

# **Safeguarding Scotland's Resources**

## **A Programme for the Efficient Use of Our Materials**

**SAFEGUARDING SCOTLAND'S RESOURCES**  
**A PROGRAMME FOR THE EFFICIENT USE OF OUR MATERIALS**  
**CONTENTS**

**MINISTERIAL FOREWORD**

**EXECUTIVE SUMMARY**

**1. INTRODUCTION & CONTEXT**

- 1.1 Zero Waste and Efficient use of Materials
- 1.2 Economic Potential
- 1.3 Overall aim
- 1.4 Priority Areas

**2. AREAS FOR ACTION**

- 2.1 **BUSINESS RESOURCE EFFICIENCY**
  - 2.1.1 Business Resource Efficiency Support
  - 2.1.2 Voluntary Agreements for Business Action
  - 2.1.3 The Value of Data and Tools
  - 2.1.4 Waste Management Industry Role
  - 2.1.5 Questions – Business Resource Efficiency

**2.2 PRODUCTS AND PACKAGING**

- 2.2.1 Design of Products and Services
- 2.2.2 Packaging Waste
- 2.2.3 Critical Materials
- 2.2.4 Questions – Products and packaging

**2.3 REUSE**

- 2.3.1 Reuse Opportunities
- 2.3.2 Supply of Reusable Items
- 2.3.3 Demand for Reused Items
- 2.3.4 Reuse data
- 2.3.5 Questions – Reuse

**2.4 INFLUENCING BEHAVIOURS**

- 2.4.1 Public Engagement
- 2.4.2 Education
- 2.4.3 Carrier Bags
- 2.4.4 Community Action
- 2.4.5 Collection Systems
- 2.4.6 Public Organisations' Role
- 2.4.7 Questions – Influencing behaviours

**3. MEASURING PROGRESS**

- 3.1 Reducing Environmental Impact
- 3.2 Delivering a Zero Waste Economy
- 3.3 Headline 5% Waste Reduction Target and Key Indicators
- 3.4 Future Indicators and Research
- 3.5 Questions – Targets and indicators

**ANNEX 1: PRODUCER RESPONSIBILITY FOR PACKAGING (ACTION 8)**

**ANNEX 2: CARRIER BAGS (ACTION 10)**

**ANNEX 3: SUMMARY OF QUESTIONS**

**ANNEX 4: HOW TO RESPOND TO THIS CONSULTATION**

**ANNEX 5: RESPONDENT INFORMATION FORM**

## **SAFEGUARDING SCOTLAND'S RESOURCES**

### **A PROGRAMME FOR THE EFFICIENT USE OF OUR MATERIALS**

#### **Ministerial Foreword**

When I launched Scotland's Zero Waste Plan in 2010, I was clear that the key challenge was to shift our view and see today's waste as tomorrow's resource. The Waste (Scotland) Regulations 2012 now set a clear path for this to happen and will enable Scotland to become a high performing recycling nation. The logical next step to unlock even greater economic and environmental benefits is through minimising the resources we need to deliver the quality of life we have come to expect, while ensuring Scotland's continued economic growth; realising a resource efficient Scotland.

Scotland is already making the transition to a low carbon economy with the Scottish Government setting ambitious targets for cutting carbon emissions and expanding renewable energy. Both our Low Carbon Economic Strategy and Government Economic Strategy already recognise efficient use of resources as critical to Scotland's economic wellbeing, and achieving a transition to a low carbon economy.

A Scotland which uses materials efficiently will be more resilient to increasing global competition for resources, enabling its businesses to be more competitive. There are huge opportunities:

- Scottish businesses could save up to £1.4bn per year by using raw materials more efficiently, including cutting waste.
- The low carbon goods and services sector can grow to more than 10% of the Scottish economy, helping create 60,000 green jobs.
- Electrical equipment waste in Scotland over the last decade contained around £700m worth of precious metals. Very little of this value is currently recovered here in Scotland.

If all countries in the world consumed as much as Scotland and other developed nations currently do, we would need three planet Earths to meet our needs. This is clearly unsustainable, and requires leadership from the developed world to safeguard our natural resources and the environment on which we depend.

I want to see Scotland well prepared for a future where many materials will become less readily available or more expensive. Many businesses are already responding. Voluntary initiatives like the Courtauld Commitment have helped transform the contents of the average shopping basket, with products and packaging designed to use fewer virgin materials, enable greater reuse, and result in less waste. For example some wine bottles are now 25% lighter than they were five years ago.

Not all the actions we need to take are about efficient use of materials in business, some are about changing behaviours. One of the actions I am consulting on is introducing a charge for single use carrier bags. This is about

encouraging us all to use reusable bags and take a step a small step to change our consumption patterns.

This consultation sets out a range of measures to promote efficient use of material resources, including through cutting waste, and is an opportunity to engage with businesses and the public on this increasingly important issue.

I am proposing additional targets, for an initial 5% reduction in total waste by 2015, with a longer term aim for a 15% reduction by 2025. We will make this happen through a series of actions designed to engage and support both businesses and the public to make it easy to do the right thing.

I believe that the actions proposed in this Programme will enable us in Scotland to move towards a more sustainable „one planet“ way of living while supporting a prosperous economy. I look forward to hearing your views.

**Richard Lochhead**  
**Cabinet Secretary for Rural Affairs and the Environment**  
**June 2012**

**SAFEGUARDING SCOTLAND'S RESOURCES**  
**A PROGRAMME FOR THE EFFICIENT USE OF OUR MATERIALS**  
**EXECUTIVE SUMMARY**

This consultation builds on our Zero Waste Plan's vision of a Scotland where we waste as little as possible - recognising that every item and material we use is a resource which has a value. Using materials efficiently, avoiding waste and reusing items are our priorities because they deliver the greatest benefits, both financially and environmentally.

We are seeking views on a programme of proposals to drive progress towards that vision in the broad areas of working with businesses; product design and packaging; reuse; and influencing behaviours. The proposals are designed to deliver benefits across:

- Scotland's economy;
- Environmental protection;
- Carbon savings;
- Resource conservation; and
- Behaviour change.

**BUSINESS RESOURCE EFFICIENCY**

We are putting forward proposals to enable businesses in Scotland to tap into the huge potential for savings through using raw materials more efficiently and generating less waste.

**Action 1 - Simplifying access to business resource efficiency advice:**

Developing a new single service - replacing business and public sector resource and energy efficiency advice and support currently delivered through Carbon Trust, Energy Saving Trust and Zero Waste Scotland. The new service will help identify and implement waste, energy, and carbon efficiency measures that will cut costs and improve competitiveness.

**Action 2 - Voluntary agreements with business:** Working to ensure that voluntary agreements with business on waste and resources work well in Scotland and include a waste prevention focus.

**Action 3 - Zero Waste Pledges:** Enabling proactive companies to gain recognition through public commitment to a new Zero Waste Pledge system.

**Action 4 - Preventing construction wastes:** Encouraging prevention, reuse and recycling of construction wastes through promoting Site Waste Management Plans and the Halving Waste to Landfill commitment. Working with the industry to develop these into more comprehensive tools will unlock greater benefits through efficient use of construction materials.

**Action 5 - Data, benchmarks and tools:** Working to develop data and tools to help businesses make more efficient use of resources.

**Action 6 - Waste management industry:** Exploring the potential for a voluntary agreement with the industry to help their customers reduce waste and recycle more.

## PRODUCTS AND PACKAGING

Product design and treatment of packaging both have a key role in ensuring we use material resources efficiently.

**Action 7 - Sustainable design:** Promoting sustainable design of products and services through ensuring we have the right further and higher education; providing guidance and training from our businesses advice service; and supporting the work of the Product Sustainability Forum to identify key areas to improve product design.

**Action 8 - Producer responsibility for packaging waste:** Working to amend existing Producer Responsibility regulations to enable separate identification of packaging waste arising in Scotland; to use as a baseline for future Producer Responsibility targets for packaging waste in Scotland.

## REUSE

Reusing items extends their lifespan and reduces demand for new materials.

**Action 9 - Reuse supply and demand:** Working to increase the supply and demand for quality reusable items through improving collection, promotion and public procurement.

## INFLUENCING BEHAVIOURS

Individual actions and the approach of organisations are vital in achieving our goals. In addition to our on-going communications activity and support for environmental education, we are therefore putting forward the following proposals.

**Action 10 - Carrier bags:** Reducing the number of carrier bags used in Scotland by legislating to require retailers to charge for bags; with a voluntary agreement that net proceeds will be donated to good causes, including for waste and litter prevention. We expect to see bag use fall by at least 60% in Scotland. If 80% is achieved, the charge would raise around £5m per year for charitable good causes.

**Action 11 - Community action:** Promoting community activity to prevent waste through supporting practical actions including funding community-led waste prevention through the Climate Challenge Fund.

**Action 12 - Waste collection systems:** Helping local waste collection services to minimise the waste produced by Scottish households through guidance and developing a business case for reusing bulky waste.

**Action 13 - Public bodies' leadership:** Rolling out sustainable procurement training and best practice guidance across the public sector.

## MEASURING PROGRESS

**Headline Target:** We are proposing an overall target of a 5% reduction in all waste by 2015; and a longer term vision of a 15% reduction in all waste by 2025. This, coupled with our ambitious recycling targets, would put us on a path towards a one-planet living approach in line with our vision for a low-carbon, sustainable future for Scotland.

## 1. INTRODUCTION & CONTEXT

### 1.1 Zero Waste and Efficient use of Materials

Our Zero Waste Plan set out a new vision for Scotland's approach to waste: wasting as little as possible and recognising that every item and material we use, either natural or manufactured, is a resource which has a value. The plan is an economic strategy and a resource strategy - not simply a waste strategy.

Natural resources are under pressure across the world from rising population, growing economies, and changing consumer trends. The average person in the UK consumes 12 tonnes of resources per annum<sup>1</sup>. In a world of 9 billion people by 2050, the UN estimates 5-6 tonnes per annum as sustainable<sup>2</sup>. It is clear that a move to reduce this consumption is in line with our vision for a low-carbon, sustainable future for Scotland – and a significant step towards one-planet living.

Looking forward, estimates indicate that 3 billion new wealthier consumers will enter the global market by 2030. These demographic and consumer trends will heighten global demand and competition for a range of resources. Average commodity prices<sup>3</sup> are higher than at any time in the past century – wiping out a century of falling costs.

In addition to price rises and increasing market volatility, the environmental costs of resource extraction are likely to increase. For instance, where new supplies of diminishing materials are needed, more energy intensive mining and refining may be necessary, with higher greenhouse gas emissions, impacts to ecosystems and increased demands on water supplies.

It is clear that secure access to reliable supplies of resources is essential for our economy to prosper, and this means that we must find new and innovative ways to conserve our natural assets while harnessing opportunities to safeguard the secondary resources that flow through our economy.

Our Zero Waste Plan committed to produce a Waste Prevention Programme aimed at reducing the amount we waste in Scotland, and encouraging reuse wherever possible. This meets the requirement in the European Waste Framework Directive<sup>4</sup> for every member of the European Union to produce such a programme by the end of 2013.

We are committed to creating closed loop systems that maintain and enhance the value of the material flowing through our economy. This means focusing our efforts at the top of the waste hierarchy. Efficient use of materials, waste prevention and reuse sit at the top of the hierarchy for good reason. Where using less is an option it is generally the best option - both financially and in

---

<sup>1</sup> <http://www.eea.europa.eu/data-and-maps/figures/resource-use-per-person-by>

<sup>2</sup> <http://www.unep.org/resourcepanel/Publications/Decoupling/tabid/56048/Default.aspx>

<sup>3</sup> Averaged across Food, non-food agricultural items, metals, and energy

<sup>4</sup> [http://ec.europa.eu/environment/resource\\_efficiency/](http://ec.europa.eu/environment/resource_efficiency/)

terms of environmental impact. For example, preventing glass or plastic waste can be three times more beneficial (in carbon terms) than recycling.

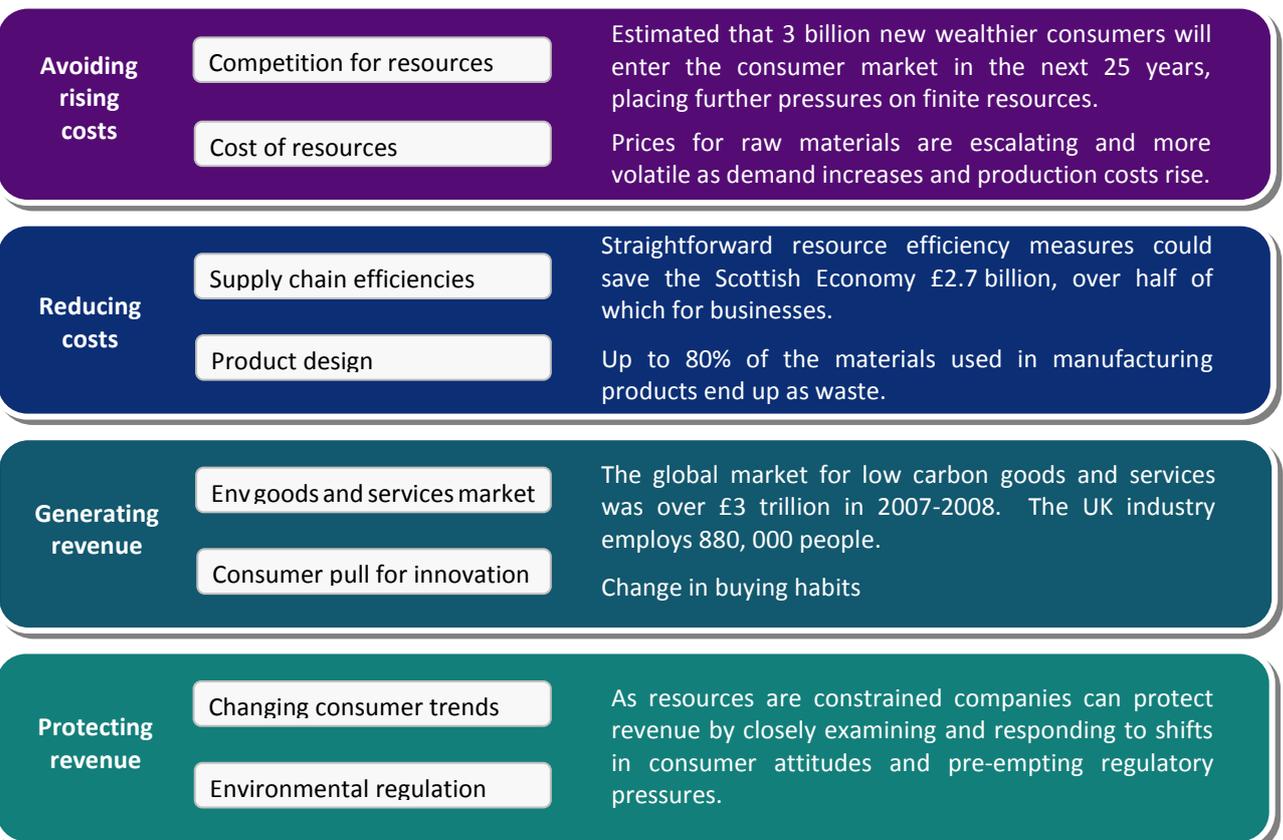
Harnessing the resource value of waste will help Scotland in its transition to a low carbon economy<sup>5</sup>. Our Government Economic Strategy<sup>6</sup> has an emphasis on making better, more efficient use of natural and material resources to secure the future productivity, competitiveness and resilience of Scotland's economy. This chimes with the focus on resource efficiency in EU policy.

**Our approach to reducing waste needs to be seen in the context of how we use resources as a whole. Many of the most effective actions we can take to prevent waste also deliver benefits for recycling or energy efficiency. For that reason, we are consulting on a Programme for Efficient use of Materials, rather than simply a plan for preventing waste.**

This programme will therefore complement existing measures to boost recycling and our Energy Efficiency Action Plan<sup>7</sup>.

## 1.2 Economic Potential

The whole thrust of these proposals is to improve Scotland's economic competitiveness and reduce our carbon footprint through using materials more efficiently. This can bring economic opportunities across the supply chain for goods, services and commodities.



<sup>5</sup> <http://www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/lowcarbon/lces>

<sup>6</sup> <http://www.scotland.gov.uk/Publications/2011/09/13091128/0>

<sup>7</sup> <http://www.scotland.gov.uk/Publications/2010/10/07142301/0>

A recent UK study estimated around 2.3% of Gross Domestic Product (GDP) could be saved through straightforward resource efficiency measures by using raw materials more efficiently and generating less waste<sup>8</sup>. In 2010 that would have meant more than £2.7bn of potential savings to the Scottish economy. Over half of the savings (£1.4bn) can be made within businesses – around 4% of profits.

The research also looked at longer-term best practice savings that could be achievable by 2050, giving an additional savings potential of around 5% of GDP - more than £5.8bn on current figures.

Scotland is a net importer of materials – reliant on other corners of the globe to supply our industries and consumers. Businesses are facing rising costs for essential raw materials and minerals, their scarcity and price volatility are having a damaging effect on economies worldwide<sup>9</sup>.

Beyond immediate cost savings, efficient use of materials is important for longer term economic resilience to risks of scarcity or unreliable supply of certain materials critical to our economy – copper, indium, rare earth elements etc<sup>10</sup>. Of particular concern are materials critical to low carbon technologies. A recent survey of European businesses found that 87% expect prices of raw materials to rise in the next 5-10 years<sup>11</sup>. Costs of some materials have already grown dramatically – the price of copper rose 400% between 2000 and 2010.

Many nations (e.g. Japan, the US and Russia) already have resource strategies in place and Scotland's approach needs to reflect our own economy's needs. Improving efficiency of resource use is one way to increase the resilience of Scottish businesses to such material supply risks.

### **1.3 Overall aim**

We propose the following high-level aim for this programme:

***To put our use of material resources on a sustainable footing - protecting Scotland from resource related risks and realising opportunities.***

Using materials sustainably means a number of things. It includes:

- widespread recognition of the value of material resources and the economic opportunity from efficiency savings;
- reducing the overall amount of materials we use;
- reducing the amount of primary or new material resources we use, by replacing these with reused or recycled materials;

---

<sup>8</sup> [http://www.wrap.org.uk/sites/files/wrap/Final%20Report%20EVA128\\_SEI%20\(1\)%20JB%20SC%20JB3.pdf](http://www.wrap.org.uk/sites/files/wrap/Final%20Report%20EVA128_SEI%20(1)%20JB%20SC%20JB3.pdf)

<sup>9</sup> [http://www.sniffer.org.uk/Resources/ER27/Layout\\_Default/0.aspx?backurl=http%25](http://www.sniffer.org.uk/Resources/ER27/Layout_Default/0.aspx?backurl=http%25)

<sup>10</sup> [http://www.sniffer.org.uk/Resources/ER27/Layout\\_Default/0.aspx?backurl=http%25](http://www.sniffer.org.uk/Resources/ER27/Layout_Default/0.aspx?backurl=http%25)

<sup>11</sup> [http://ec.europa.eu/public\\_opinion/flash/fl\\_315\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_315_en.pdf)

- ensuring that any virgin materials are sustainably sourced, by managing renewable material resources within their natural capacity and minimising the impacts of extracting non-renewable resources; and
- ensuring that we use materials as efficiently and sustainably as possible, preserving their value as long as possible, and recovering them wherever we can.

Figure 1 illustrates this move from „waste management“ to „resources management“

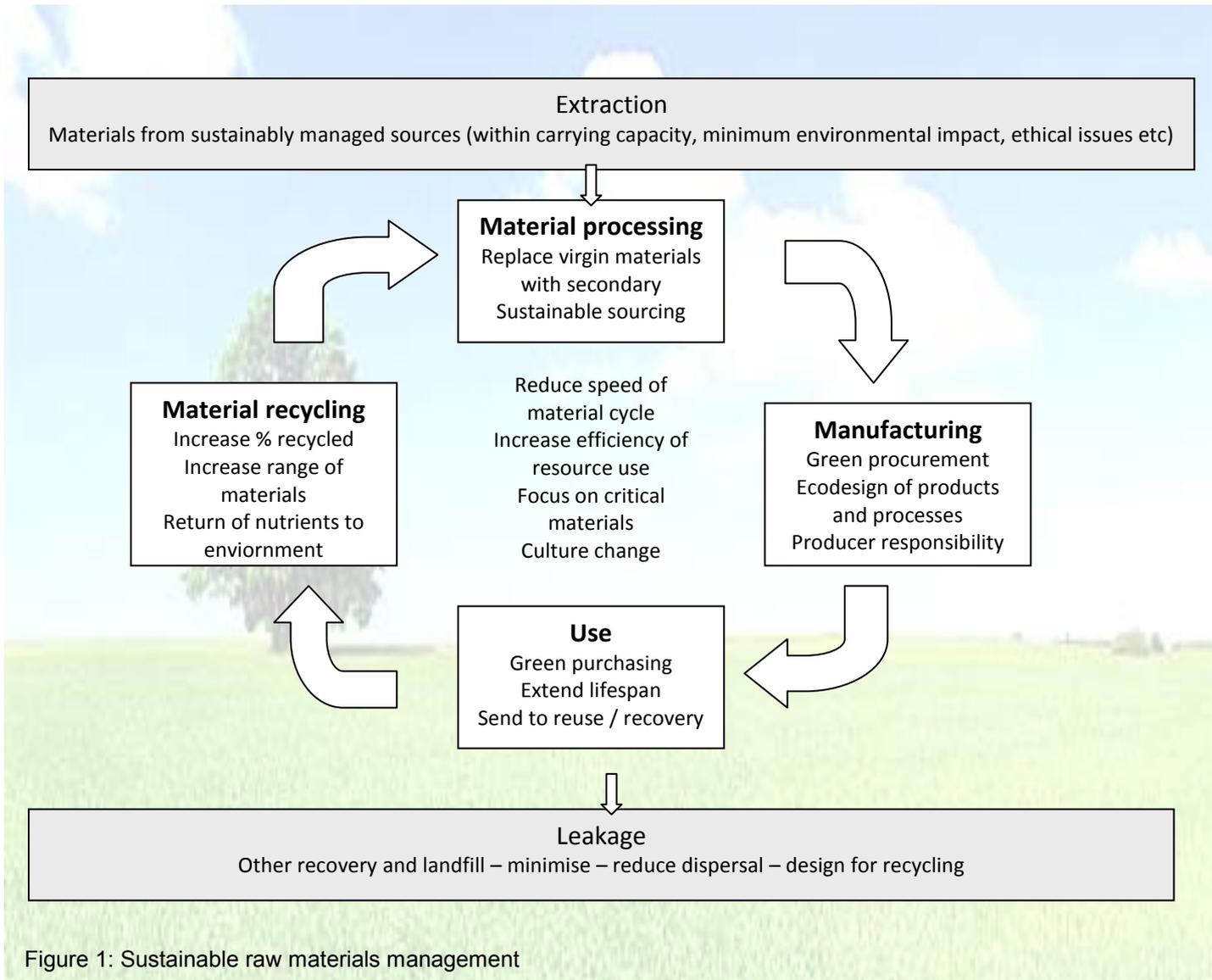


Figure 1: Sustainable raw materials management

## **1.4 Priority Areas**

The proposals in this consultation have been developed through reviewing the evidence from existing sustainable use of materials initiatives in Scotland and beyond; and also seeking to identify a limited number of actions with the greatest impacts where the Scottish Government has the necessary influence to deliver change. These include continuing some existing actions, where this appears to be the most powerful approach.

This consultation puts forward a set of proposals on

- working with businesses,
- product design and packaging,
- reuse, and
- influencing behaviour change.

These proposals will contribute to:

- *Scotland's economy* - through savings to businesses and creation of new business and market opportunities;
- *Environmental protection* - through reduced environmental impact of resource use and waste treatment;
- *Carbon savings* - through reduced carbon impact across all parts of the resource use cycle;
- *Resource conservation* - protecting and maximising the value of scarce finite resources; and
- *Behaviour change* – to help deliver the transition we need.

## 2. AREAS FOR ACTION

### 2.1 BUSINESS RESOURCE EFFICIENCY

This consultation has highlighted the huge potential savings for businesses in Scotland through using raw materials more efficiently and generating less waste.

#### 2.1.1 Business Resource Efficiency Support

Zero Waste Scotland already provides **advice and support** to many businesses across Scotland to help them improve their resource efficiency. The business resource efficiency programme targets Scottish SMEs (Small and Medium Sized Enterprises), aiming to engage with 5000 companies a year to achieve annual savings of over £5 million. Zero Waste Scotland also delivers support for specific sectors of the economy, including food and drink; hospitality, tourism and events; construction; and retail. Support for the food and drink sector alone identified potential savings for Scottish businesses in 2011/12 of over 5,000t of waste prevention, over 30,000t CO<sub>2</sub> equivalent emissions, and over £1.5 million of cost savings.

It is clear that offering businesses tailored advice on sustainable and efficient use of materials results in tangible cost savings, and helps them become more competitive. It is also clear that business can benefit from holistic advice on both energy and resource efficiencies and that there is a desire to see a simplification of the advice landscape.

That is why, as noted in the Government Economic Strategy, we are already working to coordinate the existing range of business support and advice programmes delivered by a range of bodies, including Zero Waste Scotland, Scottish Enterprise, Highlands and Islands Enterprise, Business Gateway, Energy Saving Trust, Carbon Trust, Scottish Environment Protection Agency and others. This will make it easier for businesses to access effective advice from any entry point through joint marketing, events and cross-referral. We want to take this integration further to provide an even better service and unlock greater resource savings.

#### **Action 1 – Simplifying access to business resource efficiency advice**

By April 2013 we will develop a new single business resource and energy efficiency service which will replace the business and public sector energy and resource efficiency advice and support currently delivered through Carbon Trust, Energy Saving Trust and Zero Waste Scotland.

The new service will offer comprehensive information, advice and support to business and public sector organisations including a specific focus on supporting SMEs to implement waste, energy, and carbon efficiency measures that will translate into cost savings and increase competitiveness.

#### 2.1.2 Voluntary Agreements for Business Action

Many sectors are already taking action, and many businesses have signed up to formal **voluntary agreements** or responsibility deals (table 1). The retail and food and drink sectors are actively working to reduce their waste and

improve resource efficiency through the voluntary Courtauld Commitment. Zero Waste Scotland has developed a similar agreement with Scotland’s key hospitality sector organisations to reduce food and packaging waste arising in restaurants, hotels, foodservice, pubs and canteens. We are developing a proposal for collective action in the clothing sector that will provide a framework for changing the way that businesses design clothing, select fabrics, label and sell garments, and recover their products.

**Action 2 - Voluntary agreements with business**

We will work to ensure that voluntary agreements with business sectors work well in Scotland and include a focus on waste prevention – both through engaging positively with proposals for new UK or Scottish agreements and reviews of existing agreements.

**Table 1: Existing Voluntary Agreements**

Voluntary Agreement	Sector / product / issue
<a href="#">Courtauld Commitment</a>	Retail grocery sector - minimising packaging, household food and supply chain wastes
<a href="#">Home Improvement Sector Commitment</a>	DIY sector - packaging and waste reduction and recycling
<a href="#">Halving Waste to Landfill</a>	Construction - landfill reduction across the sector
<a href="#">Federation House Agreement</a>	Food and Drink sector – improving water efficiency and reducing overall water usage
<a href="#">Direct marketing responsibility deal</a>	Direct mail - recycling and waste reduction

There are many actions that businesses can take to reduce their waste, including developing a waste prevention plan, improving staff awareness through training, introducing sustainable procurement and considering the benefits of resource exchange. Some businesses may choose to become certified to environmental management systems and publicly **demonstrate their commitment**. Others may pursue a less formal approach.

**Action 3 - Zero Waste Pledges**

We want to see proactive companies in Scotland gain recognition through pledging their commitment to zero waste.

Zero Waste Scotland will develop a high level Zero Waste Pledge system with a menu of actions open to companies of any size, such as waste prevention planning, staff training, adopting sustainable procurement guidelines and reporting on their achievements. ZWS will work to encourage Scottish companies to sign up and support signatories to take actions.

Construction and demolition waste represents around 44% of total waste produced in Scotland<sup>12</sup>. It is estimated that the construction industry could

<sup>12</sup>[http://www.sepa.org.uk/waste/waste\\_data/commercial\\_industrial\\_waste/construction\\_de\\_molition.aspx](http://www.sepa.org.uk/waste/waste_data/commercial_industrial_waste/construction_de_molition.aspx)

save over £170 million a year<sup>13</sup> by reducing its waste through the consistent use of Site Waste Management Plans to reduce the amount of waste created during projects. Additional financial and environmental benefits can be gained by embracing resource efficiency and expanding Site Waste Management Plans into Resource Management Plans.

Many major companies in the **construction** sector and public bodies such as Transport Scotland have voluntarily committed themselves to halve the waste they send to landfill by 2012. We would be interested in potential to build on this good work to develop new „Resource Management Plans“ or a new voluntary agreement with the sector – recognising the impact of design on resource use and waste. This approach is in line with our recent consultation on a new Architecture and Placemaking Policy for Scotland, which welcomes comments on a variety of issues, including the role of the design process in making best use of resources, minimising waste and promoting the use of sustainable materials<sup>14</sup>.

#### **Action 4 – Preventing construction wastes**

Zero Waste Scotland will encourage prevention, reuse and recycling of construction wastes through:

- promoting peer good practice, including the use of Site Waste Management Plans, across the construction industry;
- continuing to promote the Halving Waste to Landfill commitment and working with the construction industry to develop a follow on voluntary agreement addressing Resource Efficiency, to be rolled out from 2013;
- working with the construction industry to support the evolution of Site Waste Management Plans into a process for addressing Resource Efficiency by developing and trialling Resource Management Plans to encompass design, in line with our Greener Homes initiative and Sustainable Housing Strategy.

#### **2.1.3 The Value of Data and Tools**

For any business to reduce its resource use, it needs first to understand how much it is using. **Good quality data** is essential to help waste producers recognise the true cost of waste (ie not just the cost of disposal, but the cost of purchase and processing materials), and to benchmark resource efficiency. SEPA is already making efforts to gather more accurate waste data from businesses to help provide the detailed picture we need<sup>15</sup>. As part of this, the electronic Duty of Care project has the potential to generate much better (anonymous) data to transform our understanding of resource flows in different sectors.

In particular, those businesses with the most significant potential for environmental impacts, which are regulated under Integrated Pollution

<sup>13</sup> <http://www.zerowastescotland.org.uk/content/scottish-companies-could-save-%C2%A3236-billion-year-reducing-waste-costs>

<sup>14</sup> A policy on architecture and placemaking for Scotland: public consultation (until 7 September): [www.scotland.gov.uk/consultations](http://www.scotland.gov.uk/consultations)

<sup>15</sup> <http://www.legislation.gov.uk/sdsi/2010/9780111010662/contents>

Prevention and Control, account for over 6% of all controlled waste in Scotland (and 9% of hazardous waste)<sup>16</sup>. These industrial processes already need to have **Resource Utilisation Assessments (RUAs)**, through conditions inserted in their permits, to audit their use of materials and other resources. We propose to help businesses make much better use of these RUAs, including through good-practice guidance. The work involved for businesses should therefore be minimised and there is significant potential for resource savings to be identified. In time, we also want to explore potential to offer the RUA tool to other businesses, on a voluntary basis.

#### **Action 5 - Data, benchmarks and tools**

ZWS and SEPA will work to develop data and tools to help businesses become more resource efficient:

- We are committed to moving to electronic waste tracking systems which will improve data quality. SEPA is playing a leading role in this transition through supporting the Electronic Duty of Care project being developed by the Environment Agency.
- ZWS will develop tools for businesses to assess and benchmark their resource use.
- For those 500 or so businesses with the greatest potential environmental impact, SEPA will develop the use of Resource Utilisation Assessments (RUAs) to drive resource efficiency. This will include guidance, training and focus on RUAs during audits, and will be in line with the principles of better regulation.

#### **2.1.4 Waste Management Industry Role**

These proposals are designed to help deliver the shift in emphasis at the heart of the Zero Waste Plan to waste being seen as a resource. The **waste management industry** is uniquely placed to help their clients move from waste disposal to advising on how to manage resources more efficiently to maintain the maximum value. We want to replicate the approach whereby advice on energy efficiency is now offered by energy suppliers. With the new Waste (Scotland) Regulations 2012 requirements for separate collection of recyclable materials, the industry has a real opportunity to develop its relationship with businesses in all sectors to catalyse further resource efficiency. We want to see voluntary action, although statutory approaches could be considered.

#### **Action 6 – Waste management industry**

Zero Waste Scotland and the Scottish Government will explore with the waste management industry the potential for a voluntary agreement to provide resource efficiency services to their customers, and help them reduce waste.

#### **2.1.5 Questions – Business Resource Efficiency**

We are interested in receiving feedback on these proposals and the priorities to help businesses in Scotland benefit from more efficient use of materials.

<sup>16</sup> Scottish Pollutant Resource Inventory data supplied by SEPA

We also want to hear from companies interested in finding out more about specific proposals or assisting with their development.

*A. We have already decided to go ahead with the integrated Business Resource Efficiency service and are engaging directly with stakeholders over how it should be focused. We would however welcome views on the priorities for the new integrated service. (Action 1)*

*B. We would welcome views on the type of “Zero Waste Pledge” companies might be interested in signing up to and the type of support needed. (Action 3)*

*C. For companies and organisations involved in the construction sector, do you agree with the principle of a new voluntary agreement, following on from “Halving Waste to Landfill”, encompassing the impact of design on both construction waste and materials? We would also welcome views on the level of ambition for such an agreement. (Action 4)*

*D. For companies with existing “Resource Utilisation Assessments” (Action 5), we want to hear any lessons or good practice points to help us make sure future guidance on RUAs is as useful as possible in enabling relevant businesses realise resource savings.*

*E. For waste management companies, would you be interested in signing up to a voluntary agreement to provide resource efficiency advice to your customers? (Action 6)*

*F. For other companies, what more would you want to see in terms of advice on resource savings and recycling from your waste management contractor? (Action 6)*

## 2.2 PRODUCTS AND PACKAGING

### 2.2.1 Design of Products and Services

To make lasting improvements in efficient use of resources, we need to look at the start of the process of **design and manufacture of products**. Around 80% of a product's lifetime environmental impact is decided by its design. Design determines how much of different materials are used and how easily products can be reused, repaired or recycled. As pressures on global resources increase, it is becoming clear that certain materials are of critical importance Scotland's economy<sup>17</sup>. But these materials can only readily be used efficiently where products have been designed for a long lifetime and eventual disassembly or recovery. A recent report identified key ways in which action could be taken in Scotland to increase ecodesign.<sup>18</sup>

While many products are designed and manufactured outside Scotland, we should work with Scottish manufacturers and design professions to raise awareness of this issue. We also need to raise public understanding of the importance of key resources to help consumers make wise choices.

#### **Action 7 – Sustainable design**

We will promote sustainable design of products and services (taking account of the key findings of the Scottish Government review into reducing waste through better product design), including:

- ensuring the right further and higher education provision on sustainable design through integrating design into current projects looking at Low Carbon Opportunities and Skills Implications (led by Scottish Enterprise);
- providing guidance and training on the benefits of sustainable design in resource efficiency advice to businesses, and the Scottish Energy and Resource Efficiency Service's programme of seminars and events;
- supporting the work of the Product Sustainability Forum<sup>19</sup> to assist businesses in identifying key areas to improve product design;
- promoting the case for sustainable design in EU legislation and policies, such as the Ecodesign Directive<sup>20</sup> and the UK Eco-Innovation Roadmap.

Businesses such as B&Q and Marks and Spencer are experimenting with **new business models** for a future where pressures on material resources are only going to increase. These business models develop new customer relationships for example, to extend product life (such as Dyson's home repair service), or to retain ownership of products and thus have access to the valuable materials at the end of life. Zero Waste Scotland, and Scotland's economic development bodies, will promote new resource efficient business models through their engagement with businesses.

<sup>17</sup> [http://www.sepa.org.uk/science\\_and\\_research/idoc.ashx?docid=d55199dc-1ba7-4297-9365-3ddb40e0a078&version=-1](http://www.sepa.org.uk/science_and_research/idoc.ashx?docid=d55199dc-1ba7-4297-9365-3ddb40e0a078&version=-1)

<sup>18</sup> <http://scotland.gov.uk/Publications/2009/08/18161245/0>

<sup>19</sup> <http://www.wrap.org.uk/content/product-research-forum>

<sup>20</sup> [http://ec.europa.eu/energy/efficiency/ecodesign/eco\\_design\\_en.htm](http://ec.europa.eu/energy/efficiency/ecodesign/eco_design_en.htm)

**Producer responsibility** legislation across the UK requires producers and retailers in some sectors to take responsibility for their products at the end of their use, by promoting the recycling and recovery of:

- packaging,
- waste electrical and electronic equipment (WEEE),
- end-of-life motor vehicles, and
- batteries.

These schemes have been effective in increasing recycling rates, although they do not place as much emphasis on reducing resource use or on reuse.

The Scottish Government has published a review<sup>21</sup> of these existing Producer Responsibility schemes to consider whether changes could be made to improve the benefits in Scotland. This review is the basis for considering whether Producer Responsibility schemes could focus on preventing waste, and whether to consider new regimes for other products with particularly high environmental impacts or potential for reuse.

### 2.2.2 **Packaging Waste**

The existing **packaging** legislation requires businesses producing or selling products to report on the amounts of packaging sold onto the UK market and contribute towards its recycling. Reprocessors (recyclers) and exporters also have to report on quantities of materials they deal with. However, the system supports less recycling in Scotland compared with areas of greater population density in England. It is estimated that 50-52% of Scottish packaging waste is recycled, below the recycling rate for the UK as a whole (59-61%). We propose to amend the system to require identification of packaging sold and collected in Scotland to enable Ministers to make future adjustments to make the system work better for Scotland. We want to achieve this while keeping any extra administration to a minimum and would design any changes accordingly.

#### **Action 8 - Producer responsibility for packaging waste**

We propose to work with other UK administrations to amend existing Producer Responsibility regulations to enable separate identification of packaging waste arising in Scotland; to use as a baseline for subsequent separate Producer Responsibility targets for packaging waste in Scotland.

*This proposal is explained in more detail at Annex 1.*

Smaller companies are exempted from reporting requirements, under existing thresholds and would continue to be so. In the longer term, setting separate packaging recycling targets for Scotland could mean companies contributing slightly more towards the recycling of each tonne of packaging of goods sold here. However, nothing in these proposals will make it more expensive to manufacture goods in Scotland. Northern Ireland already has this separate reporting requirement.

Many countries run **deposit return schemes** - particularly for drink containers - which regularly achieve return rates of over 80%. Consumers pay a deposit

<sup>21</sup> <http://scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/17103/responsibility>

which is returned when they return the item for reuse or recovery. Alternatively, „reverse vending“ schemes can provide an incentive for recycling certain containers, e.g. through reward card points. Schemes of this kind directly cut the use of virgin resources by improving the level and quality of recycling and sometimes reuse. They can also have a significant impact on litter. We are committed to trialling such schemes in Scotland and Zero Waste Scotland will work with interested parties - retailers, drinks producers, trade associations, local authorities etc - to pilot a variety of schemes over the coming months to provide evidence on what can work in Scotland<sup>22</sup>.

### 2.2.3 **Critical Materials**

Small **waste electronic and electrical items** contain valuable but potentially hazardous materials and can also have a high reuse value. However, all too often they are simply thrown away and their value is lost. Only around 22% of small waste electrical and electronic equipment (WEEE)<sup>23</sup> is collected for recycling in the UK at present. Zero Waste Scotland, with support from SEPA, will therefore work with retailers and local authorities to encourage voluntary action to help more people return more of this type of equipment for recycling and reuse.

Many products made and consumed in Scotland contain **critical materials** - materials which are critical to the products we rely on which may face supply risks due to scarcity or significant price rises. A recent report identified a list of 12 materials critical to the Scottish Economy<sup>24</sup>, including rare earth elements, indium, lithium, copper, phosphorous and tin. They are used in many different areas such as electronics, batteries, food production and renewable energy. It is important that business are aware of these issues so that that they can act to manage the risks to their own operation.

Along with these risks, come opportunities: to develop substitute materials; to design products so that materials can eventually be recovered; and to develop collection, sorting and processing infrastructure for recovery. For example, it is estimated that the UK’s electrical equipment waste over the last decade contained around £5bn gold, £1bn silver and £1bn palladium, very little of which is recovered. In time, clean energy technologies such as solar panels and wind turbines will also provide opportunities for recovering valuable materials. However, the barriers are significant, as these materials are often found in low concentrations, recovery technologies are in early stages of development and recovery may not be economically viable at current market prices. Zero Waste Scotland is currently investigating the opportunities for recovery of these materials<sup>25</sup>.

---

<sup>22</sup> <http://www.zerowastescotland.org.uk/content/deposit-and-return-systems-and-reverse-vending-pilot-projects-innovation-fund-dep-001>

<sup>23</sup> Based on the amount of WEEE placed on the market 3 years ago.

<sup>24</sup> “[Raw Materials Critical to the Scottish Economy](#)” (2011), SNIFFER

<sup>25</sup> <http://www.zerowastescotland.org.uk/sites/files/wrap/IMT002%20Strategic%20Raw%20Materials%20Capacity%20Report%20-%2027th%20March%202012.pdf>

#### **2.2.4 Questions – Products and packaging**

We are interested in receiving feedback on these proposals designed to encourage more efficient use of material resources in providing the products and packaging we need.

*G. Do you agree with the actions identified to support sustainable design of products? (Action 7)?*

*H. Do you agree with the principle of amending the existing Producer Responsibility Regulations to enable separate identification of packaging waste arising in Scotland, to use as a baseline for subsequent separate Producer Responsibility targets for packaging waste in Scotland (Action 8)? Further more detailed questions on the mechanics of this proposal are included at Annex 1.*

*I. For those involved in the sale of electronic and electrical equipment or collection of WEEE, we would welcome views or good examples of the most effective approaches to making it easier for people to return more of this type of equipment for recycling and reuse.*

*J. We would be interested in your views on priorities to increase the resilience of the Scottish economy to supply risks associated with critical materials, and for maximising the opportunities for Scottish businesses.*

## 2.3 REUSE

### 2.3.1 Reuse Opportunities

Reuse has a vital contribution to make to sustainable use of materials. Reusing items extends their lifespan and reduces demand for new materials. Zero Waste Scotland estimate for example that every tonne of clothing reused saves 15 tonnes of carbon emissions.

While much focus has been given to reuse of household waste, there is significant untapped potential for resource reuse in the commercial and industrial sector.

Zero Waste Scotland will encourage reuse and resource exchange through the development of the ZWS Resource Exchange, an online tool that will help businesses find solutions that reuse resources, and encourages use of materials with recycled content.

Remanufacturing, where used products are refurbished and sold with a warranty to match, also offers potential in Scotland. Products with high material value and embedded production costs e.g. electronic products, vehicles, wind turbines, medical, defence and aerospace components, are particularly suitable for remanufacturing solutions.

### 2.3.2 Supply of Reusable Items

Scotland has developed an extensive and strong **community reuse network** over the last 5-10 years, which reuses around 19,000 tonnes of items a year which would otherwise have been sent to landfill. This equates to around 0.5% of local authority collected municipal waste. This network also provides employment and opportunities for people to develop new skills.

The community reuse sector is well-placed to develop further in Scotland. To increase its impact it is important for the sector to be widely recognised as providing a professional quality service to a consistent standard.

Zero Waste Scotland is working to develop Scotland's reuse infrastructure by supporting community organisations through the development of a reuse and repair network under the name of **Revolve**<sup>26</sup>. The Network will help increase professionalism, consistent standards, branding and consumer focus within the sector - helping reuse organisations be more financially sustainable.

A key issue for sustainable reuse of resources is gaining **access to reusable items**, before they become damaged or contaminated with other wastes. There are different ways of achieving this – through kerbside collections, bulky waste collection, reuse areas at recycling centres, or return to retailer schemes. For example, IKEA has established a partnership with Furniture Reuse Network (FRN), making it easier for customers to donate their old furniture to FRN for reuse or recycling. Zero Waste Scotland will seek to encourage other companies to adopt these types of approaches.

---

<sup>26</sup> <http://www.revolvereuse.com/what-is-revolve>

### **2.3.3 Demand for Reused Items**

Stimulating demand for reused items is also important. Targeted awareness-raising and marketing of reuse as a desirable option, and providing quality assurance for reused products, will be important in driving these changes. For example, Vienna's reuse shops present items as professionally and attractively as high street shops. Zero Waste Scotland is testing a similar approach through 3 pilot projects.

Zero Waste Scotland is also piloting a new telephone hotline to make it easier to donate quality, unwanted goods for reuse such as furniture, working electrical items and clothing. The hotline will enable householders to pass on suitable goods to others by arranging for a local re-use organisation to collect items free of charge. The Reuse Hotline (08000 665 820), initially in 16 local authority areas, aims to cover the whole of Scotland by the end of the year.

#### **Action 9 – Reuse supply and demand**

We will work through Zero Waste Scotland to increase the supply and demand for quality reusable items through:

- Supporting the pilots of new and innovative collection systems for reusable items, including through recycling centres and kerbside.
- Covering collection for reuse in the forthcoming household waste collection guidance.
- Raising awareness of households and businesses of how they can source reused items.
- Supporting reuse through public procurement (see action 13)

### **2.3.4 Reuse data**

The Waste Framework Directive defines „preparing for reuse“ as, “*Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be reused without any other pre-processing*”.

Preparing for reuse activities are registered by SEPA as exempted from waste licensing. Once something has been prepared for reuse, it is no longer classed as waste. Examples include repair and refurbishment of furniture and carpets; collection and mixing of waste paint; and bike salvage and refurbishment centres.

We want to encourage these activities but do not currently have good data on how much „preparing for reuse“ is currently undertaken in Scotland. SEPA's Waste Data Strategy<sup>27</sup> recognises the need to improve this information for all wastes. This could be done through:

- Improved data on activities exempt from waste management licensing;
- Data reported from members of the Revolve Network; and
- Data from local authorities, reported via Waste Data Flow.

---

<sup>27</sup> “[A Waste Data Strategy for Scotland](#)” (2011), SEPA

Our Zero Waste Plan<sup>28</sup> noted that this programme would need to consider how preparing for reuse activities might contribute towards recycling targets. One option would be to have a „preparing for reuse“ target, contributing towards the existing recycling targets. A first step would be to develop better data on preparing for reuse, to inform the development of such a target.

### **2.3.5 Questions – Reuse**

We are interested in receiving feedback on these proposals designed to encourage greater reuse of items.

*K. Do you agree with the actions identified to increase the supply and demand for quality reusable items (Action 9)?*

*L. Do you feel it would be (a) practical and (b) valuable to collect separate data on the quantities of materials ‘prepared for reuse’ with a view to developing a preparing for reuse target contributing towards overall recycling targets?*

---

<sup>28</sup> [Scotland’s Zero Waste Plan – Annex A – Zero Waste Plan Targets and Data Needs](#) (2010) Scottish Government

## 2.4 INFLUENCING BEHAVIOURS

### 2.4.1 Public Engagement

We will all need to make changes to how we use and reuse materials, both at home and at work if we are to achieve the step-change in resource efficiency we are targeting. All of the actions in this document have a role, but engagement, making change easy, and maximising the role of the public sector are also crucial if more efficient use of resources is to become part of everyday life - a social norm.

Effective and well-targeted **communication, awareness raising** and **support** will help individuals and businesses make these changes. We have recognised the importance of waste prevention as a key aspect of the *Low Carbon Scotland: Public Engagement Strategy*, with „Reducing and reusing“ and „limiting food waste“ among the key priorities for action.

One such route is **public campaigns**. Any campaigns about waste and resources need to include clear information about the value of preventing or reducing resource use. And they need to be helpful, for example, pointing to practical tools and the services that can help us use less and waste less. Campaigns also need to reflect what is happening at other levels, both national and local. When the same messages are received from different sources, and are backed up by visible action on the ground, they are all the more effective.

Scottish Government and Zero Waste Scotland will ensure that relevant public communication and campaigns support the actions in this programme.

A key element of our engagement is an overarching campaign which aims to motivate collective action to help make Scotland a cleaner, greener place. A dedicated website<sup>29</sup> promotes the key climate change behaviours identified by our Public Engagement Strategy, and offers information, support and advice to do more. We are also planning a food waste campaign, initially focused on prevention, highlighting the damaging environmental impact of unnecessary food waste. We will work to ensure that all relevant campaigns – by Scottish Government and its partners – support the actions set out in this programme.

Preventable **food waste** costs Scottish consumers £1 billion a year, or an average of £430 per household<sup>30</sup>. Our campaign work links with the well-established Love Food Hate Waste consumer programme<sup>31</sup>, which provides information and advice on how to reduce food waste across four key areas: planning and preparation, storing food, portion sizes and recipe ideas. Zero Waste Scotland also shares Love Food Hate Waste resources with major retailers to help their customers cut food waste.

---

<sup>29</sup> <http://www.greenerscotland.org/>

<sup>30</sup> The Food We Waste in Scotland (2009) <http://www.zerowastescotland.org.uk/content/food-we-waste-scotland>

<sup>31</sup> <http://www.zerowastescotland.org.uk/lovefoodhatewaste>

### **2.4.2 Education**

Scotland is seen as one of the world leaders in the **Eco-Schools** movement, with almost 4,000 schools participating in the programme (98% of local authority schools). In total over 1300 establishments currently hold a Green Flag. The inclusive, whole-school nature of the Eco-schools programme helps to raise awareness of environmental and sustainable development issues with young people, through its strong links with the Curriculum for Excellence. The Curriculum for Excellence is a key part of the Scottish Government's Action Plan for the second half of the UN Decade of Education for Sustainable Development "Learning for Change".

### **2.4.3 Carrier Bags**

Single-use disposable carrier bags are a symbol of the throw-away culture that we are seeking to change. They are also a highly visible aspect of litter and there is no reason why bags should not be reused much more than at present. We recognise the progress made over the past few years by the supermarkets and consumers but carrier bag use in Scotland has stabilised at a significant level and we want to take decisive action to address this.

<b>Action 10 – Carrier bags</b>
We propose to reduce the number of carrier bags used in Scotland by legislating to require retailers to charge for bags; with a voluntary agreement that net proceeds (estimated at £5-6m per annum based on an 80% drop in bag usage) will be donated to charitable causes, a proportion of which will be for waste and litter prevention.

We propose the key features of the scheme to be as follows (more detail is provided in Annex 2):

- including all retailers – to create a level playing field
- including all single-use / disposable bags, regardless of material
- setting the minimum charge at 5p – to deliver at least a 60% reduction
- exempting certain carrier bags – where consumers have to use a bag, and a reusable one would not be appropriate
- making the scheme cost-neutral for retailers
- directing net revenues to good causes
- reporting requirement on retailers
- light touch approach to enforcement

### **2.4.4 Community Action**

Another important way to deliver real change is via local communities and groups. Waste is one aspect of the Climate Challenge Fund (CCF) and a number of CCF projects have already taken forward imaginative and innovative responses to resource issues.

### **Action 11 – Community action**

We will promote community action to prevent waste through:

- Continuing to support community-led waste prevention to help reduce carbon emissions through the Climate Challenge Fund.
- ZWS will consider adapting its Zero Waste Pledge model for communities, supporting them to take practical actions towards zero waste.
- ZWS assessing the costs and benefits of more intensive interventions, as piloted by several community groups, and make recommendations for their future use.

#### **2.4.5 Collection Systems**

Making it easy to „do the right thing“ is a key step in influencing behaviours. The design of collection systems can directly influence the amount of waste we produce – in particular the frequency of collections and the size of bins.

The roll-out of separate collection of food waste may also help householders reduce the amount wasted as people see how much valuable food is thrown away.

### **Action 12 – Waste collection systems**

We want to make sure local waste collection services are designed to help minimise the waste produced by Scottish households. Zero Waste Scotland guidance to Local Authorities on collection system design will include examples to show how different residual (non-recyclable) waste collection systems can reduce waste volumes. This will include a focus on collections of food waste, and items for reuse.

Zero Waste Scotland will develop a business case for reusing bulky waste, supported by communication materials and good practice case studies.

#### **2.4.6 Public Organisations' Role**

The Climate Change (Scotland) Act 2009 introduced new duties on public bodies to take account of sustainability in their functions<sup>32</sup>. Their approach to using materials will be an important element in leading by example in delivering on these duties in two major areas.

The public sector is itself a major waste producer, generating almost 1 million tonnes of waste a year, 5% of all Scotland's waste. The Scottish Government is already working to reduce waste in our own operations by 25% by 2020 and to reduce the amount of landfilled waste by 80% (baseline 2006/7).

<sup>32</sup> <http://www.scotland.gov.uk/Publications/2011/02/04093254/0>

Scotland's public sector spends around £9bn per annum. Smarter, **sustainable procurement** offers real opportunities to reduce the public sector's need for material resources, reducing waste and promoting reuse. We are committed to consulting on proposals for a Sustainable Procurement Bill in the current Parliamentary term.

#### **Action 13 – Public bodies leadership including sustainable procurement**

We want to see public bodies, including the Scottish Government itself, leading by example on sustainable resource use and waste prevention following their new Climate Change Act duties to act sustainably. We will:

- roll out sustainable procurement training to over 300 key buyers across the wider public sector in Scotland;
- embed sustainable procurement and zero waste advice and support into The Procurement Journey (best practice guidance);
- participate in a Zero Waste Scotland-led project to improve environmental performance across the Scottish Government Estate;
- support the work of the Public Sector Climate Action Group to lead by example on the zero waste agenda.

#### **2.4.7 Questions – Influencing behaviours**

*M. We are interested in receiving feedback on these proposals, including communications, designed to influence behaviours of individuals and organisations to use material resources more efficiently.*

*N. Do you support the proposal of introducing a charge for carrier bags (action 10)? In particular we would welcome views on the key aspects of the proposals:*

- *including all retailers*
- *including all single use / disposable carrier bags, regardless of material*
- *setting the minimum charge at 5p*
- *the exemptions proposed in Annex 2*
- *making the scheme cost neutral for retailers*
- *directing net revenues to good causes – including your views on the types of good causes to be included*
- *design of the reporting system*

### **3. MEASURING PROGRESS**

This proposed Programme for the Efficient use of our Materials is also designed to meet the requirements of the 2008 Waste Framework Directive for a waste prevention programme. The Directive requires appropriate benchmarks for waste prevention measures, with indicators to monitor these.

Waste prevention is defined by the Directive as “*measures taken before a substance, material or product has become waste that reduce:*

- (a) the quantity of waste;*
- (b) the adverse impacts of the generated waste on the environment and human health; or*
- (c) the content of harmful substances in materials and products;”*

In measuring progress with delivery of this programme we want to consider economic and environmental impacts, as well as the quantity of waste produced.

#### **3.1 Reducing Environmental Impact**

We estimate that an average tonne of household waste is responsible for 2 tonnes of carbon emissions<sup>33</sup> (including production, use and disposal). By focussing on preventing high-carbon waste streams, such as clothing, food and metals, we can reduce the carbon intensity of waste at every stage of its life.

#### **3.2 Delivering a Zero Waste Economy**

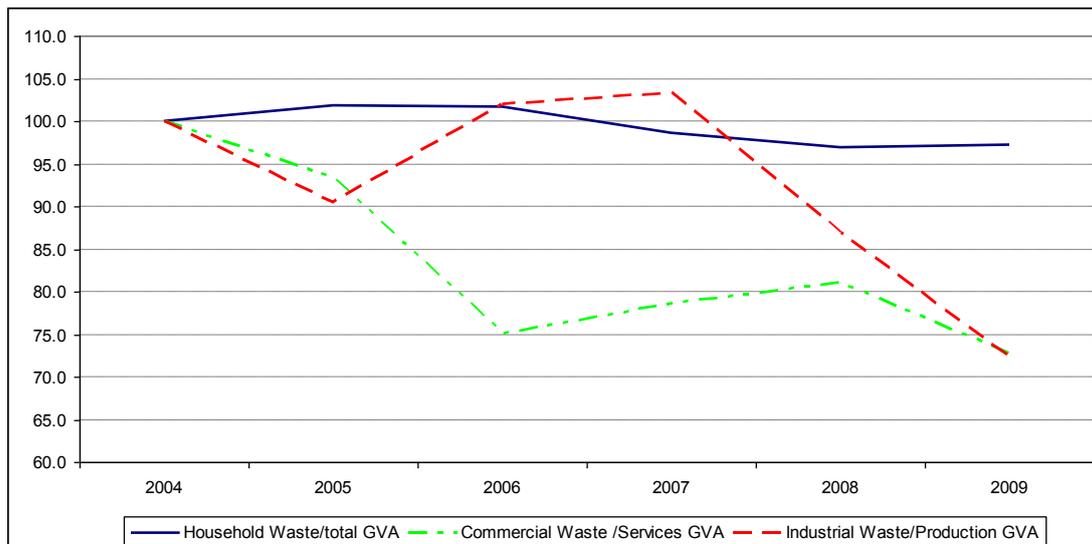
The Scottish Government’s commitment to a zero waste society is clear. As well as reducing the absolute quantity of waste arising, waste prevention activity must also ensure that the link between economic growth and increased waste arisings is broken. Our Government Economic Strategy gives clear priority to accelerating economic recovery and includes a focus on resource efficiency to drive sustainable economic growth and develop a more resilient economy.

Materials resource efficiency is a key facet of this. Through the actions in this consultation, we need to ensure that Scotland gains the benefits of more effective use of resources and that economic recovery does not lead to an increase in waste arisings. The figure below shows trends in „waste intensity“ in Scotland for 2005-2009 (measured as the ratio of household, commercial or industrial waste arisings to economic output).

Household waste intensity stays broadly the same over these years. Industry and commerce waste intensity has sharply reduced since 2007; in other words, it has been decoupling waste and economic performance. This programme seeks to continue this trend.

---

<sup>33</sup> There are several gases which cause global warming. In order to be able to compare global warming potential it is necessary to convert these into one unit – termed „CO2 equivalents“ or“ CO2eq”



### 3.3 Headline 5% Waste Reduction target and Key Indicators

To set our overall direction and to provide an overall focus for materials resource efficiency and waste prevention activity, we want to set ambitious targets that are capable of being achieved through the actions set out in this consultation.

#### Headline Target

We propose to set an overall target of a **5% reduction in all waste by 2015**, against a baseline year of 2011. (2011 will see a new methodology for more accurate commercial and industrial waste figures.)

We also propose setting a **longer term vision of a 15% reduction in all waste by 2025**. This, coupled with our ambitious recycling targets, would put us on a path towards a one-planet living approach in line with our vision for a low-carbon, sustainable future for Scotland.

The 2015 target will be weight based and we will look to develop carbon measures that sit alongside.

To ensure that activities on waste prevention are heading in the correct direction, the following headline indicators will be monitored:

- The **amount of waste produced**, in total and by household, commerce and industry and construction and demolition.
- The **carbon impact of waste** is also a key indicator. Understanding the whole-life impacts of waste (including prevention) is crucial to delivering a low carbon and zero waste economy. At present, this can be measured for household, commercial and construction and demolition waste.
- The **amount of waste produced per unit of GDP/ GVA** in Scotland to show how quickly we are moving along a pathway to a zero waste economy, and to ensure that the Economic Strategy is complimented by this proposed Programme for the Efficient use of our Materials.

### **3.4 Future Indicators and Research**

Waste arisings are a function of use of materials and products. As well as waste arisings, there is therefore a need to investigate the **total amount of raw materials used**, and the amount of raw materials used per unit of GDP/ GVA. The EU Resource Efficiency Roadmap proposes using such a measure of resource productivity.

The **carbon impact of industrial waste** is not well understood at present and this will be investigated further. We are investigating scope to develop a single indicator for the carbon impact of waste in Scotland, bringing together the carbon-savings benefits of recycling and waste reduction.

Investigating trends in attitudes and self reported behaviours would also help us understand the extent of cultural changes within Scotland.

Finally, there is a need to understand better the role resource efficiency can have in **securing and creating jobs**.

We will continue to look at scope for investigating these areas further in future research.

### **3.5 Questions – Targets and indicators**

*O. We would welcome comments on these proposed targets and indicators, in particular views on the merits of an absolute target or one relative to GDP, given the strong relationship between economic growth and waste generation in previous years.*

## **ANNEX 1: PRODUCER RESPONSIBILITY FOR PACKAGING (ACTION 8)**

Producer responsibility legislation<sup>34</sup> across England, Scotland and Wales requires producers and retailers to take responsibility for promoting the recycling and recovery of packaging.

Producer responsibility is an extension of the "polluter pays" principle. It aims to ensure that businesses which place products on the market take responsibility for those products once they have reached the end of their life.

The regulations require businesses that handle more than 50 tonnes of packaging a year and have a turnover of more than £2m to recover and recycle specified tonnages of packaging waste each year. The amount each business has to recover is determined by three factors:

- the amount of packaging the business handles;
- the business recovery and recycling targets for the year;
- the activity the business carries out on packaging (eg packing, filling, converting)

The existing legislation requires businesses producing or selling products to report on the amounts of packaging sold onto the UK market and contribute towards its recycling. Reprocessors (recyclers) and exporters also have to report on quantities of materials they deal with. However, it is likely that the system supports less recycling in Scotland compared with areas of greater population density in England. It is estimated that 50-52% of Scottish packaging waste is recycled<sup>35</sup>, below the recycling rate for the UK as a whole (59-61%).

*We are consulting on a proposal to amend the system to require identification of packaging sold and collected here to enable Ministers to make future adjustments to make the system work better for Scotland.*

This annex describes a set of proposals designed to make those adjustments in as light-touch a way as possible, to deliver the Scotland-specific reporting we are seeking while keeping the additional requirements on businesses to a minimum.

Several distinct groups are affected by the Producer Responsibility regulations and will be impacted by the proposed changes. We have grouped these into:

- Retailers
- Supply chain
- Importers
- Recyclers/reprocessors and exporters
- Compliance schemes

---

<sup>34</sup> The Producer Responsibility Obligations (Packaging Waste) Regulations 2007

[http://www.legislation.gov.uk/ukxi/2007/871/pdfs/ukxi\\_20070871\\_en.pdf](http://www.legislation.gov.uk/ukxi/2007/871/pdfs/ukxi_20070871_en.pdf)

<sup>35</sup> <http://scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/17103/responsibility>

## **Retailers**

Retailers are best placed in the packaging chain to know whether their packaging is likely to become waste in Scotland. Many of the major retailers will know on a store-by-store basis what their sales are (and therefore the packaging content) and it would be relatively simple to separate the sales in Scotland using postcodes or store identification codes. There is an assumption that the vast majority of product packaging sold in Scotland will arise as waste in Scotland and that the effect of any cross-border movement is neutral.

*We therefore propose that retailers who are already required to report under the Producer Responsibility regulations on packaging of products sold will also need to provide a separate figure for the proportion sold in Scotland.*

This would require retailers to amend their current recording and reporting system.

*Question H-1: Do you agree with this approach? Please give reasons.*

We would welcome in particular the views of retailers already reporting under these regulations.

## **Supply Chain**

This group covers:

- **Raw material manufacturers** (those who extract virgin material for packaging, e.g. manufacture of aluminium sheets or plastic pellets. Share of responsibility = 6%)
- **Convertors** (those who convert raw materials into packaging; share of responsibility = 9%)
- **Packers/ Fillers** (those who fill packaging with goods; share of responsibility = 37%)

In our view, it would be difficult in most cases for businesses at the start of the supply chain (furthest away from the point at which the packaging becomes waste) to determine whether their product ends up as waste in Scotland or another part of the UK.

*We therefore propose that supply chain companies who are already required to report under the PR regulations on packaging of products sold will only be required to provide evidenced estimates for the proportion sold in Scotland.*

One option could be for these businesses to develop an allocation method in which a set percentage is applied to all packaging they manufacture or use. It is then assumed that this percentage becomes waste in Scotland. Businesses could be required to produce evidence to demonstrate these percentages are reasonable. This could include providing actual details of the amount of their packaging that becomes waste in Scotland; this may be easier for those businesses closer to the point of sale (eg packer / fillers).

*Question H-2: Do you agree with this approach? Please give reasons.*

We would welcome in particular the views of businesses already reporting under these regulations on the following points:

*Question H-3: Do you agree with the proposal that those in the pre-retail supply chain should be permitted to use a set allocation of their total output as 'Scottish' waste?*

*Question H-4: If the supply chain businesses chose to provide evidence of the exact amount of their product ends up as waste in Scotland, what evidence should be accepted?*

*Question H-5: Should a distinction be made between the different stages of the supply chain?*

### **Importers**

Importers collect the “rolled up” obligations for activities that take place outside the UK. This ensures that when packaging becomes waste, 100% of the obligation is accounted for. A producer who imports packaging for the purpose of selling, e.g. imported bottles of wine, will collect the rolled up obligations (for the activities carried on outside the UK) of 52% (37%+9%+6%) for the imported bottles, and then the 48% selling obligation when the bottles are sold.

*We therefore propose that similarly to retailers, importers who are already required to report under the PR regulations on packaging of products sold will also need to provide a separate figure for the proportion sold in Scotland.*

*Question H-6: Do you agree with this approach? Please give reasons.*

We would welcome in particular the views of importers already reporting under these regulations.

### **Reprocessors (recyclers) and Exporters**

Reprocessors and exporters can choose to become accredited (by SEPA or the Environment Agency, depending on their location). Accredited reprocessors and exporters submit data on the tonnages of packaging waste they have reprocessed in the UK or exported for reprocessing abroad. For every tonne of packaging waste they reprocess (or export for reprocessing) they are allowed to issue evidence of reprocessing in the form of a Packaging Waste Recovery Note (PRN) or a Packaging Waste Export Recovery Note (PERN). These are then purchased by producers (or compliance schemes) to show that they have had the required amount of packaging waste recycled on their behalf.

*We propose that reprocessors and exporters who wish to issue Scottish PRNs/PERNs would need to demonstrate that the packaging waste was originally collected in Scotland.*

In our view, this is unlikely to require significant extra resource as the Duty of Care requires that waste transfer notes record the origin of the waste.

As the existing accreditation system is voluntary, it is suggested that the additional Scottish evidence is also voluntary. If the evidence fetches a higher

price in the market, it will be more attractive to reprocessors to make the additional investment in administration to record the necessary details.

*Question H-7: Do you agree with this approach? Please give reasons.*

We would welcome in particular the views of reprocessors and exporters already reporting under these regulations.

### **Compliance Schemes**

We anticipate that compliance schemes will have a key role in helping enable their members respond to the requirements of any amended Producer Responsibility scheme. Compliance schemes will be incentivised to work in partnership with local authorities and reprocessors to ensure that evidence of recycling of Scottish packaging waste is available.

### **Packaging Waste Collectors (Including Local Authorities)**

Although they don't have obligations to report data on packaging and packaging waste, packaging waste collectors could benefit from these proposals through an increase in demand for quality Scottish recyclable materials. As the demand for Scottish evidence develops, the demand for Scottish recyclate will increase. Local Authorities and other collectors in Scotland could benefit from these proposals through the payment of higher prices by reprocessors and exporters.

### **Compliance and Fraud/Double Counting Prevention**

In the proposed system, SEPA would extend its existing monitoring of registered compliance schemes and reprocessors to ensure that Scottish evidence is only issued for waste arising in Scotland. We do not anticipate that the extra resource required will be large.

As waste from Scotland will potentially be dealt with in other parts of the UK, and we anticipate that reprocessors and exporters will wish to issue SPRNs/SPERs on Scottish waste, we would require the co-operation of the relevant agencies to ensure compliance by companies operating outwith Scotland. This will be an important aspect of our dialogue on these proposals with the UK and other devolved governments.

*Question H-8: We would welcome further views on the proposed approach to prevent fraud and double counting.*

## **ANNEX 2: CARRIER BAGS – (ACTION 10)**

### **Purpose**

We propose to reduce the number of carrier bags used in Scotland by legislating to require retailers to charge for bags; with a voluntary agreement that net proceeds (estimated at £5-6m per annum based on an 80% drop in bag usage) will be donated to charitable causes, a proportion of which will be for waste and litter prevention.

We want to establish a robust system which leads to much greater reuse of bags while keeping administrative burdens to a minimum.

### **Main Proposals**

We are therefore proposing a system consistent with that in place in Wales, to allow us to learn lessons from their implementation and to ease the administrative burdens on UK-wide retailers.

We propose to:

- a. *Include all retailers in Scotland.* Although supermarkets dispense the majority of single-use plastic bags, including all retailers would capture nearly all bags dispensed and create a level playing field between different types of retailer.
- b. *Include all single-use/disposable carrier bags, regardless of material.* We do not want to create an incentive to switch from plastic to types of bags with a higher environmental footprint, through manufacture, storage and transport.
- c. *Set the minimum charge at 5p.* Research demonstrates that a 5p charge could deliver reductions of at least 60%
- d. *Exempt carrier bags being used for some specific reasons.* We do want to allow flexibility in the regulations to allow exemptions. Primarily, exemptions would be made when consumers have to use a bag and/or where a re-usable bag would not be appropriate. These situations could include:
  - Bags intended for food hygiene (e.g. raw unpackaged meat or vegetables)
  - Bags intended for confidentiality (e.g. medicines or family planning products)
  - Bags intended for health and safety (e.g. unpackaged blades or bags on any sort of public transport)
  - Live plants in soil, fish and other aquatic creatures in water
  - Pre-packaged items
  - In airports after passing through security, as consumers will be prevented by current security regulations from using bags that are not tagged and recognisable as being from outlets that are within the security cordon
  - Mail order bags

- Gusseted box liners
- Small paper or plastic bags

To prevent advantage being taken of exemptions for items in larger bags, we propose that these exemptions will apply only when the bag is being used to transport exempted items.

- e. *Make the scheme cost-neutral for retailers* – We would like to create a reporting system that does not create additional costs for retailers to run. Therefore, we propose that retailers will be able to take their costs for administering the system out of the proceeds of the charge.

### **Proceeds to Good Causes**

The legislation that allows for charging also allows for the Scottish Ministers to direct net proceeds (i.e. profit after administrative costs have been deducted, estimated at £5-6m if an 80% drop is achieved) to be used for „environmental protection or improvement or to any other purposes that may be reasonably regarded as analogous“. However, we are aware that some retailers already charge for carrier bags and donate profits to various charitable causes. Rather than interfere with this practise, which has obvious benefits, we would like to reach a voluntary agreement with retailers that they donate net proceeds to good causes, some which should include litter prevention, waste prevention and recycling.

### **Monitoring and Reporting**

Retailers would be expected to monitor and report on the numbers of single use bags dispensed, the cost of administering the charge, the amounts donated to charity and the recipient of the proceeds. We would want the reporting system to be as easy as possible. We anticipate that large retailers would already have systems in place to monitor the numbers of carrier bags they dispense as part of their normal stock procedures and therefore would not find this reporting requirement too onerous. Costs of modifying the systems could be considered a reasonable one-off deduction from proceeds. We recognise that the system should be as simple as possible for SMEs; therefore we would not require central reporting for carrier bags dispensed but would expect some form of public display of the proceeds and their recipient – this could be as simple as a poster or certificate from a charity.

We anticipate that these proposals will require little enforcement input from Local Authorities due to self-regulation and reporting requirements. We expect retailers, being in the public eye will act responsibly, charging and reporting in line with the regulations and donating net proceeds in line with the proposed agreement. We also expect that members of the public will report any failure to charge (as has been the case in the Republic of Ireland). We anticipate that this will keep enforcement burdens at a minimum.

Any retailer failing to charge would be subject to the normal range of civil sanctions Local Authorities can apply, including fixed penalty notices, a sliding scale of variable financial penalties, and specific steps to ensure compliance in the future.

### **ANNEX 3 – SUMMARY OF QUESTIONS**

**Business Resource Efficiency** – We are interested in receiving feedback on our business resource efficiency proposals and the priorities to help businesses in Scotland benefit from more efficient use of materials. We also want to hear from companies interested in finding out more about specific proposals or assisting with their development.

*A. We have already decided to go ahead with the integrated Business Resource Efficiency service and are engaging directly with stakeholders over how it should be focused. We would however welcome views on the priorities for the new integrated service. (Action 1)*

*Comments:*

*B. We would welcome views on the type of “Zero Waste Pledge” companies might be interested in signing up to and the type of support needed. (Action 3)*

*Comments:*

*C. For companies and organisations involved in the construction sector, do you agree with the principle of a new voluntary agreement, following on from “Halving Waste to Landfill”, encompassing the impact of design on both construction waste and materials? We would also welcome views on the level of ambition for such an agreement. (Action 4)*

*Agree/Partially Agree/Disagree*

*Comments:*

*D. For companies with existing “Resource Utilisation Assessments” (Action 5), we want to hear any lessons or good practice points to help us make sure future guidance on RUAs is as useful as possible in enabling relevant businesses realise resource savings?*

*Comments:*

*E. For waste management companies, would you be interested in signing up to a voluntary agreement to provide resource efficiency advice to your customers? (Action 6)*

*Comments:*

*F. For other companies, what more would you want to see in terms of advice on resource savings and recycling from your waste management contractor? (Action 6)*

*Comments:*

**Products and packaging** – We are interested in receiving feedback on the proposals designed to encourage more efficient use of material resources in providing the products and packaging we need.

*G. Do you agree with the actions identified to support sustainable design of products? (Action 7)*

*Agree/Partially Agree/Disagree*

*Comments:*

*H. Do you agree with the principle of amending the existing Producer Responsibility Regulations to enable separate identification of packaging waste arising in Scotland; to use as a baseline for subsequent separate Producer Responsibility targets for packaging waste in Scotland (Action 8)?*

*Agree/Partially Agree/Disagree*

*Comments:*

*H-1: Do you agree with the approach regarding retailers? Please give reasons.*

*Agree/Partially Agree/Disagree*

*Comments:*

*H-2: Do you agree with the approach regarding the retail supply chain?*

*Agree/Partially Agree/Disagree*

*Comments:*

*H-3: Do you agree with the proposal that those in the pre-retail supply chain should be permitted to use a set allocation of their total output as 'Scottish' waste?*

*Agree/Partially Agree/Disagree*

*Comments:*

*H-4: If the supply chain businesses chose to provide evidence of the exact amount of their product ends up as waste in Scotland, what evidence should be accepted?*

Comments:

*H-5: Should a distinction be made between the different stages of the supply chain?*

Comments:

*H-6: Do you agree with the approach regarding importers? Please give reasons.*

*Agree/Partially Agree/Disagree*

Comments:

*H-7: Do you agree with the approach regarding reprocessors and waste exporters? Please give reasons.*

*Agree/Partially Agree/Disagree*

Comments:

*H-8: We would welcome further views on the proposed approach to prevent fraud and double counting.*

Comments:

*I. For those involved in the sale of electronic and electrical equipment or collection of WEEE, we would welcome views or good examples of the most effective approaches to making it easier for people to return more of this type of equipment for recycling and reuse.*

Comments:

*J. We would be interested in your views on priorities to increase the resilience of the Scottish economy to supply risks associated with critical materials, and for maximising the opportunities for Scottish businesses.*

Comments:

**Reuse** – We are interested in receiving feedback on the proposals designed to encourage greater reuse of items.

*K. Do you agree with the actions identified to increase the supply and demand for quality reusable items (Action 9)?*

*Agree/Partially Agree/Disagree*

*Comments:*

*L. Do you feel it would be (a) practical and (b) valuable to collect separate data on the quantities of materials 'prepared for reuse' with a view to developing a preparing for reuse target contributing towards overall recycling targets?*

*a) Comments:*

*b) Comments:*

### **Influencing behaviours**

*M. We are interested in receiving feedback on the proposals, including communications, designed to influence behaviours of individuals and organisations to use material resources more efficiently:*

*Comments:*

*N. Do you support the proposal of introducing a charge for carrier bags (Action 10)? In particular we would welcome views on the key aspects of the proposals:*

- including all retailers*
- including all single use / disposable carrier bags, regardless of material*
- setting the minimum charge at 5p*
- the exemptions proposed in Annex 2*
- making the scheme cost neutral for retailers*
- directing net revenues to good causes – including your views on the types of good causes to be included*
- design of the reporting system*

*Agree/Partially Agree/Disagree*

*Comments:*

### **Indicators and Monitoring**

*O. We would welcome comments on these proposed targets and indicators, in particular views on the merits of an absolute target or one relative to GDP, given the strong relationship between economic growth and waste generation in previous years.*

*Comments:*

## ANNEX 4 – HOW TO RESPOND TO THIS CONSULTATION

**We invite written responses to this consultation by Friday, 28 September.**

This consultation, and all other Scottish Government consultation exercises, can be viewed online on the consultation web pages of the Scottish Government website at <http://www.scotland.gov.uk/consultations>.

### How to respond

We would be grateful if you could use the [Respondent Information and Consultation Questionnaire](#) provided for your response, or clearly indicate which questions or parts of the consultation paper you are responding to. This will aid our analysis of the responses received.

In any case you **must** complete the Respondent Information section of the questionnaire (pages 1-2) and return it to us with your response (please see **„handling your response’** below).

The form is published as a Word document under „other downloadable documents“. You can download it from the website and save it on your PC (click „File – Save as – and give it a new name).

Please send your response to: [EQCAT@scotland.gsi.gov.uk](mailto:EQCAT@scotland.gsi.gov.uk)

Or by post to:

Tim Chant  
Zero Waste Delivery

*Scottish Government  
Victoria Quay  
Leith Docks  
Edinburgh  
EH6 6QQ*

### Handling your response

We need to know how you wish your response to be handled and, in particular, whether you are happy for your response to be made public. Your completed Respondent Information Form, which forms part of the consultation questionnaire, will help us to treat your response appropriately. If you ask for your response not to be published we will regard it as confidential and we will treat it accordingly.

All respondents should be aware that the Scottish Government is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and so would have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

## **Next steps in the process**

Where respondents have given permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be made available to the public in the Scottish Government Library by 26 October and online by and on the Scottish Government consultation web pages by 02 November 2012. You can make arrangements to view responses by contacting the SG Library on 0131 244 4552. Responses can be copied and sent to you, but a charge may be made for this service.

## **What happens next?**

Following the closing date, all responses will be analysed and considered along with any other available evidence to help us prepare a final Energy Efficiency Standard for Social Housing in Scotland. We aim to issue a report on this consultation process in December 2012.

## **Comments and complaints**

If you have any comments about how this consultation exercise has been conducted, please send them to: [EQCAT@scotland.gsi.gov.uk](mailto:EQCAT@scotland.gsi.gov.uk)

Or by post to:

Tim Chant  
Zero Waste Delivery

*Scottish Government  
Victoria Quay  
Leith Docks  
Edinburgh  
EH6 6QQ*

# ANNEX 5 - SAFEGUARDING SCOTLAND'S RESOURCES – A PROGRAMME FOR THE EFFICIENT USE OF OUR MATERIALS CONSULTATION AND PARTIAL BUSINESS REGULATORY IMPACT ASSESSMENT



## RESPONDENT INFORMATION FORM

Please Note this form **must** be returned with your response to ensure that we handle your response appropriately

### 1. Name/Organisation

Organisation Name

Title Mr  Ms  Mrs  Miss  Dr  *Please tick as appropriate*

Surname

Forename

### 2. Postal Address

Postcode	Phone	Email

### 3. Permissions - I am responding as...

<b>Individual</b>	<b>/</b>	<b>Group/Organisation</b>
<input type="checkbox"/>		<input type="checkbox"/>
<i>Please tick as appropriate</i>		

**(a)** Do you agree to your response being made available to the public (in Scottish Government library and/or on the Scottish Government web site)?

*Please tick as appropriate*  Yes  No

**(b)** Where confidentiality is not requested, we will make your responses available to the public on the following basis

*Please tick ONE of the following boxes*

Yes, make my response, name and address all available

*or*

Yes, make my response available, but not my name and address

*or*

Yes, make my response and name available, but not my address

**(c)** The name and address of your organisation **will be** made available to the public (in the Scottish Government library and/or on the Scottish Government web site).

Are you content for your **response** to be made available?

*Please tick as appropriate*  Yes  No

**(d)** We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

*Please tick as appropriate*  Yes

Please return this information form with your comments by 28 SEPTEMBER 2012.

Your comments with this form may be sent by post, e-mail or fax to:-

Postal address:           Zero Waste Team  
                                  Scottish Government  
                                  Area 1-H  
                                  Victoria Quay  
                                  Edinburgh EH6 6QQ

E-mail:                     [EQCAT@scotland.gsi.gov.uk](mailto:EQCAT@scotland.gsi.gov.uk)

Fax:                        0131-244 0211



© Crown copyright 2012

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/> or e-mail: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk).

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

ISBN: 978-1-78045-912-7 (web only)

The Scottish Government  
St Andrew's House  
Edinburgh  
EH1 3DG

Produced for the Scottish Government by APS Group Scotland  
DPPAS13100 (06/12)

Published by the Scottish Government, June 2012

w w w . s c o t l a n d . g o v . u k