involved; and the use of a variety of communication channels.

Skills for a circular economy

Extract from consultation

Ambition - We want to embed the development of new circular economy skills and thinking in the next generation of designers, business leaders and innovators. We want to make sure Scotland's workforce has the right skills to take advantage of opportunities from a more circular economy, to ensure our businesses can innovate and prosper, now and in the future.

198. We will **review existing Skills Investment Plans** (SIPs) to identify how circular economy training and skills development can be incorporated on a cross-sector basis. This information will also be used to build on existing engagement with stakeholders such as Industry Leadership Groups, Skills Groups and Employers.

199. We will **assess the specific skills needs** for the growth opportunities identified by our evidence programme, initially in the Food & Drink sector, Oil & Gas sector, and Re-use organisations.

200. We intend to explore how we can support education on the circular economy through the **embedding of sustainability** in Scottish design undergraduate degrees and the development of learning for sustainability across the school curriculum.

201. We will also explore potential to integrate circular economy awareness and skills into a range of other training and education programmes including Business Studies qualifications.

202. We will explore how to ensure circular economy skills are **mainstreamed** within wider skills development activity.

203. We will consider if there are opportunities to support greater **transfer of skills between industries**, or to align skills with new technologies, to supplement the existing industry-led approaches.

Feedback showed general consensus on the ambition proposed for skills, with comments on the need to also involve third sector organisations and local authorities. Two respondents disagreed. One individual respondent disagreed with this (and the consultation as a whole), while a trade association felt Scotland already has a wide range of skills so did not see this as being critical.

There was general agreement from those commenting on the proposal to review skill investment plans at paragraph 198. Comments included concern about poor uptake to date, especially for chemical sciences; calls for funding for development of design and remanufacturing skills; and (again) for third sector involvement.

Respondents who commented broadly agreed to the proposal at paragraph 199 on assessing skills needs for specific sectors. Feedback noted that research expertise could be hard to find. Suggestions included additional sectors relevant to respondents; of sector specific knowledge hubs; and a call for research on the impact of circular economy approaches for existing labour markets.

The proposals on education and training at paragraphs 200 and 201 received broad agreement from the responses received, with views that all education establishments should be involved. On the school curriculum, some suggested that circular economy thinking should be joined up with existing work on sustainability, while others felt this should remain separate to encompass more subjects. Other comments included concern not to overburden teachers; and a suggestion for a new and comprehensive circular economy skills certification scheme.

There was also general support for the proposal at paragraph 202 on mainstreaming within skills development activity. Comments received also emphasised engagement with informal education and bodies that work with young people to help inform transitional change; and the role the third sector could play through employability schemes to get people back to work.

The proposal on skills transfer between sectors at paragraph 203 was also welcomed. Suggestions included liaising with the SWITCH (Scottish Waste Industry Training, Competency, Health & Safety) forum through its Education, Training and competence group as well as third sector and community groups.

Other suggestions on skills:

- a new comprehensive circular economy skills certification scheme;
- collaboration between universities and secondary schools enabling continuity between pupil projects in their senior stages of the curriculum of excellence and a more systematic focus on undergraduate degree programmes;
- Developing Scotland's Young Workforce Programme to connect education and training needs with employers in each region;
- emphasis on using the skills of the older generation;
- facilitate development of community based experience, enabling skills within a community to be utilised; and
- role of social enterprise in the reuse sector to be safeguarded and developed through the use of social clauses in tendering processes.

Measuring progress

Extract from consultation

Ambition - We want to improve our understanding of how products and materials flow through our economy - to track progress, assess the scale of potential opportunities; and help identify future actions.

Proposals

213. We will continue to build our **evidence base** to help identify specific circular economy opportunities.

214. We intend to refresh Scotland's suite of **targets and indicators**, incorporating **process measures** to reflect the development of a more circular economy. This will be developed in parallel with discussions on the EU Circular Economy package.

215. We will continue to promote the **carbon metric** as an alternative to the conventional weight-based waste measurements including in the context of the EU Circular Economy package. Zero Waste Scotland will use the carbon metric to highlight the significant difference in impacts between recycling and reuse.

216. We intend to develop a **long term data strategy** to support a more circular economy.

217. To help understand the flow of materials around our economy, we propose to make the use of the **electronic edoc system mandatory in Scotland**; and will continue working with the UK Government and other devolved governments to develop this system and consider inclusion of transfrontier shipment of waste and hazardous waste.

This chapter was the most technical and had a relatively small response rate. There was little substantive comment on the ambition suggested, although the respondents who did give feedback generally agreed. One respondent disagreed with this (and with the consultation as a whole).

Respondents generally agreed with the proposal at paragraph 213 on building our evidence base, with a few requesting that the Scottish Government and delivery partners publish all studies. There was also a suggestion to use evidence already gathered to identify priority areas.

Respondents also agreed with the proposal at paragraph 214 on targets and indicators. Several argued for consistency with the EU as well as minimising administrative costs. Suggestions were provided for new measures or targets to incorporate reuse, food waste and resource use as well as environmental foot printing and qualitative measures. Requests were also made for clear presentation of progress.

The proposal on the carbon metric at paragraph 215 received very little comment. Most respondents agreed who provided comment, and two disagreed. Some raised concerns that the carbon metric was not well communicated or understood.

Respondents agreed with the long term data strategy proposal at paragraph 216. Again, respondents argued for consistency with the EU and the use of environmental foot-printing as well as a call to improve commercial waste data.

The majority of respondents who commented agreed with the proposal at paragraph 217 on making the electronic edoc system mandatory. Three disagreed. Some commented on the importance of ensuring the system was effective, with a local authority and a waste/resource management company expressing concerns about this. One argued for transitional support for waste producers and emphasised the need to incorporate hazardous waste documentation.

Equality – Do you have any comments on the proposals in terms of how they may impact on any particular equalities groups i.e. in respect of age, gender, race, religion, disability or sexuality?

For the respondents that replied to the above equality question, the majority of respondents had no comments to make to this question. A number of responses highlighted that the circular economy would be a benefit to everyone, of all age, abilities etc.

Comments from three trade associations highlighted the impact of a deposit return scheme would have on less able or elderly, and those who may not have access to a car or suitable storage space to reclaim their deposit. Another highlighted the impact a deposit return scheme would have on the price of goods and how this would affect an individual or family on a fixed income would become too expensive so regressive and unfair.

One respondent highlighted that cultural values from different ethnic communities on food waste collection can be difficult regarding used and left-over food so would require specific approached but highlighted positive experiences from the City of Antwerp in Belgium and Milan.

The only other point highlighted was in regards to the voluntary household waste recycling charter and for consideration to be taken into account for the ability of elderly and disables to participate in waste recycling collection systems.

Business and Regulatory Impact Assessment (BRIA) – Do you have any comments on the draft partial Business and Regulatory Impact Assessment?

The majority of respondents that replied to this question stated that they had no comments. For those who did, a summary of the comments received included:

- To ensure the capture of mismanagement and detrimental man management practices;
- Queried that ‘business as usual’ has no costs and asked if this could be supported following the cost for not moving to a circular economy;
- Regulation must be simplified and accessible, co-created through engagement with the population and businesses;
- Full support provided to ‘option 2’ from an engineering business that would welcome the strategy development and implementation;
- Could include benefits analysis for the purpose of identifying key benefits, dis-benefits and unintended impacts/benefits;
- The use of higher value biological materials in processes other than generation of energy will increase sustainability and emissions reductions, particularly carbon dioxide, is an added benefit on top of the economic drivers;
- One respondent asked for their entire response to consultation to be considered within the BRIA during its development;
- One respondent felt that the ‘business as usual’ scenario required some level of quantification and felt that the argument for a circular economy was less convincing;
- One response highlighted their interest on how the approach would be implemented with regards to cross-nation supply chains; and
- One organisation highlighted that the assessment did not stipulate the better employment rate of the reuse sector compared to recycling – providing figures, and suggested that it was essential to provide better support to reuse activities rather than recycling activities.

Strategic and Environmental Assessment – Please give details of additional relevant resources.

A limited response was received to the five questions contained under the heading for the Strategic and Environment Assessment (SEA). However, responses were generally positive in regards to the ambitions set out in the consultation document and the findings of the SEA. One respondent disagreed with this (and with the consultation as a whole), commenting that Scotland does not have a serious environmental or water shortage issue.

There was general agreement with the current baseline set out in the report and the description of the business as usual option. One respondent disagreed with the business as usual option, stating it was unlikely to be viable given the likelihood of further changes to resource supply and use i.e. fluctuating oil prices.

Another respondent thought the language used ‘over-emphasised’ circular economy success stories and that initiatives had been based on incentives to encourage consumer behaviour to varying degrees of success. Concern was highlighted that there had been little consideration on the full lifecycle aspects of circular initiatives, while others felt that some will prove to be more beneficial than others whilst some will have knock-on negative impacts in other areas of the economy.

Other comments included that the SEA should make recommendations on how systems approaches may be used to develop, apply and promote circular economy initiatives; only greenhouse gas emissions were considered as an environmental impact and although these activities often reduce overall lifecycle greenhouse gas emissions, they could also increase other environmental impacts; further emphasis could be placed on marine litter (micro plastics in water) and litter in urbanised areas; and believed the SEA viewed environment primarily as climate change that provided a limited viewpoint on both impacts and benefits of the circular economy.

One respondent suggested that the use of Denmark as an example of public procurement was misleading due to high tax rates in Denmark and suggested it may have been more prudent to select a model based on countries with similar fiscal policies to Scotland. Another respondent suggested there were gaps in specific baseline information such as specific demographic data in relation to the population factor which could be obtained from local authorities.

Strategic and Environmental Assessment – Do you agree with the predicted environmental effects as set out in the Environmental Report?

Again, there was a limited response received to this question although there was broad agreement from those who did respond.

One respondent who agreed also commented on the importance that the products and materials produced from the recycled biomaterial must meet the standards and expectation of newly made products in order to allow the circular economy to succeed. One respondent highlighted that the report lacked in its analysis of local air quality while a couple of responses mentioned the exclusion of areas such as biodiversity that they saw as important winners if the circular economy was implemented in the optimal way.

Another respondent that broadly agreed, recommended that people and communities are considered as an integral part of the environment and an area worthy of more specific assessment in the future as part of developing circular economy initiatives.

Strategic and Environmental Assessment – Do you agree with the recommendations and proposals for mitigation and enhancement of the environmental effects set out in the Environmental Report?

The majority of respondents had no comment to add to this question. From those who did provide a response, broad agreement was received although one respondent highlighted there was insufficient information to assess.

Along with their agreement, respondents also provided additional comments that included the importance that proposals for mitigation recognise regional differences and diversity and highlight mitigation of impacts of national developments; any monitoring scheme needs to take a systems perspective and not entirely based on carbon accounting; and one respondent expects further and specific sector consultation to refine outputs.

Strategic and Environmental Assessment – Please give details of additional relevant resources.

From the responses received to this question, a number of respondents had no additional comments to be made. Some highlighted the evidence used appeared to be reliable so no further source required or that a comprehensive review of all materials available in the public domain seemed to have been used.

One respondent highlighted that the document appeared to be very reliant on the Ellen MacArthur Foundation and the wealth of experience from countries such as Japan, Denmark and Norway. Another highlighted their concern for micro plastics in waters (oceans particularly) as a growing concern and highlighted several reports on the problem.

Suggestion was also made regarding the outputs from the current (2011-2016) and future (2016-2021) RESAS (Scottish Government's Rural and Environment Science and Analytical Services Division) Strategic Research Programme to inform the assessment as well encouraging those developing the circular economy mandate to engage with the RESAS Programme and main research providers.

Strategic and Environmental Assessment – Are you aware of other ‘reasonable alternatives’ to the proposed policies that should be considered as part of the Strategic Environmental Assessment (SEA) process conducted for the consultation document?

Respondents to this question mainly had no additional comments to make or were not aware of other alternatives from those already contained within the report.

One respondent highlighted that other countries have done similar assessments and although not necessarily alternative, could support policy development in Scotland. Another respondent highlighted the case for a detailed assessment on the life cycle and value chain to allow focussed targeting of incentives.