

## **SCOTLAND'S ZERO WASTE PLAN**

## **SAFEGUARDING SCOTLAND'S RESOURCES – BLUEPRINT FOR A MORE RESOURCE EFFICIENT AND CIRCULAR ECONOMY**

## **MAKING THINGS LAST – A CIRCULAR ECONOMY STRATEGY FOR SCOTLAND**

### **Strategic Environmental Assessment (SEA) Post Adoption Statement**

**February 2016**

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## Abbreviations

AA	Appropriate Assessment
AWP	Area Waste Plan
BAU	Business-as-usual
BPEO	Best Practicable Environmental Outcome
CAR	Controlled Activities Regulations
EC	European Commission
edoc	Electronic Duty of Care system
EfW	Energy From Waste
EIA	Environmental Impact Assessment
EU	European Union
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GVA	Gross Value Added
HRA	Habitats Regulations Appraisal
LCA	Life Cycle Assessment
LSE	Likely Significant Effect
NGO	Non-Governmental Organisation
NPF	National Planning Framework
NWMP	National Waste Management Plan 2009
PPC	Pollution Prevention and Control
PPS	Plan, Programme or Strategy
RESAS	Rural and Environment Science and Analytical Services
SEA	Strategic Environmental Assessment
SEA Statement	Post Adoption Strategic Environmental Assessment Statement
SEPA	Scottish Environment Protection Agency
SPP	Scottish Planning Policy
SNHi	Scottish Natural Heritage Interactive
SSR	Safeguarding Scotland's Resources - Blueprint for a More Resource Efficient and Circular Economy
SWAG	Scottish Waste Awareness Group

The 2005 Act	The Environmental Assessment (Scotland) Act 2005
UK	United Kingdom
WRAP	Waste and Resources Action Programme
WEEE	Waste Electrical and Electronic Equipment
WWF	World Wide Fund for Nature
ZWP	Zero Waste Plan

# 1 Introduction

## 1.1 Background

- 1.1.1 In 2008, the National Waste Management Plan for Scotland was developed as a requirement of the EU Waste Framework Directive<sup>1</sup> and the National Waste Management Plan for Scotland Regulations 2007<sup>2</sup>. The development of this national plan, later to be finalised and named Scotland's Zero Waste Plan (ZWP)<sup>3</sup>, set out the Scottish Government's vision for a zero waste society, and was the first step in the process of the Government changing how waste is managed in Scotland. The Zero Waste Plan set out ambitions for not just managing waste more efficiently, but changing the thinking behind how waste is generated and how these materials can be utilised.
- 1.1.2 The Zero Waste Plan's commitment to develop a waste prevention programme was taken forward through the development of the Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient and Circular Economy (SSR) programme in 2013<sup>4</sup>, which broadened waste prevention thinking to resource efficiency, encompassing efficient use of materials, energy and water. It also set out early steps towards examining circular economy opportunities, which laid the foundations for the recent development and publication of Making Things Last – Consultation on Creating a More Circular Economy in Scotland<sup>5</sup>. This coincided with the development and consultation on the European Commission's (EC) Circular Economy Package in 2015 and publication of Closing the Loop – An EU Action Plan for the Circular Economy in December 2015<sup>6</sup>.
- 1.1.3 The following sections of this Strategic Environment Assessment Post Adoption Statement provide an overview of how the Scottish Government has taken forward the evolving emphasis on zero waste, resource efficiency and a circular economy in Scotland through the development and publication of Scotland's ZWP in 2010, the SSR programme in 2013, and the recent

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<sup>1</sup> Directive 2008/98/EC on waste (Waste Framework Directive) [online] Available from: <http://ec.europa.eu/environment/waste/framework/> (accessed 22/02/2016)

<sup>2</sup> The National Waste Management Plan for Scotland Regulations 2007 [online] Available at: <http://www.legislation.gov.uk/ssi/2007/251/made> (accessed 24/02/2016)

<sup>3</sup> The Scottish Government (2010) Scotland's Zero Waste Plan [online] Available at: <http://www.gov.scot/Resource/Doc/314168/0099749.pdf> (accessed 24/02/2016)

<sup>4</sup> The Scottish Government (2013) Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient and Circular Economy [online] Available at: <http://www.gov.scot/Resource/0043/00435308.pdf> (accessed 24/02/2016)

<sup>5</sup> The Scottish Government (2016) Making Things Last: Consultation on Creating a More Circular Economy in Scotland [online] Available at: [https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting\\_documents/makingthingslast.pdf](https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting_documents/makingthingslast.pdf) (accessed 22/02/2016)

<sup>6</sup> EC (2015) Closing the loop – An EU action plan for the circular economy [online] Available at: [http://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC\\_1&format=PDF](http://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF) (accessed 22/02/2016)

publication of Making Things Last – A Circular Economy Strategy for Scotland<sup>7</sup>.

## 1.2 The Strategic Environmental Assessment Process

- 1.2.1 Strategic Environmental Assessment (SEA) is the assessment of the likely significant effects that a public plan, programme or strategy (PPS) will have on the environment once implemented.
- 1.2.2 During their development, Scotland's ZWP, SSR and Making Things Last were considered likely to have significant environmental effects in accordance with the Environmental Assessment (Scotland) Act 2005 (the 2005 Act). As a consequence, SEA was undertaken and an Environmental Report prepared and published alongside the development of each document. These reports were undertaken to both inform the decision-making process in the development of the respective Plans, Programmes and Strategies (PPS), and also to engage with the statutory Consultation Authorities<sup>8</sup> and other stakeholders and interested parties via the statutory public consultation process set out in the 2005 Act.
- 1.2.3 Table 1.1 illustrates the timeline that the Consultation Documents for each PPS and their Environmental Report were made available for public consultation in accordance with the requirements of the 2005 Act.

## 1.3 The Post Adoption Statement

- 1.3.1 The requirements for the post-adoption stage of SEA are set out under Part 3 of the 2005 Act. This includes publication and advertising of a PPS, the Environmental Report and a statement setting out:
- How environmental considerations have been integrated into the plan (Section 18(3)a of the 2005 Act).
  - How the environmental report has been taken into account (Section 18(3)b).
  - How consultees opinions have been taken into account (including trans-boundary consultations) (Section 18(3)c and d).
  - The reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives considered (Section 18(3)e).
  - Measures to be used to monitor the significant effects of the plan (Section 18(3)f).

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<sup>7</sup> The Scottish Government (2016) Making things last: A Circular Economy Strategy for Scotland [online] Available at: [www.gov.scot/makingthingslast](http://www.gov.scot/makingthingslast) (accessed 22/02/2016)

<sup>8</sup> Historic Environment Scotland (HES), Scottish Environment Protection Agency (SEPA) and Scottish Natural Heritage (SNH).

1.3.2 This Post Adoption Statement (SEA Statement) fulfils these requirements for Scotland's ZWP, SSR and Making Things Last. It brings together the findings of each SEA, including a summary of the views expressed by respondents on the Environmental Reports and the Consultation Documents to which they related.

**Table 1.1 List of Relevant PPS and Important Dates**

<b>PPS</b>	<b>Date of Publication / Period</b>
<b>Scotland's ZWP and its SEA Environmental Report</b>	
SEA Scoping Report	26 November 2008
SEA Environmental Report	14 August 2009
Consultation Period for Scotland's ZWP: Consultation and its SEA Environmental Report	20 August 2009 – 13 November 2009
Publication of Scotland's ZWP	9 June 2010
<b>SSR and its SEA Environmental Report</b>	
Screening and Scoping Report	23 November 2012
SEA Environmental Report	31 January 2013
Consultation Period on the SSR Consultation Document	27 June 2012 – 28 September 2012
Consultation Period on the SSR Consultation Document and SEA Environmental Report	31 January 2013 – 28 February 2013
Publication of SSR – Blueprint for a More Resource Efficient and Circular Economy	2 October 2013
<b>Making Things Last and its SEA Environmental Report</b>	
Screening and Scoping Report	21 May 2015
SEA Environmental Report	20 August 2015
Consultation Period on Making Things Last Consultation Document and its SEA Environmental Report	20 August 2015 – 30 October 2015
Publication of Making Things Last – A Circular Economy Strategy for Scotland	23 February 2016

## 1.4 Structure of this SEA Statement

### 1.4.1 The SEA Statement is structured as follows:

- Section 1: Presents an introduction to this SEA Statement, providing an overview of Scotland's zero waste and circular economy ambitions, the SEA processes undertaken for each, and links to relevant documents.
- Section 2: Presents an overview of responses on the Consultation Document for Scotland's ZWP and its Environmental Report, and a summary of the findings of the SEA. This section also sets out how these findings and views were considered in the development of the ZWP and in subsequent policy, and the consideration of alternatives.
- Section 3: Presents an overview of responses on the SSR Consultation Document and its Environmental Report, and a summary of the findings of the SEA. This section also sets out how these findings and views were considered in the development of the SSR and in subsequent policy, and the consideration of alternatives.
- Section 4: Presents an overview of consultation responses on the Making Things Last Consultation Paper and its Environmental Report, and a summary of the findings of the SEA. This section also sets out how these findings and views were considered in the development of Making Things Last – A Circular Economy Strategy for Scotland, and the consideration of alternatives.
- Section 5: Presents a summary of common threads running through the policy development processes for Scotland's ZWP, the SSR Programme and Making Things Last, and providing a broad overview of the shared links and ambitions between them.
- Section 6: Sets out opportunities for mitigation and enhancement, and outlines the proposed monitoring framework and next steps in the process.

## 1.5 Links to Relevant Documents

### 1.5.1 Links to key documents relevant to this SEA Statement are set out below.

- Scotland's ZWP:
  - Scotland's ZWP: Consultation is available from:  
<http://www.gov.scot/Publications/2009/08/19141153/0>
  - The Environmental Report for Scotland's ZWP: Consultation is available from:  
<http://www.gov.scot/Resource/Doc/282237/0085306.pdf>

- Scotland's ZWP is available from:  
<http://www.gov.scot/Resource/Doc/314168/0099749.pdf>
- The SSR Programme:
  - The Consultation Document for Safeguarding Scotland's Resources – A Programme For The Efficient Use of Our Materials is available from: <http://www.gov.scot/Publications/2012/06/4215>
  - The Environmental Report for Safeguarding Scotland's Resources – A Programme for the Efficient Use of Our Materials is available from: <http://www.gov.scot/Resource/0041/00413697.pdf>
  - Safeguarding Scotland's Resources – A Programme for the Efficient Use of Our Materials: Analysis of Consultation Responses is available from: <http://www.gov.scot/Resource/0042/00424030.pdf>
  - Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient and Circular Economy (SSR):  
<http://www.gov.scot/Resource/0043/00435308.pdf>
- Making Things Last:
  - Making Things Last - Consultation on creating a more circular economy in Scotland is available from:  
[https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting\\_documents/makingthingslast.pdf](https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting_documents/makingthingslast.pdf)
  - The Environmental Report for the Making Things Last Consultation is available from: [https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting\\_documents/A11726904%20docx.pdf](https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting_documents/A11726904%20docx.pdf).
  - The Response Analysis Report for the Making Things Last Consultation is available from: [www.gov.scot/makingthingslast](http://www.gov.scot/makingthingslast).
  - Making Things Last – A Circular Economy Strategy for Scotland is available from: [www.gov.scot/makingthingslast](http://www.gov.scot/makingthingslast).

## 2 Scotland's Zero Waste Plan (ZWP)

### 2.1 What is the Scotland's ZWP?

- 2.1.1 The development of a National Waste Management Plan (NWMP) for Scotland<sup>9</sup> commenced in 2008. As noted in Section 1.1, the Consultation Document for this Plan was originally published as Scotland's ZWP: Consultation and was later finalised and named Scotland's ZWP<sup>10</sup>.
- 2.1.2 Published on 9 June 2010, Scotland's ZWP was developed to set out the strategic direction for waste policy for Scotland and built upon Scotland's previous work in improving the management of waste. It set out the need for a change of mind set and the need for everyone in Scotland to view waste as a potential resource, and furthermore to think about how to efficiently use these resources. It was developed to be concise and strategic in its approach, and to set goals for waste reduction in Scotland whilst also being focused on key areas of activity. In particular, it focused on those areas with the potential to make the greatest contribution in delivering those goals.
- 2.1.3 It laid the foundations for taking forward the Scottish Government's vision of waste management by presenting the key principles of the waste hierarchy, and setting out an order of preference for managing waste. This comprised waste prevention first, preparing for re-use of materials, recycling/composting, recovery (including energy recovery) and, lastly, disposal. The ZWP also included a list of key actions aimed at making the best use of these resource streams and promoting the development of economic opportunities through more efficient waste management. This included the setting of recycling targets, further development of the waste resource management sector, and improving education and awareness of waste resources amongst individuals, businesses and organisations.
- 2.1.4 The ZWP set out the roles and responsibilities of a range of stakeholders in relation to Scotland's waste management, such as, waste producers, public bodies and local authorities, the private sector and community groups. It also discussed the role of other waste delivery bodies such as the Waste and Resource Action Programme (WRAP), Scottish Waste Awareness Group (SWAG) and ReMade Scotland. Along with wider policy (i.e. National Planning Framework (NPF) and Scottish Planning Policy (SPP), amongst others), the ZWP was also developed to replace the National Waste Plan, the 11 Area Waste Plans (2003), the Household Waste Prevention Action Plan (Scotland) 2007 and the Business Waste Framework for Scotland (2007).

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<sup>9</sup> The Scottish Government (2009) Consultation on Scotland's Zero Waste Plan [online] Available at: <http://www.gov.scot/Publications/2009/08/19141153/0> (accessed 22/02/2016)

<sup>10</sup> The Scottish Government (2010) Scotland's Zero Waste Plan [online] Available from: <http://www.gov.scot/Resource/Doc/314168/0099749.pdf> (accessed 22/02/2016)

2.1.5 The SEA Environmental Report prepared by Enfusion, SISTech and MWH on behalf of the Scottish Government presented the findings of the SEA undertaken for Scotland's ZWP.

## 2.2 Overview of Consultation Responses

2.2.1 The Consultation Document for Scotland's ZWP and its SEA Environmental Report were published in August 2009 and following this, a process of public consultation on both documents was undertaken between August and November 2009.

2.2.2 The consultation received 239 responses, of which 132 were received online and the remainder submitted by letter or email. The respondents were varied, consisting of campaign organisations (23%), individuals (18%), local government organisations (14%) and trade associations (10%). Most notably, 28 of Scotland's 32 Local Authorities provided individual responses in the consultation.

2.2.3 Further detail on the breakdown of respondents to the consultation is available in the Zero Waste Plan Consultation: Quantitative Analysis Report on the consultation prepared by the Scottish Government<sup>11</sup>.

## 2.3 Summary of Views Expressed on the Consultation Document and its Proposals

2.3.1 In general, the majority of respondents expressed support for the direction of the draft NWMP and the proposals it set out. There was also support for specific proposals, such as direct variable charging for volumes of waste discarded with many respondents favouring this proposal. It was felt that this proposal could be a means of driving changes in consumer behaviour and in shifting the balance towards recycling and reuse.

2.3.2 Some respondents from a number of sectors challenged the approach of imposing a 25% cap on the total amount of municipal waste that could be used to generate energy through incineration. In particular, a number of Local Authorities saw no need or justification for the 25% cap and suggested that the recycling targets were sufficient in their own right to drive change.

2.3.3 Some respondents felt that energy from waste (EfW) had no place in a zero waste society and several also challenged the role of activities such as incineration in society. Several non-governmental organisations (NGOs) in particular expressed their opposition to extending the EfW cap, whilst a number of other respondents also noted concern about how the 25% cap could be enforced through development planning. Overall, the majority of respondents agreed that the cap should not be extended to include all forms

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<sup>11</sup> The Scottish Government (2009) Zero Waste Plan Consultation: Quantitative Analysis Report [online] Available at: <http://www.gov.scot/Resource/Doc/211199/0093793.pdf> (accessed 22/02/2016)

of residual waste treatment (beyond combustion), and several cited that these activities produce recycle/compost that would also contribute to the delivery of targets.

- 2.3.4 Some respondents suggested the use of carbon metric as a means to measure the carbon impact of waste. They felt that it could be introduced to incentivise recovery of materials that result in the greatest environmental gain, such as plastics as opposed to rubble. It was further noted that there is interest, both internationally and in UK, related to the introduction of a carbon based metric tool for driving action towards recycling.
- 2.3.5 Responses received in the consultation were considered in the finalisation of the ZWP. The Scottish Government's response to the broad set of views expressed on the Consultation Document and its Proposals is summarised in Box 1.

**Box 1 Response to Views Expressed on the Consultation Document for Scotland's ZWP and its Proposals**

**Response:**

All comments received were noted for consideration in the finalisation of the ZWP.

The ZWP stated that the Scottish Government will introduce regulatory measures to support the delivery of landfill bans and to ensure that EfW treatment is only used to recover value from resources that cannot offer greater environmental and economic benefits through reuse or recycling. These measures were developed to supersede the 25% cap which had been applied to municipal waste.

Whilst the ZWP outlined the role that EfW could play in the context of making positive contributions to renewable energy and climate change targets, the overarching shift towards a circular economy set out in subsequent policy reflected the views of many respondents. Both SSR and Making Things Last set out ambitions for moving Scotland towards becoming a circular economy, including reducing the 'leakage' of materials from the system (i.e. going to landfill, use as EfW). Making Things Last in particular, targeted the promotion of activities such as the reuse, remanufacturing, refurbishment and recycling of materials where most value can be gained from them, in preference to the value of that material being lost or 'leaked' from the system

Following publication of the ZWP, Zero Waste Scotland developed a carbon metric for waste materials aimed at exploring the impacts of a more circular economy on Scotland's carbon emissions. As set out in the Consultation Document for Making Things Last, this metric would work alongside other proposals, such as Scotland's proposed household recycling charter, and with on-going actions such as local government to improve recycling collections.

## 2.4 Overview of the Findings of the Environmental Report

- 2.4.1 The SEA found that implementation of the Plan was likely to increase the rates of waste prevention, reuse, recycling and recovery, and help in reducing the levels of landfilling undertaken in Scotland; particularly under the aspirational option (Option 2). As a consequence, it was considered that the finalised ZWP would offer the potential for significant positive environmental effects across the range of different environmental topics considered in the SEA. In some cases however, the SEA found that it was not possible to ascertain whether effects arising from the plan would be positive, neutral or negative and in some instances, the potential for both positive and negative effects were identified.
- 2.4.2 The SEA identified the potential for significant environmental effects associated with improved management of wastes and a reduction in landfill. The potential for positive effects such as reductions in air emissions and the generation of greenhouse gases (GHG) were also noted (i.e. reduced odours and methane emissions from reduced levels of landfilling). The potential for positive effects on water (i.e. likelihood of reduced effects from reduced landfilling activities) were also identified for both options put forward in the Consultation Document.
- 2.4.3 For example, the SEA identified the potential for mixed effects for soil. It found that while there may be a reduction in landfilling operations, this could be replaced, at least to some extent, by an increase in use of other recovery operations (i.e. EfW). It was noted that many of these operations produce waste that could still be landfilled. The assessment also found the potential for significant cumulative effects, including the accumulation of smaller environmental effects, and the potential for impacts arising from the interaction of different environmental effects.
- 2.4.4 The SEA also found the potential for adverse environmental impacts to air quality, water quality and biodiversity, particularly through accidental spillages and waste movements. However, it was considered that these activities and other operations undertaken at waste management facilities were either currently, or were likely to be, subject to strict regulation by the Scottish Environment Protection Agency (SEPA). As such, it found it unlikely that any such effects would be significant unless there was already an underlying impact.
- 2.4.5 Uncertainty over the potential for impacts in some environmental topic areas was also noted. In particular, the SEA found that the role of the Plan in assisting the management of waste in a way that protects landscape, cultural heritage, and communities and their local environment to be unclear. The SEA found that this was due primarily to the high level and strategic nature of the Plan, and noted that it did not identify specific locations for waste management facilities. It was subsequently considered that the potential for

any localised effects would be better identified and, if necessary, mitigated through more detailed local assessment.

## 2.5 Summary of Views Received on the Environmental Report

- 2.5.1 As set out in the Analysis of Consultation Responses, the views expressed by respondents on the Environmental Report were largely positive, with many expressing their general agreement with the overall findings of the assessment. However, some respondents also suggested a range of improvements to the assessment, including suggestions for additional information or amendments to be made to the approach taken in the SEA. The Consultation Authorities in particular identified a range of data sources that they felt could help to inform the assessment, including information to inform the environmental baseline, fill data gaps and address the uncertainty in effects identified in the SEA.
- 2.5.2 A summary of the views expressed by respondents to the consultation is set out in Table 2.1. This table also summarises how these views were taken into account in the development of the final ZWP, and where relevant, details how they influenced the subsequent development of the SSR programme and/or Making Things Last.

**Table 2.1 Summary of views expressed on the Consultation on Scotland’s Zero Waste Plan and its Environmental Report**

Summary of opinions expressed during the consultation	Response
<p>Many local authorities felt that actions should depend on circumstances, market conditions and especially the Best Practicable Environmental Outcome (BPEO).</p>	<p>Scotland’s ZWP laid the foundations for taking forward the Scottish Government’s vision for improving how waste is used and managed in Scotland. Actions such as improving awareness and education, working with stakeholders (i.e. local authorities and the waste resource management sector) and presenting the key principles and order of preference of the waste hierarchy, should help decision-makers to take appropriate steps in improving how they manage waste. The ZWP made a commitment to develop a Waste Prevention Programme for all waste in line with the EU Waste Framework Directive, prompting the development of the SSR programme.</p> <p>The SSR programme and Making Things Last build on the ambitions of the ZWP. The inclusion of actions targeting business and industry, including raising awareness and education of success stories, were developed to promote the potential for benefits associated with working in a circular economy in a wide range of sectors.</p> <p>The SEA undertaken for the ZWP was focused on identifying the potential for environmental effects associated with the proposals, enhancement of positive effects and delivering the BPEO.</p>
<p>One respondent felt that the Scottish Government expects that waste plants will increasingly be built to take single stream material. However, they also felt that these plants should only take material suitable for combustion in both practical terms and in relation to environmental performance.</p>	<p>The ZWP outlined the important role that EfW could play in making a positive contribution to both renewable energy and climate change targets. However, it also noted that to achieve the high levels of prevention, reuse and recycling outlined in the Plan, it was imperative that materials that could be reused or recycled are not directed to mixed waste treatment facilities such as EfW facilities.</p> <p>In setting out Scotland’s circular</p>

Summary of opinions expressed during the consultation	Response
	economy ambitions, Making Things Last set out ambitions for improving how waste materials are utilised, and aims to further reducing the disposal or 'leakage' of wastes, including 'leakages' to landfill and EfW.
<p>One respondent was concerned that climate change adaptation was not included in the assessment.</p> <p>While they noted that climate change mitigation was embedded in the assessment, and welcomed this, they felt that there was no consideration of how resilient the proposals in the Plan were to the projected impacts of climate change.</p>	<p>Climate change resilience and resource security are both key considerations in the Scottish Government's waste management ambitions. Whilst climate change was a consideration in the development of Scotland's ZWP and its SEA, it also formed a key focus in the development of subsequent policy; particularly Making Things Last.</p> <p>Of particular note, the resilience of Scottish industry and ambitions to increase resource security in the future were both considered to be key factors in shift towards a circular economy. This is also reflected in the SEA work undertaken, where the potential for positive effects for climate change and the ability of industry to improve their resilience and also our ability to adapt to climate change were both noted as being important factors in the success of these ambitions.</p>
<p>Some expressed their disagreement with the focus of the SEA, and felt that greater prominence should have been given to population and human health issues and climatic factors (e.g. reference to GHG emissions and bottom up carbon impact assessments).</p> <p>Another felt that the measures included were "generally quite weak and do not have appear to have any commitment to implement them".</p>	<p>The ZWP was developed as the first step in the process of changing how waste materials are viewed and utilised in Scotland. The vision, ambitions and actions set out in the finalised Plan formed the foundation for the development of subsequent programmes (i.e. SSR, Making Things Last), which expanded and built on this approach.</p> <p>Population and human health and climatic factors were scoped into the SEA for the ZWP, and the potential for environmental effects considered in subsequent assessments for the SSR and Making Things Last.</p> <p>The Plan also identified the key role that</p>

Summary of opinions expressed during the consultation	Response
	<p>the planning system and agencies such as SEPA would play in managing planning applications and mitigating environmental impacts (including impacts to human health and climatic factors) associated with waste management activities and the licensing of waste management facilities.</p>
<p>Support was shown for the collection of more accurate waste data. For example, it was suggested that an indicator for commercial and industrial waste, a more comprehensive view of GHG emissions relating to waste management, and acknowledgement of the permitting and licensing system (i.e. Pollution Prevention and Control (PPC) and waste management licensing) was needed.</p>	<p>The ZWP proposed improvements to obtain more accurate and complete waste data, both through existing mechanisms (i.e. SEPA data from waste management sites with a license or permit) and with new methods. For example, this included the introduction of regulations that businesses receiving the SEPA Waste Data Survey be required to complete it.</p> <p>The Environmental Report stated that GHG emissions attributable to the waste sector in Scotland be monitored and recorded in the GHG inventory, and that these also include indirect emissions where possible.</p> <p>The SSR programme and Making Things Last were targeted at further building upon this knowledge base and improving the availability of accurate and useful data.</p> <p>The PPC licensing and waste management licensing systems were identified and discussed in the Environmental Report, particularly in relation to co-ordination with policy and planning systems. It was also noted that the regulation of emissions from energy and waste plants is currently undertaken through these mechanisms.</p>
<p>Some also identified opportunities for enhancement in areas other than the targets (e.g. commercial and industrial waste reduction and recycling, especially considering that there are no targets in</p>	<p>These comments were noted for consideration in the finalisation of the ZWP and in the development of subsequent PPS.</p> <p>Obtaining good quality and reliable data</p>

Summary of opinions expressed during the consultation	Response
<p>this).</p> <p>The use of data collection was seen as a key issue amongst some respondents. It was felt that this could present an opportunity to promote waste minimisation and recycling for businesses.</p>	<p>is a common thread running between the ZWP and subsequent policy development, particularly in ensuring that relevant data informs the decision-making process. This is further demonstrated through the introduction of actions in SSR and Making Things Last such as the use of electronic documentation in waste management, working with various sectors to improve waste data collection and reporting, and a shift towards understanding flow of materials through supply chains rather than relying solely on weight-based data.</p>
<p>One respondent noted their concern that the significant environmental effects were not known for 5 of the 12 SEA objectives. They expected that the SEA statement would identify how the areas of uncertainty would be addressed.</p> <p>It was suggested that more detailed scoring of sub-objectives and giving consideration of local effects may aid clarity and ease of use.</p> <p>The use of a scoring matrix against different local hypothetical situations was also identified by a respondent.</p>	<p>These comments were noted for consideration in the finalisation of the ZWP and in future SEA work.</p> <p>The SEA identified a degree of uncertainty in some topic areas relating to the likelihood of environmental effects that may be associated with the ZWP and its proposals. The SEA noted that this was due largely to the strategic and national focus of the Plan and the lack of specific locational information within it. While the potential for local impacts was identified associated with activities such as changes to localised waste management, and development of new waste management facilities. It is considered that these would likely be best considered at the local level and managed through existing mechanisms (e.g. PPC licensing).</p>
<p>One respondent queried if consideration had been given to trans-boundary effects associated with the transport of wastes outside Scotland.</p>	<p>The ambitions set out in the three documents are aimed at changing how waste is generated, used and managed in Scotland. They seek to help industries improve materials and waste management, whilst growing the services and infrastructure in Scotland that will be necessary to fulfil these ambitions.</p> <p>In moving towards a circular economy, the SEAs identified the likelihood of</p>

Summary of opinions expressed during the consultation	Response
	reducing the waste volumes described as 'leakage' from the system, improving how all materials are seen as resources, and reducing transportation of these materials, including their exportation.
<p>One respondent felt that the policy context set out in the Environmental Report and the Plan itself was limited and missed important drivers. It was suggested that the inclusion of additional legislation and PPS would have been helpful in better understanding how the plan will be influenced by and influence others.</p> <p>For example, some felt that reference should be made in the Environmental Report to policies relating to energy generation, energy efficiency, renewables, thermal treatment biomass, climate change adaptation and transport.</p>	<p>Section 3 and Appendix C of the Environmental Report provided a review of associated PPS considered relevant to the development of the Plan. These sections were not designed to be exhaustive, but rather provide an overview of PPS and focus on those considered to be of most relevance to the Plan and its SEA.</p> <p>A review of the relevant PPS was also prepared in undertaking the SEAs for both SSR and Making Things Last.</p>
<p>Some respondents suggested changes to text in the Environmental Report. This included changes based upon the inclusion of additional information and data sources to inform the environmental baseline sections (e.g. water, climatic factors, soil).</p> <p>Several noted that they felt there were contradictory statements between the assessment summary and the main body of the text.</p> <p>Some respondents noted that updated figures were available relating to baseline information presented in the SEA Environmental Report (e.g. numbers of environmental designations, etc.).</p>	<p>These comments were noted for consideration in the finalisation of the ZWP and in future SEA work.</p>
<p>The potential for additional adverse effects were raised by some respondents. It was suggested that there was the potential for additional Sulphur dioxide and Nitrogen dioxide emissions from further EfW plants, and it was felt that this could lead to local effects such</p>	<p>The SEA identified the potential for an increase in the number of EfW sites operating in Scotland. Whilst it was also noted that this type of facility can produce a range of air emissions which have the potential to have adverse environmental impacts, it was also</p>

Summary of opinions expressed during the consultation	Response
<p>as acidification.</p> <p>Others felt that there may also be the potential for activities such as fly-tipping to have adverse effects on amenity, and associated concerns over the likelihood of adverse cumulative effects.</p>	<p>considered that these emissions are strictly regulated under the current PPC licensing system. As such, it was not considered likely that nationally significant effects would occur associated with the expected increase in scale of EfW.</p> <p>The SEA identified the potential for an increase in fly-tipping associated with an increase in restrictions for disposal to landfill. The potential for amenity impacts was noted and considered in the finalisation of Scotland's ZWP.</p>
<p>It was suggested that greater clarity on how the options and alternatives were generated would be useful, particularly the development of the aspirational option (Option 2) and how it relates to the Plan.</p> <p>They also felt that the SEA could have explored a range of ways of meeting the plan objectives, either through their inclusion in the Plan itself or in lower tier plan assessments, as appropriate.</p>	<p>These comments were noted for consideration in the finalisation of the ZWP and in future SEA work.</p> <p>Section 5.3 of the Environmental Report set out the alternative scenarios considered in the development of the Plan. However, as noted in the Report, the range of genuinely practical options considered in the development of the Plan was limited by a number of factors; in particular, the introduction of the revised EU Waste Framework Directive which set out key targets and objectives for member states to achieve. These limitations set the parameters of the Plan.</p> <p>The alternatives are discussed further in Section 3.5.</p>
<p>There was concern expressed by one respondent that the Plan seemed to focus on targets related to municipal waste, and that the findings of the SEA were not fully representative of the impacts of non-municipal waste on the environment.</p>	<p>This comment was noted for consideration in the finalisation of the ZWP and future SEA work.</p> <p>The Plan considered both municipal and commercial and industrial waste, including construction and demolition waste which was identified as contributing to the largest proportion of the total waste generated in Scotland.</p> <p>The EU has set targets of 70% recycling and reuse of construction and demolition wastes. As a consequence, subsequent</p>

Summary of opinions expressed during the consultation	Response
	policy development in this sector expanded the focus set by the ZWP and SSR programme, and introduced a series of actions specifically targeted at helping business to use resources more efficiently. This included actions for preventing construction wastes and tracking key indicators within this sector.
They also felt that greater focus should be given to the potential introduction of limits on waste recycling on land due to limits in the available land bank, and the consideration on cumulative effects on water and soil, amongst others.	These comments noted for consideration in the finalisation of the ZWP and in future SEA work.  The potential for cumulative and synergistic environmental effects was discussed in Table 1.3 of the Environmental Report.
It was also suggested that the SEA may benefit from the identification of generic effects linked to waste management facilities in different locations (i.e. rural and urban); consequently water, soil, air and climatic effects.	These comments noted for consideration in the finalisation of the ZWP and in future SEA work.
It was suggested that the SEA would benefit from further reference to the impacts that the transport of waste may have on air.	This comment was noted for consideration in the finalisation of the ZWP and in future SEA work.
The role of Area Waste Plans (AWPs) was discussed. Some expressed concern that development plans play a different role and that they may not be best placed to cover these issues should the AWPs be removed.	The ZWP outlined that along with wider policy (i.e. NPF, SPP), it was developed to replace the National Waste Plan, the 11 Area Waste Plans (2003), the Household Waste Prevention Action Plan (Scotland) 2007 and the Business Waste Framework for Scotland (2007).  Furthermore, a suite of SEPA waste sources, including the Waste Data Digests, Local Waste Management Reports, Site Capacity and Infrastructure Reports and Maps would also be produced to cover issues addressed by the AWPs. It was considered that the use of SEPA waste management data, the proposed production of Area Waste Management Reports in particular, and

Summary of opinions expressed during the consultation	Response
	<p>the continued provision of assistance from SEPA in integrating waste management in the preparation of Development Plans, would be likely to provide benefits in managing waste at the regional and local levels. Scottish Planning Policy has subsequently been developed further to support this approach.</p>
<p>There was concern that Environmental Impact Assessment (EIA) may be set aside in order to process delivery of projects associated with the actions and ambitions set out in the Plan at a greater speed, and that there may be the potential for environmental damage as a result of this.</p>	<p>The requirement for EIA is set out in the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 and its amendments in 2015, both of which have been derived from European Directives.</p> <p>Any actions taken in implementing the ambitions of the ZWP, and those set out in subsequent policy, are required to be undertaken in accordance with these regulations.</p>
<p>One respondent stated that it was important that local level monitoring of the impacts and progress of the ZWP takes place, and that this is conducted in a consistent manner across Scotland.</p>	<p>This comment was noted in finalisation of the ZWP.</p> <p>Proposals for monitoring are discussed further in Section 6 of this SEA Statement.</p>
<p>The potential need for the consideration of Habitats Regulations Appraisal (HRA) was raised by one respondent in the consultation. It was recommended that an Appropriate Assessment (AA) be carried out for the Plan, and that there was likely a need for the consideration of 'downstream' assessment as well.</p>	<p>The development of the ZWP was undertaken in accordance with obligations under the European Commission (EC) Habitats Regulations (i.e. a HRA).</p> <p>While the SEA identified the potential for environmental effects in the implementation of the ZWP, no likely significant effect (LSE) on any particular European site could be predicted. This was due largely to the strategic and national focus of the Plan and the lack of specific locational information of its actions and proposals.</p> <p>As such, it was considered that AA was not required in the development of the ZWP.</p>

## 2.6 Consideration of Alternatives

- 2.6.1 It is a requirement of the 2005 Act that reasonable alternatives to the development of a PPS be considered during the SEA process. Two broad options were identified and considered in the development of Scotland's ZWP and its SEA:
- Option 1 – involving the implementation of a suite of key targets and actions set out in the Consultation Document.
  - Option 2 – involving a more aspirational extension to the key targets and actions set out in the Consultation Document.
- 2.6.2 The development of a NWMP for Scotland was a key element of Scotland's compliance with the requirements of the revised EU Waste Framework Directive and Scottish policy was set out in a statement from the Cabinet Secretary in January 2008. As a consequence, it was considered that adopting a 'business as usual' (BAU) or 'do nothing' option of continuing to implement the current National Waste Plan and its targets was not a reasonable alternative.
- 2.6.3 The SEA considered that the primary difference between the two options was in the targets they set. The aspirational option (Option 2) largely consisted of an extension of the actions and targets included in the Consultation Document, and included a proposal to introduce of a specific reduction target for commercial and industrial waste, amongst others. Both were considered to share the same broad scope and the same strategic aims for waste management. As such, the consideration of these alternatives in the SEA was largely focused on the key targets.
- 2.6.4 It was considered that while the second option was more aspirational and set more challenging ambitions, the preferred approach set out in Scotland's ZWP was likely to be the most effective and reasonable at that time. However, the aspirational approach set out in Option 2 set the foundation for expanding the Plan, and its ambition formed the basis for the development of the SSR programme and the actions it set out (i.e. the expansion of data collection actions, increased focus on commercial and industrial, and construction and demolition wastes).

## 3 Safeguarding Scotland's Resources (SSR)

### 3.1 What is SSR?

- 3.1.1 Safeguarding Scotland's Resources – A Programme for the Efficient Use of Our Materials (the SSR Consultation Document)<sup>12</sup> was developed in 2013 to build upon the progress of the Scotland's ZWP and deliver on the ZWP commitment to bring forward a waste prevention programme. Following the consultation, this programme was finalised and published as Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient and Circular Economy (SSR)<sup>13</sup>.
- 3.1.2 The SSR programme was developed to build upon and complement the earlier development of Scotland's ZWP, and formed a key component of both the Scottish Government's zero waste agenda and its low carbon economic strategy. The development of the programme was a natural progression of many of the ambitions and actions set out in the ZWP, including the options considered in its development. In some instances, ambitions and actions set out in the programme were derived from suggestions or recommendations made in responses received in the ZWP consultation.
- 3.1.3 The overall aim of the SSR programme was to prevent waste, increase resource efficiency and further help in enabling a shift towards making Scotland a more circular economy. Amongst other things, it set targets to reduce Scotland's waste by 7% by 2017 from 2011 levels and ambitions to achieve a 15% reduction by 2025 through adopting an economy-wide approach. The SSR also laid out a programme of actions aimed at helping businesses to use resources more efficiently; to help to stimulate innovation and business opportunities in reuse, refurbishment and remanufacturing; to promote sustainable product design; improve producer responsibility and reduce the impacts of packaging; improve information on materials used; and stimulate a culture of resource efficiency amongst consumers and industry by influencing behaviour.
- 3.1.4 The SSR also included a requirement for retailers to charge customers for the provision of carrier bags from October 2014. This specific provision was aimed at cutting litter by reducing the number of carrier bags used in Scotland whilst also promoting their reuse by consumers.

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<sup>12</sup> The Scottish Government (2012) Scotland's Resources – A Programme For The Efficient Use of Our Materials [online] Available at: <http://www.gov.scot/Publications/2012/06/4215> (accessed 22/02/2016)

<sup>13</sup> The Scottish Government (2013) Safeguarding Scotland's Resources – Blueprint for a More Resource Efficient and Circular Economy [online] Available at: <http://www.gov.scot/Resource/0043/00435308.pdf> (accessed 22/02/2016)

- 3.1.5 An SEA Environmental Report<sup>14</sup> for the SSR was prepared by SEPA in collaboration with the Scottish Government, and this report documented the findings of the SEA undertaken on the programme.

## 3.2 Overview of Consultation Responses

- 3.2.1 The Scottish Government carried out two public consultations on the SSR Consultation Document. The first consultation ran from June 2012 to September 2012, and sought views on the SSR Consultation Document. This consultation was accompanied by a series of stakeholder events held during this period. Upon publication of the Environmental Report, a second consultation was held between January 2013 and February 2013 seeking views on both the Consultation Document and the Environmental Report.
- 3.2.2 Together, the two consultations received some 693 responses. Of these, some 99 responses were classed as standard responses consisting of detailed and unique comments from respondents. A further 594 responses were received from internet campaigns organised by the World Wide Fund for Nature (WWF) (490 responses) and Marine Conservation Society (104 responses) responses. The Marine Conservation Society campaign was solely focused on the proposal to introduce a charge for carrier bags, whilst the WWF campaign addressed the carrier bag and return deposit scheme proposals, and the proposed headline targets.
- 3.2.3 The breakdown of the standard responses received in the consultations was widely varied. However, the respondents consisting primarily of organisations (76%) including local authorities and those in the retail, manufacturing, packaging and waste management sectors, amongst many others. The remaining responses were received from individuals (24%).
- 3.2.4 Further detail on the breakdown of respondents to the consultation is contained in the SSR Analysis of Consultation Responses report prepared by the Research Shop on behalf of the Scottish Government<sup>15</sup>.

## 3.3 Summary of Views Expressed on the Consultation Document and its Proposals

- 3.3.1 As set out in the Analysis of Consultation Responses, the responses indicated that there was overall support for many of the ambitions and the proposals set out in the SSR Consultation Document. The analysis identified strong support for undertaking public awareness and education

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<sup>14</sup> SEPA (2012) Safeguarding Scotland's Resources – A Programme for the Efficient Use of Our Materials, Environmental Report [online] Available at: <http://www.gov.scot/Resource/0041/00413697.pdf> (accessed 22/02/2016)

<sup>15</sup> Nicholson L. (2013) Safeguarding Scotland's Resources – A Programme For The Efficient Use Of Our Materials: Analysis Of Consultation Responses [online] Available at: <http://www.gov.scot/Resource/0042/00424030.pdf> (accessed 22/02/2016)

campaigns aimed at influencing the behaviour of individuals and organisations to use material resources more efficiently. Actions aimed at promoting community action and public bodies leading the way in this received particular support amongst respondents.

- 3.3.2 The consultation responses also demonstrated general support for the inclusion of proposals aimed at promoting the Scottish Government's ambitions amongst business and industry stakeholders. For example, there was support for the introduction of an integrated Business Resource Efficiency service, voluntary agreements and pledges for businesses relating to reducing waste, and ambitions relating to the sustainable design of products, amongst others. However, many respondents also felt that the scope of these proposals should be widened to 'resource efficiency' rather than focus solely on waste; particularly the scope of the pledges set out in the Consultation Document.
- 3.3.3 Many respondents also provided suggestions for improving and/or taking forward many of the proposals. For example, some made suggestions for making it easier for consumers to return Waste Electrical and Electronic Equipment (WEEE). There were mixed views on some proposals, including the use of deposit return and reverse vending machines. One set of campaign responses expressed support for the introduction of a nationwide deposit return scheme. There was also support amongst respondents for the involvement of local authorities in of these collections.
- 3.3.4 There was support amongst many respondents for establishing a new voluntary agreement with the construction sector to address the impact of design on the generation of construction waste and materials. However, it was also noted by an attendee of a workshop that this was already being done within the architecture sector.
- 3.3.5 Whilst there was general support expressed for having overarching targets, some held reservations over how these should be set. The balance of view was in favour of linking these targets to Scotland's Gross Domestic Product (GDP), and there was broad opinion that the carbon indicator would also be a useful and important tool in measuring advances in both waste prevention and recycling. Some campaign responses also felt that the 2025 waste reduction target should be increased from 15% to 50%.
- 3.3.6 The primary topic of responses related to the proposed introduction of the carrier bag charge, particularly amongst the campaign responses. Overall, respondents expressed support or partial support for the proposals. It was noted that similar proposals have had success when implemented elsewhere, and that the proposals could become a powerful behaviour change message whilst also likely leading to a reduction in pollution and litter. However, there were also concerns that introducing such as charge could also have adverse effects (e.g. consumers may buy other bags such as bin liners to compensate, resulting in more waste). Some also felt that

the proposal could have little impact on resource efficiency, and concerns were expressed that introducing such a charge may have been based on a 'false premise' that carrier bags were 'single use'.

- 3.3.7 There were also mixed views expressed by respondents on the minimum charge applied for each bag. However, it was widely considered amongst respondents that if the charge for carrier bags was introduced, all retailers should be included in the scheme, and that all single use/disposable carrier bags should be included regardless of their material (i.e. plastic or paper).
- 3.3.8 The Scottish Government's response to the broad set of views expressed on the Consultation Document and its Proposals is summarised in Box 2.

## **Box 2 Response to Views Expressed on the SSR Consultation Document**

### **Response:**

All comments were noted and considered in the finalisation of the SSR programme. The suggestions made in relation to WEEE were considerations in the finalisation of Section 6.4 (Producer Responsibility and Packaging) of the SSR. This included a commitment to evaluate the 'Recycle and Reward' pilots of deposit return and reverse vending systems, and building on the results, a proposal for the Scottish Government to work with local government, businesses and industry to examine the feasibility of a national deposit-return scheme.

The final SSR programme also included commitments for seeking collective action within the construction industry to improve resource efficiency and promote good practice across the sector. The development of Making Things Last built upon this, seeking further opportunities to work with the sector, particularly in relation to improving the recycling of construction materials.

The SSR programme set out the requirement for Scottish retailers to charge for carrier bags from October 2014. SSR made a further commitment to negotiate a voluntary agreement that net proceeds be donated to good causes; a proportion of which would be used for waste and litter prevention.

## **3.4 Overview of Findings of the Environmental Report**

- 3.4.1 While the SEA identified that the actions currently being undertaken were likely to have overall positive effects, even without additional commitments, there was the potential to deliver further benefits through the implementation of the proposals set out in the SSR Consultation Document. In general terms, the assessment found that the environmental effects from the three alternatives set out in the SSR Consultation Document were likely to be broadly positive in likely reducing quantities of waste, including the introduction of a carrier bag charge. In all, this approach was seen to be a holistic approach that attempted to reach across the lifecycle of material use

by introducing changes in the design of products, buildings and sustainable sourcing.

- 3.4.2 The SEA identified the potential for positive effects for soil, water, air climatic factors and material assets, in particular. However, it also identified the potential for wider benefits for other environmental topic areas over the medium and/or long term. Similarly, positive effects were considered likely with the introduction of a carrier bag proposal, particularly over the medium and longer term.
- 3.4.3 The assessment made a number of additional suggestions to enhance any positive effects. These broadly included focusing activities earlier in the product lifecycle, procuring materials from sustainable managed sources, using recycled materials rather than virgin materials, focusing on those materials that have greatest environmental impact, and maximising environmental benefits through measures to increase reuse rates of 'bags for life'.
- 3.4.4 The SEA also identified that the programme of proposed actions is likely to have strong cumulative and synergistic benefits in reducing impacts on material assets in particular. It also noted an opportunity for significant cumulative benefits for climate, soil, air and water as well. However, it was considered that while the programme set out an enabling framework for the prevention of waste, the delivery of any benefits was likely to be dependent on changing the behaviours of stakeholders (i.e. businesses, designers, retailers, consumers, waste industry, community groups, and public sector employees).

## 3.5 Summary of Views Received on the Environmental Report

- 3.5.1 A total of nine responses were received in the consultation on the SSR programme relating to the Environmental Report. These included three responses three from the Consultation Authorities, three from other organisations, and three from individual respondents. Of these, over half of the respondents also submitted their views on the SSR Consultation Document.
- 3.5.2 A summary of the views expressed by the respondents in the consultation is set out in Table 3.1. This table also broadly details how these views were taken into account in the development of the final SSR programme, and how in some instances, these views influenced the development of Making Things Last.

**Table 3.1 Summary of views expressed on the Environmental Report prepared for the SSR Consultation Document**

Summary of opinions expressed during the consultation	Response
<p>One respondent felt that no data sources had been listed for the identified biodiversity, flora and fauna SEA issues. They suggested that Scottish Natural Heritage Interactive (SNHi) Natural Spaces could provide a wide range of datasets, including protected areas, habitats and species that may be useful.</p>	<p>This comment was noted for consideration in informing future SEA work.</p>
<p>Some respondents commented on the content and style of the report. For example, one respondent felt that the report lacked a clear strategy and was complicated. They felt it was overly focused on the proposal to introduce a plastic carrier bag levy and on waste recycling rather than waste minimisation, which in their view could lead to greater sustainability.</p>	<p>This comment was noted for consideration in informing future SEA work.</p> <p>Whilst the Environmental Report provided an assessment of the proposed carrier bag charges and recycling, both it and the final SSR programme set out and assessed a range of ambitions and actions for minimising waste through actions aimed at promoting sustainable product design, improving producer responsibility and reducing the impacts of packaging. The inclusion of these in the final SSR reflected the Scottish Government's long-term goal of enabling a shift toward 'designing out' wasted materials, energy and pollution, and 'designing in' reassembly/ remanufacturing and useable by-products.</p> <p>This is further reflected in the focus on the business and manufacturing sectors in facilitating this shift in the proposals set out in Making Things Last.</p>
<p>It was also suggested that more focus be placed on lifestyle-based changes, such as providing greater incentives for householders to be more responsible for their waste, rather than simply targeting recycling would be beneficial.</p>	<p>The SSR set out a range of proposals aimed at improved management of household waste and making it easier for householders to choose options other than disposal of their waste materials. For example, Action 11 set out ambitions to work with local authorities and stakeholders to support pilots of collection systems for reusable items; to</p>

Summary of opinions expressed during the consultation	Response
	<p>stimulate development in refurbishment and repair infrastructure in Scotland; to further develop the Revolve network and reuse shops; continuing to support the Reuse Hotline helping people donate items for reuse; and raising awareness of both households and businesses of how they can source reused items.</p> <p>These actions were developed to complement and build upon a range of actions already being undertaken by local authorities (e.g. providing kerbside recycling, operating recycling centres and undertaking education programmes, amongst others).</p>
<p>Some highlighted what they perceived to be gaps in the SSR Consultation Document and Environmental Report. For example, one noted that there was no mention of the 'circular economy' or addressing the instructions on packaging materials which state 'not presently recyclable'.</p>	<p>Action 7 set out that the programme will support the transition to a more circular economy, and ambitions for this to inform development of future policy and business support.</p> <p>Action 13 was focused on sustainable design, seeking to ultimately promote the sustainable design of products and packaging to engender a shift towards design for longevity, reassembly or remanufacturing and useable by-products.</p> <p>The development of Making Things Last took the Scottish Government's circular economy ambitions further forward. This included the development of additional actions to promote and enable businesses and industry to contribute to helping Scotland to shift towards a circular economy.</p>
<p>One respondent felt that there should be further initiative in dealing with resistance from stakeholders to the proposals (i.e. manufacturers and retailers), who they felt would be resistant to working towards minimising packaging.</p> <p>They also felt that the role of supermarkets role in encouraging food</p>	<p>Both the SSR Programme and Making Things Last seek to engage with stakeholders throughout the supply chain in adopting circular economy ambitions. The development of Making Things Last in particular, set out ambitions for more products to be designed for longer lifetimes, and be ready to be disassembled, repaired and eventually</p>

Summary of opinions expressed during the consultation	Response
waste should also be addressed.	<p>recycled. It also advocated for more companies to keep hold of valuable products and components through leasing, servicing, repair and re-sale. It also outlined a range of actions targeting awareness and education of benefits in adopting circular economy practices, changing packaging design and the establishment of support service to help businesses adopt circular economy approaches.</p> <p>The SEA undertaken for Making Things Last stated that “should the integration of these principles by business and industry continue to be hampered by barriers, further exploration of additional, stronger and more direct measures may be required to deliver the long-term ambitions”.</p>
One respondent considered that whilst coverage was given to producer responsibility for packaging in the main report, the Environmental Report did not give comparable coverage to this issue.	The Environmental Report set out the findings of the assessment undertaken on the proposed programme and all potential actions in detail in Section 3.4 and Appendix C. This included consideration of Action 8: Producer Responsibility for Packaging Waste.
<p>One respondent considered that the Environmental Report did not provide an accurate picture of the many issues or consequences surrounding the proposed imposition of a charge for carrier bags.</p> <p>It was felt that potential effects such as an increase in energy requirements, fuel usage, transport requirements, harmful emissions and increase in landfill requirements following its proposed introduction.</p>	<p>The SEA identified the potential for largely positive environmental effects associated with the implementation of the carrier bag proposals and the likelihood of increased reuse and a reduction in volumes of carrier bags being disposed of as waste.</p> <p>While this comment was noted, it was considered that the likelihood of the effects outlined by the respondent was low.</p>
It was recommended that all funds from charging for carrier bags should be used in good causes that deliver environmental benefits. They suggested that this could also address behaviour change in relation to waste and	Action 20 of the finalised programme stated that the Scottish Government would negotiate a voluntary agreement that net proceeds will be donated to good causes. A proportion of this was to be allocated for waste and litter prevention.

Summary of opinions expressed during the consultation	Response
<p>consumption.</p> <p>It was also felt by one respondent that it would be more beneficial if the financial penalty on carrier bags under the Producer Responsibility (Packaging Waste) Regulations is spent on recycling the carrier bags.</p>	
<p>A respondent felt that the Environmental Report should include information on impacts of plastic waste on wildlife (i.e. carrier bags).</p>	<p>These comments were noted for consideration in finalisation of the SSR programme.</p>
<p>It was felt by one respondent that the SSR programme should advocate plain/unprinted and unpigmented carrier bags and that this would make the bags easier to recycle.</p>	<p>These comments were noted for consideration in finalisation of the SSR programme.</p>
<p>One respondent questioned why carrier bags had been singled out over general street litter.</p>	<p>The Scottish Government's National Litter Strategy was developed alongside the SSR Programme, with both forming key components in wider ambitions to reduce waste and litter in Scotland. The Strategy was aimed at reducing litter, fly-tipping and increasing recycling by encouraging personal responsibility.</p> <p>Action 20 of the final SSR programme stated that the Scottish Government would negotiate a voluntary agreement that net proceeds will be donated to good causes. A proportion of this was to be allocated for waste and litter prevention.</p>
<p>It was noted that pilot deposit return schemes were listed in Appendix B of the Environmental Report as a potential action. While this was welcomed by one respondent, they queried why these schemes were not included within the suite of proposed actions in Section 2 of the Programme.</p>	<p>Action 16 of the Programme set out that Zero Waste Scotland would evaluate its 'Recycle and Reward' pilots of deposit return and reverse vending systems.</p> <p>Since this time, the Scottish Government has commissioned further work to examine the feasibility of a national deposit-return scheme for Scotland.</p> <p>In May 2015, a report investigating the options for a refundable cash deposit for recycling drinks bottles, cartons and cans</p>

Summary of opinions expressed during the consultation	Response
	in Scotland was released, and a call for evidence to industry and other stakeholders made on the role of a deposit return system. Issues raised in that call for evidence are currently being investigated by Zero Waste Scotland.
Several respondents suggested alternative wording in the Environmental Report, particularly around the terminology relating to the Revolve Standard, the promotion of re-use via the Re-use Hotline and clarity on definitions used in the report.	These comments have been noted for consideration in future SEA work.

## 3.6 Consideration of Alternatives

3.6.1 It is a requirement of the 2005 Act that reasonable alternatives to the development of a PPS be considered during the SEA process. As detailed in the Environmental Report, the SEA for the SSR programme considered and compared the potential for environmental effects associated with three broad alternatives:

- No new commitments – This alternative involved the continuation of all actions that were already underway, and that no existing or new actions were to be developed further.
- Full implementation of the proposals set out in the SSR Consultation Document – these proposals formed the basis for an alternative approach to ‘no new commitments’, and built on the work already underway as a consequence of current policy whilst also driven by further opportunities for market and sectoral development.
- Inclusion of carrier bag proposals – this proposal was identified and considered as an option during the development of the SSR. It sought to reduce carrier bag use and encourage their re-use through a number of different approaches (i.e. charging for carrier bags, introduction of a tax).

3.6.2 The approach advocated by the SSR proposals was considered to be holistic in nature and its scope focused on addressing the lifecycle of material use (e.g. changes in design of products, buildings and sustainable sourcing). In comparing the first two options, the SEA found that the potential environmental benefits of these proposals were likely to be greater than that of current commitments, particularly in the medium and long term. Furthermore, it considered that while progress in managing waste was likely

to be made under existing commitments, waste levels were likely to continue to reduce in line with current trends. As such, the SEA considered that not implementing the proposals set out in the Consultation Document could be a missed opportunity for building upon current actions and shifting towards improving how materials are used across their lifecycle.

- 3.6.3 Similarly, the introduction of carrier bag charges was also considered likely to deliver positive environmental effects, particularly over the continuation of the status quo. In the development of the SSR and its SEA, continuing with voluntary initiatives in reducing carrier bag use was not deemed to be a reasonable alternative as previous reductions in carrier bag usage had levelled off, with further reductions likely to be small. The delivery of a charging mechanism for individual bags was the preferred option over the introduction of a form of tax or agreement with retailers, and also a means of raising awareness of the importance of managing waste amongst consumers themselves.
- 3.6.4 The introduction of measures focused on a particular type of bag was not considered to be reasonable option at the time on the basis that the primary objective was to reduce bag use and encourage re-use rather than having consumers switch from bags made from one material to another. These views were shared by many of the respondents to the public consultation.

## 4 Making Things Last – A Circular Economy Strategy for Scotland

### 4.1 What is Making Things Last?

- 4.1.1 The development of Making Things Last: – A Circular Economy Strategy for Scotland<sup>16</sup> is the latest step in the implementing the Scottish Government's drive to shift Scotland further towards becoming a circular economy. Its development built on the progress made in implementing Scotland's ZWP and SSR programme. Following a SSR commitment, the development process used a programme of evidence gathering undertaken by the Scottish Government, Zero Waste Scotland, Scottish Enterprise, SEPA and Highland and Islands Enterprise, and also incorporated a wide range of issues that emerged through on-going engagement with stakeholders from the early stages of the development of Scotland's ZWP and through numerous consultation processes.
- 4.1.2 In general terms, the development of Making Things Last built upon the foundations laid by both Scotland's ZWP and the SSR programme, which it supersedes. It expanded the scope of the ambitions and actions that they set out; sharpening them into a broader set of opportunities for business and industry. It set out additional ambitions and actions for promoting circular economy approaches amongst business and industry, and demonstrating that they can help deliver Scotland's zero waste ambitions whilst also providing business with opportunities for further growth and innovation. As a consequence, it was more focused on identifying opportunities for economic benefits and business growth through the adoption of more circular approaches than its predecessors, and was targeted at specific industry sectors where sizable opportunities were identified.
- 4.1.3 Making Things Last also includes a wide range of measures and actions that cross a number of different themes and sectors. For example, working to facilitate a fundamental change in the way our economy works and ensuring the right skills and expertise are in place to enable and support a shift towards a circular economy. When brought alongside those actions currently being implemented via Scotland's ZWP and SSR programme, Making Things Last and its suite of actions and measures, including on-going targets and actions from the ZWP and SSR which it supersedes, make up Scotland's first circular economy strategy (the Strategy).

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<sup>16</sup> The Scottish Government (2016) Making Things Last – A Circular Economy Strategy for Scotland [online] Available at: [www.gov.scot/makingthingslast](http://www.gov.scot/makingthingslast) (accessed 22/02/2016).

4.1.4 The Environmental Report for Making Things Last<sup>17</sup> was prepared by the Scottish Government's Environmental Assessment Team. It documents the process of undertaking the SEA and presented its findings.

## 4.2 Overview of Consultation Responses

4.2.1 The Scottish Government published the Making Things Last Consultation Document and its SEA Environmental Report on 20 August 2015 and sought the views of stakeholders and the general public on both documents.

4.2.2 The public consultation ran from August to October 2015 and generated a total of 78 responses from a wide range of sectors. The vast majority of responses (86%) were largely from organisations such as local authorities, government and public bodies, those from the private sector, third sector, trade associations, community organisations, waste management organisations, academic and research sectors. Therefore the views of individuals accounting for 14% of responses to the consultation.

4.2.3 Further detail is available on the breakdown of these responses in the Consultation Analysis Report prepared by the Scottish Government<sup>18</sup>.

## 4.3 Summary of Views Expressed on the Consultation Document and its Proposals

4.3.1 As set out in the Response Analysis Report, there was broad support for the wide range of ambitions and proposals set out in the Consultation Document and the 'holistic approach' in working towards a circular economy. There was also positive feedback on the Consultation Document itself with several respondents noting the clarity and coherence of the Scottish Government's propositions; particularly as some noted that terminology often used in relation to the circular economy topic area can be a barrier. However, while the ambition and proposals set out in the Consultation Document were generally welcomed by respondents, technical proposals such as those covering measuring progress, and energy recovery, received comparatively little feedback from respondents.

4.3.2 Some respondents called for more emphasis on the role that waste prevention could play in a circular economy. Some supported the promotion of goods with a longer lifespan and there was general agreement on the inclusion of ambitions for promoting producer responsibility. As such, engagement with both producers and consumers was identified as an

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<sup>17</sup> The Scottish Government (2015) Making Things Last: Consultation On Creating A More Circular Economy In Scotland, Strategic Environmental Assessment Environmental Report [online] Available at: [https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting\\_documents/A11726904%20docx.pdf](https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting_documents/A11726904%20docx.pdf) (accessed 22/02/2016).

<sup>18</sup> The Scottish Government (2016) Making things last: Consultation on creating a more circular economy in Scotland, Response Analysis Report [online] Available at: [www.gov.scot/makingthingslast](http://www.gov.scot/makingthingslast) (accessed 26/02/2016)

important factor in taking forward proposals in the finalised Strategy, and in tackling ‘throw-away’ culture. It was also suggested that an integrated communications strategy involving the use of a variety of communication channels could be developed to support these proposals.

- 4.3.3 The need to improve consumer confidence in the quality of reused and remanufactured goods was widely discussed, and some respondents made suggestions for taking these ambitions forward. For example, some suggested that additional products and sectors could be included in the reuse section of the Strategy. Some also emphasised the importance of standards in improving consumer confidence and suggested options for addressing this, such as a quality accreditation and guarantee system.
- 4.3.4 Some respondents noted the role that alternative business models could play in contributing to the Scottish Government’s circular economy ambitions. For example, product leasing models and services for repairing existing products were identified. Whilst product design was also discussed, some felt that there is a limit to Scotland’s influence on product design and that there is a need to act internationally at an EU level. Further, some respondents expressed concern at the potential for cost implications in taking such an approach, and that the introduction of extra costs for Scottish manufacturers or consumers should be avoided.
- 4.3.5 Many expressed support for the proposals and ambitions relating to skill development and education. For example, there was general support for mainstreaming skills development within wider educational activity. Some felt that third sector organisations, local authorities and education establishments should also be involved. Opportunities for engaging with informal education bodies and those that work with young people to help inform transitional change were also noted in the consultation.
- 4.3.6 Some comments discussed specific proposals in their responses. For example, one respondent felt that more could be done to reduce food waste and to extract the greatest benefit from our biological resources. Other responses felt that there should be additional deterrence for disposal to landfill and some stated their opposition to EfW; these comments largely reiterated views expressed in previous consultations. Improving the collection and quality of data was also a key topic of discussion.
- 4.3.7 The Scottish Government’s response to the broad set of views expressed on the Consultation Document for Making Things Last and its proposals is summarised in Box 3.

### **Box 3 Response to Views Expressed on the Consultation Document for Making Things Last**

#### **Response:**

In view of the general support expressed amongst respondents, the Strategy is mainly a refinement of the ambitions and proposals that were consulted upon. In many instances, the comments and suggestions are aligned with the long-term ambitions of the policy area; notably the commitment to developing skills to support growth in the sector, improving the collection of accurate and useful data, improving public awareness, and engaging business and industry in contributing to the shift towards Scotland becoming a more circular economy. Communication and engagement in particular are recognised as important, and both the Strategy and its SEA acknowledge the importance of having the buy-in of stakeholders to the delivery of any potential benefits.

All comments were noted and considered in the finalisation of the proposals in the Making Things Last consultation and the development of the Circular Economy Strategy. As demonstrated through the evolution of Scottish waste policy and the feedback from the many consultations since the development of the ZWP, it is anticipated that these suggestions and comments will also help to inform future stages of policy-making.

## **4.4 Overview of Findings of the Environmental Report**

- 4.4.1 The SEA found that the proposals set out in the Making Things Last Consultation Document were likely to have positive effects for the environment, particularly working alongside and in-combination with existing measures and actions set out in wider Scottish policy. The Environmental Report stated that the inclusion of proposals aimed at improving how waste materials and products are utilised in Scotland, and at incorporating circular principles into all stages of a product's lifespan in particular, has the potential to deliver positive effects.
- 4.4.2 The SEA found that there is the potential for greater sustainability and efficiency in the management of our natural resources, and improved management of materials already in the system. It found that these actions have the potential to further reduce the volume of waste generated and type of materials 'leaked' from the system through disposal. This shift in focus from not only reducing the 'leakage' of materials, but also promoting their better utilisation and retention, is likely to be significantly beneficial; particularly if targeting those materials that are likely to have a greater detrimental effect on the environment.
- 4.4.3 It also found that the proposals would be likely to build upon and work in conjunction with current and previous policy in reducing the volume of waste disposed of and work to increase resilience and adaptation to the effects of

climate change (e.g. Scotland's ZWP, SSR programme). However, it was also noted that the delivery and maximisation of any such benefits would likely need the 'buy in' of business and industry.

- 4.4.4 The potential for indirect or secondary effects on other aspects of the environment, such as helping to achieve further reductions in GHG emissions, was also identified in the SEA. In particular, the potential for impacts associated with changes in the way that waste is managed in the future and changing infrastructure requirements was identified. However, while the potential for mixed effects at the next stages of the delivery of some proposals was identified, the SEA found that this could not be anticipated with any certainty at this policy level. It was also noted that the potential for adverse environmental effects associated with future waste management developments could be mitigated at the local and project levels through existing mechanisms (e.g. planning, environmental assessment).
- 4.4.5 The Environmental Report also identified the importance of monitoring, particularly how monitoring of the various waste streams across all sectors should provide crucial feedback on the rate of progress in adopting circular economy principles. It was recommended that if the integration of these principles by business and industry in their operations remained slow or continued to be hampered by barriers, further exploration of additional, stronger and more direct measures may be required to deliver the Scottish Government's long-term circular economy ambitions.

## 4.5 General Views Received on the Environmental Report

- 4.5.1 The views expressed by respondents were generally positive, both in relation to the ambitions set out in the Consultation Document and the findings of its SEA. There was general agreement with the current baseline set out in the Report and the description of the BAU option. However, some respondents disagreed with the inclusion of the BAU option, stating that they felt that it was unlikely to be viable heading into the future given the likelihood of further changes to resource supply and use (e.g. fluctuating oil prices, lower supply of resources and higher predicted costs of extraction). Resilience was a key topic of discussion, and it was stated by several respondents that steps need to be taken to ensure energy security and the availability of materials to enable production to continue in the future.
- 4.5.2 There was support expressed by several respondents on the use of examples in the Making Things Last consultation for the successful implementation of circular economy principles and measures by business and industry. However, one respondent felt that there was an overemphasis in language in the Environmental Report on these 'success stories'.
- 4.5.3 A summary of the views expressed by the respondents is set out in Table 4.1. This table also broadly details how the views were taken into account in the development of the Strategy.

**Table 4.1 Summary of views expressed on the Environmental Report prepared for the Making Things Last Consultation**

Summary of opinions expressed during the consultation	Response
<p>Some felt that adopting a BAU approach was not a ‘realistic option’ moving forward. They expressed concerns over issues such as fluctuating oil prices, reductions in supply of resources and higher costs in their extraction, adding that this necessitates a need to take steps to secure energy and material production for future generations.</p>	<p>Resource security and resilience for Scottish businesses and industry was identified as a key driver behind the Scottish Government’s circular economy ambitions and the development of Making Things Last and its proposals, as it was for the development of Scotland’s ZWP and SSR.</p> <p>Opportunities to promote the potential for resource security benefits were also identified in the SEA. In particular, the inclusion of case studies showing how businesses that have successfully adopted circular economy practices in the Environmental Baseline; several of which did so to alleviate resource supply issues and costs.</p>
<p>One respondent felt that there were a number of instances where the language used in the Environmental Report ‘over-emphasised’ circular economy success stories. They felt that these initiatives have been based on incentives to encourage consumer behaviour, and noted that they have had varying degrees of success.</p>	<p>The SEA identified the importance of having the support and buy in of business and industry in the delivery of the ambitions set out in the Making Things Last consultation. Whilst the case studies were included in Making Things Last and Environmental Report to demonstrate that some businesses have successfully adopted circular economy practices, whether to adopt circular economy approaches ultimately remains the decision of those in business and industry themselves.</p> <p>As a consequence, the proposals set out in Making Things Last seek to encourage and work with stakeholders in helping to deliver these benefits, primarily by raising awareness and promoting the various opportunities and benefits that can be achieved by adopting circular economy practices within business models.</p>

Summary of opinions expressed during the consultation	Response
<p>Some expressed concern at the links between circular economy ambitions and the wider economy. It was felt that there has been little consideration of the full lifecycle aspects of the circular initiatives, and that not all will make environmental or economic ‘sense’. Others felt that there some will prove to be more beneficial than others whilst some will have knock-on negative impacts in other areas of the economy. For example, it was felt that there was limited discussion about the wider impacts that relatively undefined terms such as ‘remanufacture’ might have on business, the dynamics of supply and demand.</p> <p>Some felt that this linkage is too ‘narrow’ or ‘overly simplified’, and that an entire life cycle analysis or assessment of the products within the value chains must be fully understood. It was felt that a detailed assessment of the life cycle and value chain is required to enable focused targeting of any incentives.</p>	<p>A Partial Business Regulatory Impact Assessment (BRIA)<sup>19</sup> was completed for the consultation. This identified that accelerating the development of a circular economy in Scotland will assist the achievement of the National Purpose Framework<sup>20</sup>; notably through contributing to increased productivity, competitiveness and resource efficiency, whilst also supporting sustainability, enhancing the environment and reducing emissions.</p> <p>The ambition set out in Making Things Last related to moving towards better managing not just waste, but materials within the Scotland. It is aimed at reducing the extraction of resources, utilising those already in the ‘economy’ and identifying opportunities for businesses and industry to help drive this shift.</p> <p>The delivery of the potential benefits identified in Making Things Last and its preceding Plans is inherently linked to business and industry involvement. Many of the proposals were focused on promoting circular economy ambitions to industry sectors, and raising awareness of opportunities for businesses and the potential for synergistic benefits for the environment.</p> <p>However, ultimately the take up of circular economy ambitions and the delivery of any such opportunities will remain with business and industry itself. Integration of these practices within any business models will likely require a form of life cycle analysis of products and services, and that too will remain within</p>

<sup>19</sup> The Scottish Government (2015) Partial Business and Regulatory Impact Assessment [online] Available at: [https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting\\_documents/Partial%20BRIA%20%20Make%20Things%20Last%20%20Consultation%20Version%20Final.pdf](https://consult.scotland.gov.uk/zero-waste-delivery/making-things-last/supporting_documents/Partial%20BRIA%20%20Make%20Things%20Last%20%20Consultation%20Version%20Final.pdf) (accessed 04/02/2016)

<sup>20</sup> The Scottish Government (2016) Scotland Performs, Our Targets [online] Available at: <http://www.gov.scot/About/Performance/scotPerforms/purpose> (accessed 04/02/2016)

Summary of opinions expressed during the consultation	Response
	<p>the remit of individual businesses and manufacturers to undertake.</p> <p>The development and use of tools such as the carbon metric are expected to aid this shift and enable greater availability of accurate and relevant data. Further, this has the potential to aid decision-making and the analysis of materials and products over their lifecycle in the future.</p>
<p>Another broadly agreed, and suggested that taking a wider systems approach was needed. They felt that the SEA should make recommendations on how systems approaches may be used to develop, apply and promote circular economy initiatives in the future.</p>	<p>Further to the response provided above, the approach taken in developing Making Things Last alongside its SEA involved taking a systems approach in considering how materials and waste resources are utilised both in Scotland and abroad.</p> <p>The recommendations set out in the SEA and the opportunities set out in this Statement (Section 6) were developed to inform the next stage in moving Scotland towards becoming a circular economy.</p>
<p>It was felt that the SEA only considered GHG emissions as an environmental impact, and that while circular economy activities often reduce overall lifecycle GHG emissions, they can also increase other environmental impacts.</p>	<p>While the assessment considered that the primary effects of the proposals and ambitions set out in Making Things Last were likely to be on climatic factors, population and material assets, the potential for indirect or secondary effects on other aspects of the environment, such as helping to achieve further reductions in GHG emissions were also noted. This approach, and the scope of the assessment, was agreed at the Scoping stage with the Consultation Authorities.</p> <p>The SEA identified that with the support of business and industry, the Strategy could help in reducing the reliance on raw materials, particularly in the manufacturing sector. This would be expected to reduce requirements for their extraction and disposal as waste, and consequently, has the potential to avoid environmental impacts associated with these activities.</p>

Summary of opinions expressed during the consultation	Response
	<p>However, it was also considered that the potential for effects at the next stages of the delivery could not be anticipated with any certainty at this policy level. Primarily, these possible impacts associated with the likelihood of changes to the way that waste is managed in the future and our infrastructure requirements. It was also noted that the potential for adverse environmental effects associated with any development associated with waste management in the future could be mitigated at the local and project levels through existing mechanisms.</p>
<p>Several respondents commented on the scoping of environmental topics into the assessment. There was concern that the SEA viewed 'environment' primarily as 'climate change', and that this was a 'limited viewpoint' of both impacts and benefits of circular initiatives.</p> <p>It was felt that this could potentially be disadvantageous and could skew economic activities towards reducing carbon footprint with limited consideration of other environmental impacts.</p>	<p>The environmental topic areas scoped into the SEA (Population, Climatic Factors and Material Assets) were discussed and agreed with the consultation authorities prior to the publication of the Scoping Report. Whilst not explicitly scoped into the assessment, the potential for environmental impacts on other environmental topic areas was also discussed.</p> <p>The SEA identified the potential for mixed environmental effects at the local level; associated principally with the potential for future changes to waste management infrastructure (e.g. the development of new waste management facilities, expansion of existing facilities) and the potential for positive effects for other topic areas through the use of circular economy principles in business and industry.</p>
<p>Several respondents noted the potential for additional environmental effects associated with implementation of the Plan. These broadly included comments that the Report would benefit from further analysis of local air quality, particularly urban air quality impacts; that people, communities and their health and well-</p>	<p>While the assessment considered that the primary effects of the proposals and ambitions set out in Making Things Last were likely to be on climatic factors, population and material assets, the potential for indirect or secondary effects on other aspects of the environment, such as helping to achieve further</p>

Summary of opinions expressed during the consultation	Response
<p>being should be considered as an integral part of the environment; benefits for biodiversity through a shift to a circular economy (e.g. reduced pollutant loads and deceleration of the conversion of natural habitats); and that the consideration of environmental effects should be expanded to include other forms of pollution and waste.</p>	<p>reductions in GHG emissions were also noted. This approach, and the scope of the assessment, was agreed at the Scoping stage with the Consultation Authorities.</p> <p>Whilst not explicitly scoped into the assessment, the potential for environmental impacts on other environmental topic areas were considered in the SEA and discussed in the Environmental Report. The SEA identified the potential for mixed environmental effects at the local level, associated principally with the potential for future changes to waste management infrastructure (e.g. the development of new waste management facilities, expansion of existing facilities) and the potential for positive effects for other topic areas through the use of circular economy principles in business and industry.</p> <p>The Environmental Report also noted that there are currently existing mechanisms in place to identify and mitigate potential environmental impacts associated with waste management activities and further development in this sector (e.g. Town and Country Planning system, Controlled Activity Regulations (CAR), further environmental assessment (e.g. SEA, EIA and HRA) are required to be considered at the subsequent tiers of plan making and project implementation).</p>
<p>It was suggested that the use of Denmark as an example of public procurement might be misleading given the high taxation rates in Denmark, and It that it may be more prudent to select a model for public procurement based on countries with similar fiscal policies to Scotland.</p>	<p>This comment was noted.</p>

Summary of opinions expressed during the consultation	Response
<p>Potential gaps in specific baseline information were noted. For example, one respondent felt that specific demographic data was missing from the Environmental Report, adding that working with local authorities to obtain their area-specific data may be effective in informing the population section.</p>	<p>This comment was noted for consideration in future Policy and SEA work.</p>
<p>It was considered imperative that any products and materials produced from recycled biomaterial meet the standards and expectation of newly made products. This was identified as being vital in allowing the circular economy ambitions to succeed.</p>	<p>Both Making Things Last and its SEA identified the importance of reused goods or remanufactured products not being perceived as 'inferior' to new products, and overcoming existing consumer perceptions was identified as a challenge. The SEA also identified the important role that producers and remanufacturers would need to play in the promotion of used or remanufactured goods to consumers.</p> <p>As a consequence, the Plan included actions to recognise and promote the quality of these products, and the benefits behind practices such as remanufacturing of used products over that of the manufacture of new products. Both were identified in the development of the SEA as being important in maximising the potential benefits of the Strategy.</p>
<p>One respondent disagreed with the circular economy proposals, adding that they felt that the government should not be micro-managing this.</p>	<p>This comment was noted.</p>
<p>It was considered important by some that proposals for mitigation recognise regional differences and diversity. They also felt that mitigation of impacts of national developments be highlighted.</p>	<p>This comment was noted.</p>
<p>A respondent felt that there was no explicit mention of the mitigation measures identified as part of the SEA process being integrated within the</p>	<p>This SEA Statement sets out how the findings of the SEA and the public consultation processes helped to inform and shape the development of Making</p>

Summary of opinions expressed during the consultation	Response
<p>Circular Economy document itself. They suggested that this would have been an effective way of ensuring that mitigation is carried out to both reduce the negative effects and improve the positive effects.</p> <p>One respondent recommended that the Post Adoption SEA Statement should set out more specific information regarding these measures and their effective implementation. They felt that it was important that they have the scope to address the indirect and/or secondary effects identified in the SEA.</p>	<p>Things Last.</p> <p>Opportunities for mitigation and enhancement are discussed in further detail in Section 6 of this SEA Statement.</p>
<p>It was suggested that further and sector-specific consultation be sought to refine the outputs of the consultation process.</p>	<p>As with the development of Scotland's ZWP and SSR, sectoral engagement was undertaken during the preparation of the Making Things Last Consultation Document, preceding a period of public consultation.</p> <p>This SEA Statement sets out how the findings of the SEA and the public consultation processes helped to inform and shape the development of Making Things Last.</p>
<p>Environmental and economic monitoring was identified as being a key factor in the successful delivery of a circular economy. However, one respondent also noted that any monitoring scheme should take a 'systems' perspective rather than be based entirely on carbon accounting.</p>	<p>This comment has been noted in the preparation of this SEA Statement.</p> <p>The Environmental Report recommended that monitoring of the various waste streams and of the waste sector in particular should be undertaken to provide crucial feedback on the rate of progress in adopting circular economy principles. It found that the use of tools such as the carbon metric and working with business, industry and other stakeholders should help to inform future iterations of Scotland's waste, energy, environment, climate change and economic policies.</p> <p>Proposals for monitoring are discussed in further detail in Section 6 of this SEA Statement.</p>

Summary of opinions expressed during the consultation	Response
<p>One respondent felt that would be helpful if the Post Adoption Statement explained how the proposed monitoring would help to ‘flag up’ any secondary effects which may be of a strategic nature, and how this would trigger the implementation of proposed mitigation mechanisms (e.g. future changes in policy direction).</p>	<p>This comment has been noted in the preparation of this SEA Statement.</p> <p>While the SEA identified the potential for indirect or secondary environmental effects, particularly at the local level, it considered that these were largely expected to be associated with the potential for future changes to waste management infrastructure. The Environmental Report also noted that there are currently existing mechanisms in place to identify and mitigate these potential environmental impacts (e.g. Town and Country Planning, PPC and CAR licensing).</p> <p>The proposals for monitoring are discussed in further detail in Section 6 of this SEA Statement. It is anticipated that together with improved availability and the better use of relevant and accurate data, these proposals will help to inform future decision-making and the development of subsequent policies.</p>
<p>A respondent discussed the take-up of waste monitoring systems; specifically those involving the placement of chips in bins and weighing its contents. They suggested that the success of these measures be investigated for wider adoption.</p>	<p>This comment has been noted for consideration in the finalisation of the Plan.</p>
<p>One respondent noted that other countries have conducted similar assessments, and they felt that these may be of relevance to the development of this Plan. They also asked if a literature study had been undertaken, particularly in light of the wealth of experience in Japan, Singapore, Denmark and Norway.</p> <p>Several respondents also discussed this topic, and suggested that other studies and programmes undertaken could also help to inform the development of the</p>	<p>The policy development and SEA processes involved the collation of evidence from a wide range of data sources. This data gathering exercise directly informed the development of the Policy and its SEA.</p> <p>These comments have been noted and considered in the finalisation of Making Things Last – A Circular Economy Strategy for Scotland.</p>

Summary of opinions expressed during the consultation	Response
<p>Scottish Government’s circular economy ambitions. For example, the work of the Rural and Environment Science and Analytical Services (RESAS) funded Strategic Research Programme and other research examples could inform this assessment.</p> <p>Another respondent noted that programmes such as the Home Energy Efficiency Programme for Scotland, standards and market transformation can also have positive effects in delivering environmental benefits.</p>	

## 4.6 Consideration of Alternatives

4.6.1 Two broad options were identified from the outset in the development of the Making Things Last Consultation Document, and these were also considered in the SEA process as required under the 2005 Act. The two options were:

- The BAU option – this option involved continuing the current approach to waste management and continuing to promote the Scottish Government’s ambition for shifting from a ‘linear economy’ to a ‘circular economy’. This option centred upon concentrating efforts towards continuing to progress the actions and ambitions already proposed or underway, including those set out in Scotland’s ZWP, the SSR programme and in wider policy.
- The proposals set out in the Consultation Document – this involved the development of further actions to build upon and enhance those set out in previously in Scotland’s ZWP, the SSR programme and wider policy.

4.6.2 The SEA found that while progress in Scotland for moving towards becoming a circular economy was likely under current policies, any progress achieved may not be in line with current consumption rates and future population increases. As such, it was considered that without further intervention, this progress was unlikely to match that of current consumption and production; particularly in helping to eradicate existing barriers, providing further support for business and industry take-up of new circular economy business models, and increase in established practices (i.e. recycling, behaviour change). As a consequence, if a BAU approach were taken, the SEA considered that an opportunity may be missed to complement and build upon the work already being done with further action.

- 4.6.3 In its initial stages, the development of the approach set out in the second option encapsulated a broad spectrum of opportunities and ambitions centred on achieving the long-term ambition of Scotland becoming a circular economy. Through a process of evidence gathering focused on identifying and promoting opportunities for key Scottish business sectors, and a six month period of debate involving engagement with key stakeholders, these opportunities and ambitions were shaped and prioritised into a package of measures and actions that together, aim to accelerate the transition to a circular economy.
- 4.6.4 In the context of the current economic climate and increasing pressures on natural resources, it was considered that additional action was needed. Given the importance that businesses, manufacturers and consumers 'buy in' to these ambitions, it was considered that further action was required to facilitate business and industry involvement in particular. As a consequence, this approach became the preferred alternative and formed the basis for the development of the proposals set out in the Consultation Document and the measures in the Strategy.

## 5 Common Policy Threads

- 5.1.1 The SEA processes and the views expressed in the consultations identified a series of common threads running through the development of Scotland's ZWP, the SSR programme and Making Things Last. Of particular note, a shared ambition for shifting Scotland towards becoming a circular economy, and gradually working to improve how waste is viewed and utilised by both consumers and industry were common across the development of the three policy documents. As expected the focus of the three gradually evolved, with the SSR programme and Making Things Last becoming ever more business and industry-focused, whilst retaining the broad approach of the ZWP centred upon following the waste hierarchy and engaging and working with stakeholders. As such, seeking the 'buy-in' of stakeholders in contributing to the Scottish Government's ambitions was also a common theme in the development of the three documents, and a factor in the development of many of the proposals and actions they set out.
- 5.1.2 Whilst promoting education and awareness of circular economy principles and the potential for benefits in adopting circular economy practices were also key threads within the development of each policy, this was given greater focus in the development of Making Things Last than in the ZWP and SSR programme. This culminated in the inclusion of examples in the Environmental Report of businesses and sectors that have successfully adopted circular economy practices into their operations, targeting policy actions on specific industries and sectors where sizable opportunities had been identified, and the development of actions that sought to infuse circular economy thinking into product design and manufacture.
- 5.1.3 The importance of collecting relevant and useful data and the crucial role of monitoring were common findings in the SEA process, particularly in identifying and filling data gaps, and ensuring informed decision-making. The evolution of data collection was also a shared ambition with the need for useful and relevant data a topic of increased discussion. The use of the electronic duty of care system (edoc) in the waste sector and the use of the Carbon Metric demonstrates the progress made in this, and the steps being taken in addressing this issue. The role of relevant and robust data in informing subsequent policies was also identified. The data gathering and evidence review undertaken in the development of each policy and its SEA were used to not just inform current policy, but also directly inform subsequent policy. In many cases, the collection of data laid the foundation for the development of additional proposals and actions with progressively wider scope and/or ambition.
- 5.1.4 Whilst other environmental topic areas were considered in the various SEA processes, there was a clear focus on climate change, population and material assets for the development of each policy. This was due in part to adaptation and resilience to the predicted effects of climate change being

common themes raised in the SEA and consultation process undertaken in the development of Scotland's ZWP. This led to the gradual shift in policy towards reducing waste 'leakage' (e.g. landfilling, EfW) and to reflect a need to reduce natural resource consumption and an increasing need to ensure resource security into the future.

## 6 Opportunities for Mitigation and Enhancement, and Proposals for Monitoring

- 6.1.1 The development of the proposals in the Consultation Document, and the subsequent adoption of Making Things Last – A Circular Economy Strategy for Scotland, represents the latest in a series of steps in the process for implementing the Scottish Government’s ambitions for a more circular economy. These seek to work alongside and build upon on-going actions, and will be likely to form the basis for the development of future iterations of this policy area, whilst also influencing that of Scotland’s wider energy, environment, climate change and economic policies.
- 6.1.2 Like the development of Scotland’s ZWP and the SSR Programme, the implementation of Making Things Last is expected to have overall positive environmental effects, albeit dependent upon the level of buy-in of business and industry. Furthermore, the SEA process and undertaking consultation with stakeholders and the wider public in the development of the three PPS played important roles in identifying ways of enhancing the proposals set out in the Consultation Documents and in their implementation.
- 6.1.3 As noted in Section 5, informed decision-making and monitoring were common themes running through the development of each PPS and views expressed in the consultation process and in the development of recommendations set out in the respective Environmental Reports. The Scottish Government’s circular economy ambitions were likely to be contingent on integrating circular economy principles into business and industry models, and overcoming barriers to implementation. It was therefore noted in the Making Things Last SEA that further exploration of additional, stronger and more direct measures may be required in future to deliver the long-term ambitions set out in Making Things Last and the preceding policies that it supersedes.
- 6.1.4 The SEA undertaken for Making Things Last also identified the potential for positive effects at the national and local levels through reducing reliance on raw materials, particularly in the manufacturing sector. It also identified that this has the potential to reduce environmental impacts associated with both their extraction and their management as waste at the end of their life cycle. However, the potential for localised impacts was also noted in successive Environmental Reports, and that these are likely to be associated with the potential for changes in the way that waste is managed locally. However, it was also noted that existing mechanisms are in place governing the management of potential environmental effects associated with planned development; particularly via Town and Country Planning for development of new waste facilities, and by PPC regulations in relation to undertaking waste management activities.

- 6.1.5 The Making Things Last SEA recommended that any future policy should take into account the success of the implementation of Making Things Last, the actions implemented in previous PPS, and any associated environmental impacts. This too was a common thread of the three SEAs undertaken and their consultation processes. Monitoring was identified as a key tool in identifying 'gaps' and further opportunities that could be pursued in future policy. More widely, it was considered that the collection of more accurate, relevant and useful data should help to provide feedback on the rate of progress in adopting circular economy principles.
- 6.1.6 Many aspects of waste management in Scotland are already being routinely monitored. Progress and performance in waste policy has been historically measured using indicators such as gross value added (GVA) and weight-based indicators such as tonnage-based recycling rates, diversion from landfill and reductions in waste produced. While this data remains useful and readily available, the focus on weight does not provide a full understanding of the environmental impacts of a policy. As a consequence, the SEA identified the need for further actions in ensuring that good quality data is available and reliable. The development and moves towards mandatory implementation of electronic waste transfer documentation such as the edoc system is one example of measures aimed at assisting in providing greater data reliability and quality in Scotland.
- 6.1.7 A wide range of actions included in the three plans are targeted at improving the collection and use of relevant data. In particular, the inclusion of the Monitoring Progress chapter in Making Things Last, seeks to ensure that both relevant and useful data is available, and that any data obtained should build upon the current evidence base, help to identify specific circular economy opportunities and monitor the performance of the Plan. The Making Things Last SEA identified an opportunity for this data to help inform future iterations of the Strategy, in the same way that improving data collection following Scotland's ZWP and the SSR programme helped to inform its development.
- 6.1.8 Specific proposals such as refreshing Scotland's suite of targets and indicators, exploring how to improve the quality of data in some sectors, and working with industry to explore opportunities for the development for data collection systems for specific industry sectors (e.g. the reuse sector) were also identified as likely having positive effects. These actions are also likely to build upon previous work and enable better understanding of material flows and further opportunities than at present (e.g. the identification of a key need to understand critical materials set out in the SSR programme).
- 6.1.9 Further, improving how tools such as the Carbon Metric and edoc are used in Scotland, and the development of a long-term data strategy to support circular economy ambitions, were all also identified as likely to be key actions going forward.