

# **Policy Statement**

## **Zero Waste Regulations**

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## Ministerial Foreword



It is just over a year since I launched our Zero Waste Plan. A plan that sets Scotland on a path to realising the full resource potential of items we often discard, as well as to becoming one of the highest performing recycling countries in Europe.

I have seen first hand the challenges and rewards that a resource minded approach to waste management can bring, most recently in Edinburgh. The roll out of their new food waste collection service is certainly challenging – it brings food waste collections to households across a dense city landscape. But it also brings tangible rewards – the food waste will be used to generate green energy and produce high quality fertilisers for Scottish farmers.

The Zero Waste Regulations are an important step towards my vision of a zero waste Scotland. The Regulations create the statutory framework in which future recycling services and waste treatment will be rolled out across Scotland. A renewed emphasis on source segregation of recyclable materials, complemented by bans on these important resources going to landfill or incineration, will help Scotland achieve its target of 70% recycling by 2025. By placing the emphasis on recycling, these measures will help meet my aim of minimising the need for residual waste management capacity in Scotland.

A ban on municipal biodegradable waste going to landfill by 2020, the first of its type in the UK, will not only ensure that we extract value from any remaining non-recyclable waste, it will also make a substantial contribution to lowering emissions of methane from landfill sites – a key contributor to Scotland's greenhouse gas emissions.

We have consulted extensively on these Regulations and have responded carefully to the points raised by stakeholders. To ensure that there is sufficient time for small businesses to adopt new recycling services, we have moved introduction of separate food waste collection from small businesses to 2015. We have also extended the roll-out period for food waste collection from households, thus ensuring there is sufficient time for local authorities to engage with the public and business prior to the roll-out of new services.

These Regulations are an important step towards delivering my vision for a zero waste Scotland, but ultimately it is the responsibility of each and every one of us to recognise that everything we use and throw away is a resource which has a value – a value that we should try to preserve, capture, and use again wherever possible.

*Richard Lochhead*

## Summary

Following extensive consultation, this paper sets out the decisions that will underpin the final form of the Zero Waste (Scotland) Regulations that will be laid before the Scottish Parliament.

The main changes from our consultation in January 2011 are:

- a refined timetable that will drive forward the changes needed to meet the Zero Waste Plan and our recycling targets, while also providing sufficient lead-in times for local authorities, businesses and other waste producers. This includes moving the requirement for small businesses to recycle their food waste to 2015;
- more time to establish the right mix of waste treatment infrastructure across Scotland by moving the date for introducing the ban on landfilling biodegradable material to 2020. The longer lead-in time between the requirement for separate collection (of food waste) and the ban on landfilling biodegradable material will allow recycling behaviours and practice to become more established. This will provide a more accurate picture of what infrastructure is needed to deal with non recyclable (residual) waste and will help avoid unnecessary reliance on residual waste treatment;
- an extended roll-out period for local authorities to introduce food waste collection services. This will ensure that local authorities have time to establish robust collection services and raise awareness of these services and their importance with householders;
- a set of criteria establishing where local authorities must offer a food waste collection to householders and businesses, thus ensuring that households across Scotland benefit from a similar level of service;
- introduction of a ban on the non-domestic use of food waste disposal units and digesters to macerate or pre-treat food and dispose of it through the sewer network. This will ensure that the resource value of food waste as a source of green energy and as a replacement for traditional fertiliser can be realised;
- introduction of measures to ensure that the quality of materials collected and processed is maintained, thus helping to extract the best environmental and economic value from waste. In the longer term, this will help ensure that there is a greater likelihood that key materials are recycled in Scotland, supporting the local economy and insulating industry from global fluctuations and unpredictable future quality demands;
- provision to allow local authorities to co-mingle food and garden waste, but only where similar environmental benefits to separate food waste collection can be demonstrated and achieved;
- a requirement (or a voluntary agreement) for local authorities to provide the public with a biennial report showing how and where collected materials are being recycled, and the actions that are being taken to ensure the best environmental outcomes are being achieved.

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## 1. Introduction

### 1.1 Purpose

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The Scottish Government consulted on the draft Zero Waste (Scotland) Regulations (the Regulations) in early 2011<sup>1</sup>. In reply to this consultation, and ongoing dialogue with stakeholders, this paper sets out the decisions that will underpin the final form of the regulations that will be laid before the Scottish Parliament.

The Scottish Government is not consulting on the positions set out in this paper as there has already been extensive consultation on the policy. Comments are however sought on the draft Business Regulatory Impact Assessment (BRIA) that accompanies this policy statement.

### 1.2 Scotland's journey towards zero waste

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We all produce waste; by throwing things away and, indirectly, through the waste produced during the manufacture of the goods and services we consume. However, one person's waste is another person's resource. In this context, waste can drive economic activity – whether through recycling and energy recovery or through more efficient use of resources.

In 2009 Scotland produced 17.11 million tonnes of waste. Although progress is being made to reduce waste arisings and to recycle key materials, the resource value of much of Scotland's waste remains untapped: it is estimated that there is over £100million worth of untapped resources in household waste alone, and this figure is set rise as the value of discarded materials increase.

The Scottish Government's Zero Waste Plan<sup>2</sup>, launched in June 2010, set out actions to deliver important changes to how Scotland treats and manages waste. The plan is an economic strategy and a resource strategy – not simply a waste strategy. It aims to maximise the value of all the material resources we use in our economy, helping to create new business opportunities as well as savings to existing businesses and local authorities in how they manage waste. To support this aim, the plan includes ambitious recycling targets, including a 70% recycling rate for household and all other waste streams by 2025.

Delivering these changes has the potential to bring about significant benefits to Scotland's economy and environment, such as:

- supporting and expanding Scotland's recycling industry will help reduce our demand for expensive virgin materials while also creating new opportunities for economic growth and jobs in the recycling sector;
- replacing our reliance on landfill through increased recycling will substantially reduce methane emissions from landfill, a greenhouse gas 24 times more potent than carbon dioxide;

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<sup>1</sup> <http://www.scotland.gov.uk/Publications/2011/07/07130019/0>

<sup>2</sup> <http://scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/wastestrategy>

- treating food waste at anaerobic digestion facilitates will allow us to harness green energy and produce high quality fertilisers;

Ultimately, the Zero Waste Plan aims to establish a policy and regulatory framework that will allow businesses and the Scottish economy to benefit from the resource value of waste in a way that adds long term value to Scotland's economy whilst tackling fundamental waste and resource issues in the short term.

### **1.3 The Zero Waste Regulations**

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Waste management is a service upon which businesses and households across Scotland depend. The Regulations will support delivery of the Government's zero waste agenda and targets while also ensuring that the minimum level of service on offer is better than that of today.

The historic focus of waste management has been to divert material from landfill; an outcome very much in line with the old European Waste Framework Directive. Landfill tax has provided a financial incentive to avoid landfill and meet this outcome.

For source segregated waste streams, this has often meant that they have gone on to be recycled. Mixed waste (waste from which recyclable materials have not removed at source) presents a different set of challenges. The market has often responded to these challenges by offering residual waste treatment facilities, which tend to be recovery operations like incineration and Mechanical and Biological Treatment. Like all large infrastructure, such plants have long operational life spans and although this type of infrastructure is needed, an overreliance on this approach to managing Scotland's waste would trap key materials within the mixed waste stream, hindering opportunities to capture and recycle high quality materials.

To drive forward changes to how waste is managed in Scotland, the Regulations introduce a series of regulatory measures to:

- maximise the quantity and quality of materials available for recycling and minimise the need for residual waste treatment capacity;
- move residual waste management up the waste hierarchy so as to extract resource value from those materials we can't recycle;
- create the market certainty needed to support investment by businesses in the recycling, materials reprocessing and waste management sector;
- improve public confidence in recycling to help reaffirm Scotland's position as a recycling nation.

A key consideration in reviewing the draft regulations has been creating a regulatory framework that minimises, as far as possible, short term financial impacts (e.g. investment in new equipment and processes) without hindering opportunities for longer term financial savings or economic opportunities.

The Regulations are part of a suite of actions under the Zero Waste Plan. Other important actions include the development of a waste prevention strategy and actions to promote change in attitude and behaviour towards waste.

## 2. Consultation on the regulations

### 2.1 Consultation proposals

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The draft Zero Waste Regulations we consulted on earlier this year set out our proposals for new statutory measures to support delivery of our zero waste agenda. The following statutory actions were proposed:

**Source segregation and separate collection of the key recyclable materials.**

These materials are paper, card, glass, metals and plastics. Food waste is also targeted due to the environmental benefits of managing biowastes separately. Different regulatory requirements for separate collection apply to the waste collection services provided to householders by local authorities.

**A ban on mixing separately collected recyclable materials.** Once recyclable materials have been segregated, they must be managed in a way which does not compromise their quality. The proposed regulations would give SEPA statutory powers to ensure that source segregated materials are not mixed with other wastes or materials in such a way as to hinder their recycling potential.

**A ban on landfilling the key recyclable materials.** This supports the upstream source segregation and separate collection measures taken to maximise levels of quality recycling by banning those same materials from landfill when they are source segregated and separately collected.

**A restriction on the inputs to thermal treatment facilities.** Not all recyclable waste is segregated at source and in some cases it will end up in the residual waste stream. To ensure materials which could have been reused or recycled are not incinerated, residual waste must be pre-treated to remove key recyclable materials, providing a second opportunity to capture recyclate missed at the source segregation stage. Alongside the other proposals, this will ensure that Scotland does not simply move from mass landfill to mass incineration.

**A ban on waste disposed of to landfill based on organic content.** This was proposed in order to protect the environment from the potential impacts of landfilling biodegradable waste and drive residual waste management up the waste hierarchy.

### 2.2 Consultation findings

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Our consultation exercise showed strong support for the principles underpinning our draft regulations, however a number of technical and practical issues were raised, for instance:

- cost to local authorities of putting in place appropriate collection and management infrastructure to collect recyclable materials, including food waste from households;
- cost to local authorities to procure appropriate residual waste management infrastructure contracts, i.e. time needed to manage transition from current practice and contracts to services which deliver zero waste objectives;

- time for the waste management industry to develop suitable collection services for their customers and invest in appropriate management infrastructure;
- the extent of pre-treatment required before residual waste can be incinerated;
- the potential for the ban on biodegradable waste to landfill to result in 'orphan' waste streams with no alternative management or disposal outlet;
- the need for a longer lead in time to put in place appropriate residual waste infrastructure prior to the commencement of the ban on landfilling biodegradable waste.

### 3. The Waste Hierarchy and quality recyclables

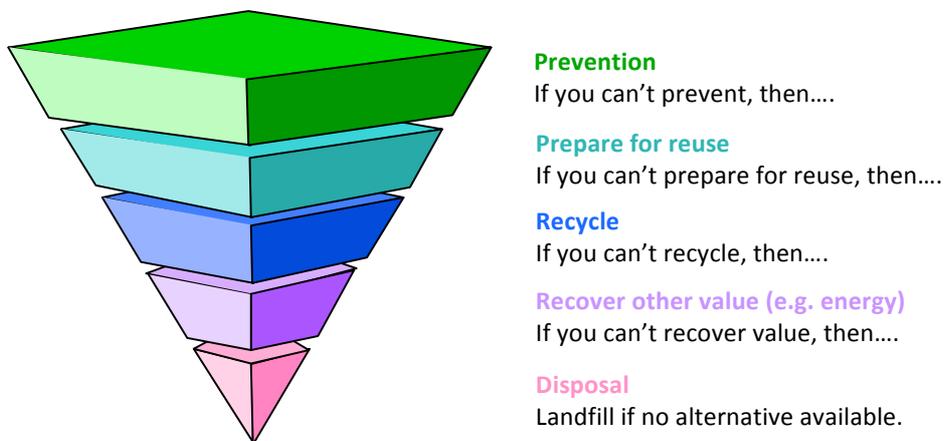
#### 3.1 The Waste Hierarchy

The Waste Hierarchy (Figure 1) is a key concept in waste management. Driving waste management up the waste hierarchy is central to the development of sustainable waste management in Scotland and the drive to a zero waste society.

High quality recyclable materials are needed to drive waste up the waste hierarchy. Without quality materials, there is a risk that materials are down-cycled (e.g. glass to aggregate rather than back to glass) and the true resource value of the materials is lost. The quality of recyclables is determined by decisions taken at each stage of recycling, from collection and transport to sorting and treatment.

Reasons to increase the quality of recyclables collected include:

- there is a demand for it from reprocessors;
- it commands a higher market price;
- higher quality recyclate is more likely to be turned into higher quality products;
- there is a greater chance it will be recycled in Scotland, supporting the local economy and insulating industry from global fluctuations and unpredictable future quality demands.



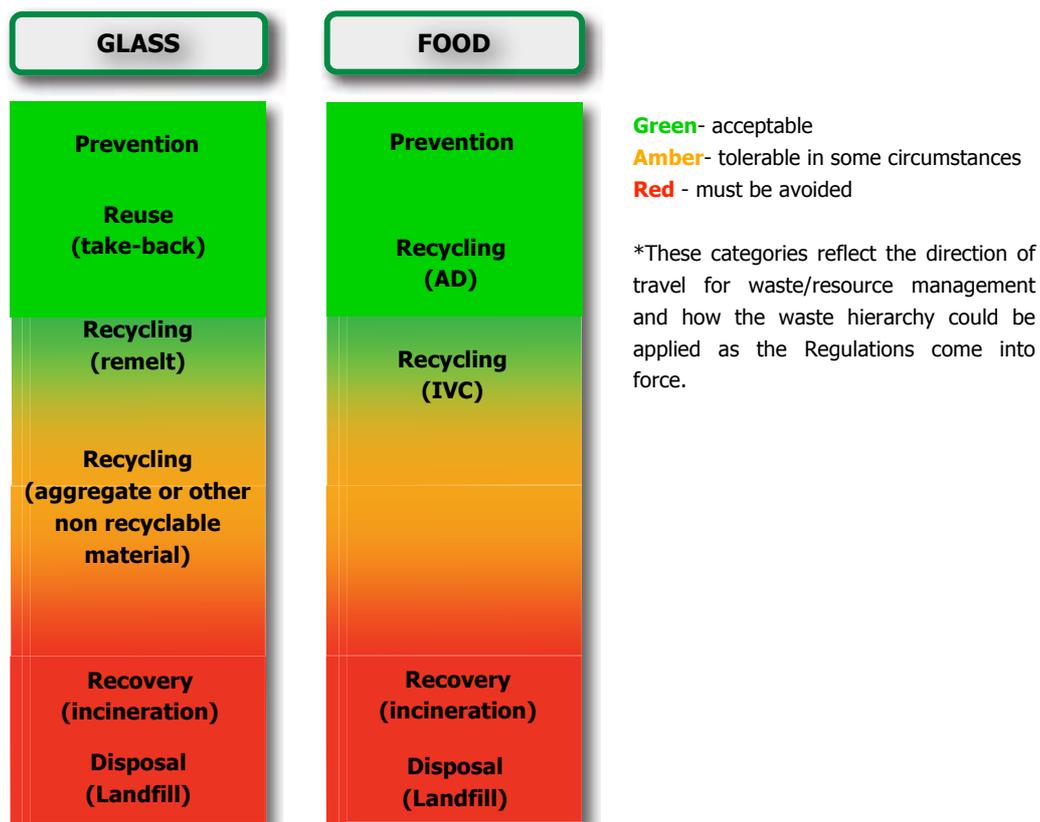
**Figure 1** - The Waste Hierarchy

The Waste (Scotland) Regulations 2011, make it the duty of “*any person who produces, keeps or manages waste (...) to take all such measures as reasonable in the circumstances to apply the waste hierarchy*”. A similar requirement to take account of the waste hierarchy has been placed on Local Authorities through the Waste Management Licensing (Scotland) Regulations 2011.

To supplement this existing duty it is the Scottish Government’s intention to issue guidance on the waste hierarchy. The guidance, which will be developed in close consultation with industry, will include information on:

- what the waste hierarchy means in practice;
- how it should be applied to a range of common materials and products;
- what public bodies and businesses need to do to apply the waste hierarchy.

An example of how information might be presented is provided in Figure 2.



**Figure 2** Example of how guidance on the waste hierarchy might be presented

### 3.2 Promoting Quality Recyclable Materials

The European Commission has made it clear that under the revised Waste Framework Directive (rWFD), co-mingling of recyclable materials will only be permitted where it meets the necessary quality standards for the relevant recycling sector and promotes high quality recycling. Indeed, the recent draft guidance from the Commission on the interpretation of key provisions of the rWFD states:

*“co-mingled collection of single waste streams may be accepted as a derogation from the requirement for separate collection, but the benchmark of “high quality recycling” of separately collected single waste streams has to be regarded; only if subsequent separation can achieve high quality recycling similar to that achieved*

*with separate collection, co-mingling is acceptable against Article 11 of the rWFD and the principles of the waste hierarchy”.*

We intend to stipulate in the regulations that co-mingling of dry recyclables will only be permitted where the hierarchy is not undermined (e.g. glass separated for re-melt) and the outputs from the materials recycling facility (MRF) are of comparable quality to that collected separately at kerbside.

To further promote high quality recyclables, we intend to include provision in the Regulations to enable Scottish Ministers to issue quality standards (or codes of practice) for recycling. This provision would allow Scottish Ministers to introduce statutory based standards if it is believed intervention is needed to drive improvements. The preference is for industry to work with local authorities, and Zero Waste Scotland, to deliver such standards, thus avoiding the need to introduce statutory measures.

In collaboration with the recycling sector, Zero Waste Scotland has begun work to develop codes of practice that will help promote quality inputs and outputs from MRFs.

## 4. Timetabling key provisions

The Zero Waste Plan sets out an ambitious agenda for changing how Scotland views and manages its resources. The pace at which these changes are taken forward will be vital to their success: moving too slowly could mean we miss key opportunities and savings, progress too quickly and new services could be introduced before the public and businesses are ready to respond to the changes needed.

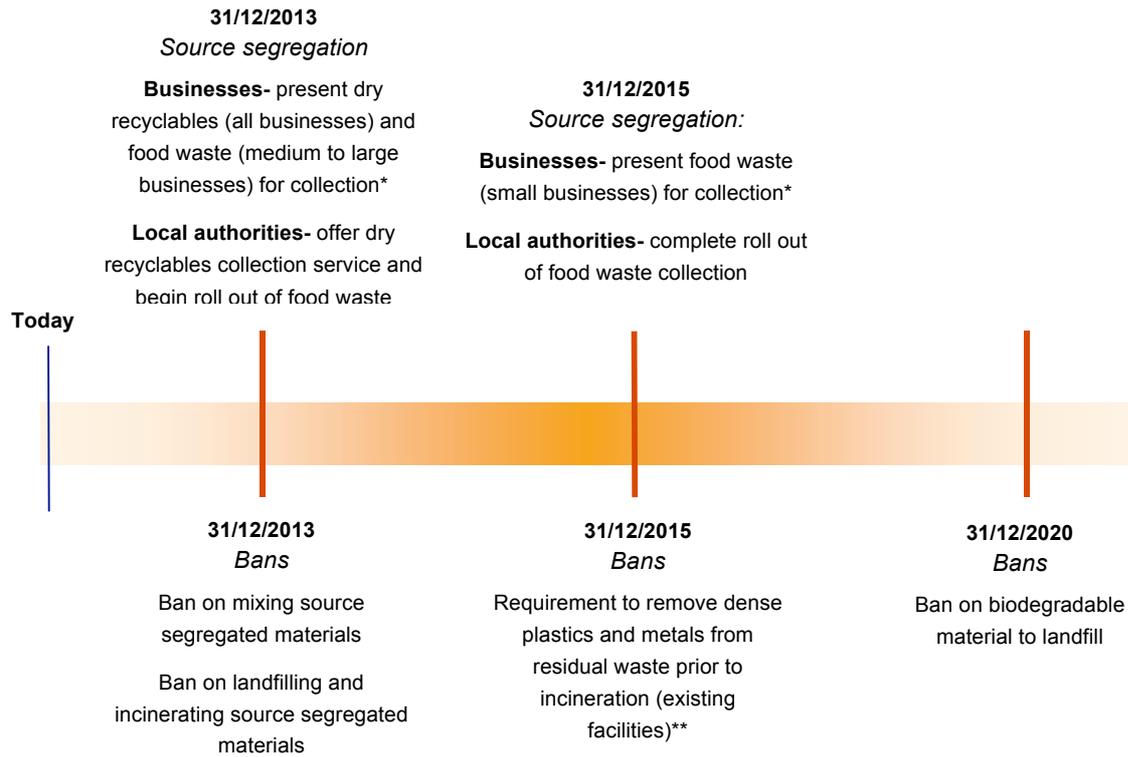
The timetable for introducing the measures set out in the Regulations is therefore critical to successful roll out of new recycling services and to ensuring that:

- there is sufficient time for businesses, particularly small businesses, to adopt new recycling services;
- there is sufficient time for engagement with the public and business prior to the roll out of new recycling services. This will help ensure that the true potential of new services can be realised;
- residual waste treatment infrastructure capacity in Scotland is kept to a minimum.

Figure 3 summarises the revised programme of roll out for the Regulations. Key changes include:

- moving introduction of source segregation of food waste for small businesses to 2015;
- providing local authorities with a longer roll out period for offering food waste collection to households;
- moving the date for introducing the ban on landfilling biodegradable material to 2020. This will allow recycling behaviours and practice to become more established, thereby providing a more accurate picture of what infrastructure is needed to deal with non recyclable (residual waste). This will contribute to the Government's aim of minimising the need for residual waste management capacity in Scotland.

These requirements and deadlines are discussed further in the preceding sections.



\* Applies to businesses involved in food production, food retail or food preparation

\*\* For new facilities, this requirement will come into effect on commencement of the regulations

**Figure 3 – Revised timeline for introducing regulatory measures**

## 5. Source Segregation and Separate Collection

### 5.1 Presentation and collection of recyclables from businesses

The consultation showed wide support for prioritising high levels of closed loop recycling. i.e. recycling a waste material into the same original material or product-glass to glass, or paper to paper. The producer of waste, through their management at source, determines the value which can subsequently be derived from that material. In order to maintain a high resource value, it is vital that recyclable materials are separated from other wastes at source.

It is widely recognised that the waste management industry through their regular engagement with waste producers (their customers) have an important role to play in communicating how best to adapt to, utilise and exploit the benefits of the new recycling services and waste management approaches that will need to be delivered to ensure compliance with the Regulations. The new approach to waste management being introduced under these regulations represents real opportunity for the waste management sector as the sale of recyclate to the reprocessing market makes up an increasing proportion of revenue. It is only right however that waste producers receive support and guidance on the most cost effective approach to managing their waste and in the adoption of new services. Scottish Government will, in consultation with the industry, seek to explore how best this can be delivered.

As set out in the consultation we intend to bring forward a statutory requirement for all waste producers (with the exception of householders) to separate the key dry recyclables (glass, metal, plastic, paper and card) and food at source. This duty will apply to all waste producers including, for example, shops, offices, factories, restaurants, schools and hospitals, whether public or private.

We intend to retain the date set out in the consultation for source segregation and separate collection of dry recyclables- 2013. We also intend to retain the ban on mixing separately collected wastes with other waste where such mixing would hinder future recycling.

The consultation also set out our intentions to introduce a requirement on those involved in food production, food retail or food preparation to present food waste for collection separately from all other wastes. This included premises involved in food manufacture, canteens, kitchens, schools, restaurants and supermarkets. We intend to retain this requirement. For the avoidance of doubt, the requirement to present food separately for collection extends to commercially organised concerts, exhibitions, shows or sporting events where food is being prepared and/or sold. The requirement to present food waste separately for collection will not apply to premises where no food is produced on, prepared on or sold from that premises and the requirement will only apply where a food waste collection service is available.

In recognition of the practicable challenges that food waste collection presents to some businesses, particularly small business with limited space, we intend to phase the introduction of segregation and separate collection of food waste to create a longer lead in time for small businesses involved in food production, food retail or food preparation. For all medium to large businesses (based upon FTE), we intend

to retain the 2013 date for source segregation and separate food waste collection. For small businesses the requirement will be moved to 2015. For commercial shows, exhibitions, concerts and sporting events the requirement will apply from 2013.

With respect to the health sector, we are acutely aware of the need to ensure that the collection and movement of waste does not impact on measures or practices in place to control the spread of infection. The Regulations will therefore include provisions to this effect.

To assist businesses in adapting to and meeting the requirements of the Regulations Zero Waste Scotland is delivering support through various programmes. It is anticipated that the scope of this support will continue to be expanded in response to the needs of the business sector. Examples of the type of support presently available are provided in Box 1.

#### **BOX 1: Zero Waste Scotland – Examples of Business Support Programmes**

##### **SMEs**

Free online training courses have been designed to give SMEs the tools needed to improve their resource efficiency and environmental performance, and identify the associated economic benefits.

##### **Food & Drink Sector**

Food and drink manufacturers and apply for free Resource Optimisation Reviews. These reviews look at the full range of activities on site in order to identify opportunities to cut costs, improve efficiency and maximise environmental benefits.

##### **Construction Sector**

Support is available to the public sector, major contractors, house builders and major designers in a variety of areas including procurement document reviews, management system reviews for waste recording and reporting and the provision of awareness and training sessions.

##### **Compost Producers (Waste Management Sector)**

Free consultancy support is available to compost producers and operators of anaerobic digestion facilities to achieve certification to PAS100 and PAS110.

##### **Food Waste Collections & Infrastructure**

Grant funding is available to assist with meeting start-up costs for commercial food waste services or additional infrastructure at existing treatment facilities.

## **5.2 The Use of Food Waste Disposal Units**

The Scottish Government intends to supplement the requirement for source segregation and separate collection of food waste with a ban on the non-domestic use of food waste disposal units (macerators) and food waste digesters where the 'treated' food is discharged into public sewers directly or indirectly.

The key drivers for this ban are to ensure that the resource value of food waste can be realised and that we manage food waste in compliance with Article 4 of the revised Waste Framework Directive which requires Member States to apply the hierarchy as a priority order in waste prevention and management legislation and

policy. The ban will deliver this by maximising the availability of material for collection and treatment in anaerobic digestion facilities that are able to meet the industry standard that enables the digestate to be used by farmers under conditions set by Quality Meat Scotland. This ban will be aligned with the roll out of separate food waste collection services to small businesses and will come into effect from the end of 2015.

Many other countries throughout Europe have banned or intend to ban the use of food macerators. In some cases it is to ensure that the resource value of food waste, as a source of energy and high quality fertiliser is realised; in other instances it is in response to the impact the material has on the sewer network. Water companies advise that the disposal of macerated food waste into the sewer network increases the risk of blockages, sewer flooding, environmental pollution, odours and rodent infestations. Indeed, both Water UK and Scottish Water advise that the loss of flow capacity and associated risk of flooding caused by the build-up of fat, oil, grease and other debris is already a major concern and something that the sewer network was never designed to deal with.

### **5.3 Local Authority Recycling Services**

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As outlined in our consultation, we intend to introduce a requirement on local authorities to offer separate collection of glass, metals, plastics, paper and card to householders by 2013. In the same way as the current duties on local authorities to offer black bag waste collection services to householder and businesses, this new duty will apply to householders and to businesses. This will ensure that businesses, particularly small business receive a minimum level of service.

In our consultation, we indicated that there would also be a requirement to collect textiles. In response to views expressed during the consultation, which included concerns over competition for materials with charities, we have decided not to place a statutory requirement on local authorities to collect textiles. The decision on whether to collect textiles will be at the discretion of individual councils. Local authorities will wish to note that the use of both recycling points and bring banks as part of an overall separate collection service is acceptable. Section 3.2 provides information on the comingling of dry recyclates.

The consultation also set out our proposals for introducing food waste collection services to households. With support from Zero Waste Scotland (BOX 2), many local authorities are already introducing food waste collection services.

We are however keenly aware of the importance of providing a practicable lead in time for introducing this service, particularly as the success of the services is dependent on changes in behaviours and practice by householders. We therefore intend to provide with a longer lead in time for rolling out food waste collection services. Local authorities will be required to have initiated the roll-out of a household food waste collection programme by end of 2013, and to have completed roll-out by end of 2015.

An important point raised by local authorities in our consultation was the need for clarity on where it will be economically, environmentally or practicable to roll out food waste collection. The Regulations will therefore identify areas of the country based on population density and travel distance between towns where local authorities will be required to offer separate collection of food waste from households and businesses. These areas will be based upon the Scottish Government urban rural classification<sup>3</sup>, and will cover the following (Annex 1):

- large urban areas (with a population over 125,000);
- other urban areas (with a population of 10,000 to 125,000); and
- accessible small towns (with a population of 3000 to 10,000) and within 30 minutes drive of a settlement of 10,000 or more.

In recognition of the challenges currently facing local authorities in providing a food waste collection service to high density housing (e.g. high rises greater than 4 floors), the statutory requirement to collect food waste will be limited to households that can present a bin to kerbside. However, providing food waste collection to areas of high density housing will be important to achieving the zero waste plan targets. Some local authorities are already trialling collection systems for tenements, and we expect local authorities to work together and with the waste management industry and Zero Waste Scotland to develop collection systems suited to the unique challenges presented by high density housing.

To support this work, a collaborative project between COSLA, Zero Waste Scotland and SEPA is already underway to develop best practice guidance on collection services for use by local authorities, which will provide an avenue for sharing experiences between local authorities.

Where separate food waste collection is not being offered, there will be a requirement on local authorities to promote actions to prevent food waste and/or home/community composting. To assist in delivering this action Zero Waste Scotland has put in place a PAS100 support scheme for community composting groups. Under this scheme grants will be provided to assist community composting groups in meeting the costs associated with achieving PAS100 accreditation.

As outlined in Section 3, the Scottish Government also intends to issue guidance on the waste hierarchy. Upon advice from local authorities, the Government may issue further guidance to support roll out of the Regulations, which could include guidance on offering collection services in areas of high density housing.

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<sup>3</sup> <http://www.scotland.gov.uk/Resource/Doc/933/0103172.pdf>

## BOX 2 Food waste support programme

In March 2010, Zero Waste Scotland rolled out its food waste programme. This programme provides technical and financial support to local authorities and businesses to help them make the important transition to food waste collection. Since the programme was established, 21 Councils have expressed an interest in the support available from Zero Waste Scotland and Scottish Futures Trust. In the main, this support has been from Councils wishing to establish a business case for the rollout of food waste to households. There has also been a number of requests for support from the private sector wishing to take advantage of the funding that is available.



Zero Waste Scotland also provides technical support and householder campaign support to Councils. 22 Councils took advantage of this support in 2010/11 and there are a number of Councils already engaged with both technical and campaign support this year. Targeted and intensive campaigns with recycling advisers speaking to people on their doorstep, have been demonstrated to drive up participation in recycling, even in locations that have been traditionally difficult to engage with.

## 5.4 Food vs Bio waste

Available evidence indicates that separate weekly collection of food waste typically delivers the highest yields, the best environmental outcomes and is likely to be less expensive than systems collecting food and garden waste together on the same frequency – mainly down to the fact that when food waste is collected and managed separately it allows garden waste to be treated using lower cost methods such as windrow composting. It is likely that as the costs of residual waste management increase over time, the benefits of separate food waste collections will also increase.

The Scottish Government's preference is therefore for separate collection of food waste from households, businesses and other premises e.g. schools, hospitals. Wherever possible, food waste collected separately should be treated in PAS compliant Anaerobic Digestion (AD) facilities as this provides scope to capture the methane produced during processing to produce energy. The residues from the AD process can be used as a nutrient rich soil conditioner, thereby replacing manufactured chemical fertilisers. Food waste to AD can also help contribute to:

- Scotland's zero waste recycling targets;
- 2020 Landfill Directive target on biodegradable waste;
- achievement of Renewable Heat targets;
- improving the sustainability of food production through the use of biofertilisers.

In some circumstances, for instance where there is access to a dry AD facility, where there is existing in-vessel-composting infrastructure and/or where a weekly garden waste collection service is available, a co-mingled biowaste (food and garden waste) collection may provide a similar environmental outcome to separate food waste collection.

For these reasons, we intend to permit co-mingled garden and food collection services where they can be demonstrated to deliver equivalent or better

environmental outcomes as a separate food waste collection service. Key to achieving an equivalent outcome is achieving similar yields for food waste.

The business case analysis for food waste collections that is being undertaken by Zero Waste Scotland on behalf of local authorities across Scotland will provide the evidence needed to determine which collection service is appropriate for individual local authorities. The Scottish Government does not intend to create enforcement arrangements to police decisions by individual local authorities. However, if need be, further guidance may be issued to ensure that local authorities apply common principles when determining their preferred approach to rolling out a food waste collection service.

Following reception at treatment facility, we intend to include provision that would allow for the blending of food wastes with other suitable organic waste materials to facilitate the efficient and effective treatment of the food waste at that facility. This will allow separate food waste collection systems to be offered without restricting that use of facilities (e.g. In Vessel Composting) that require garden waste to form part of their feedstock.

## **5.5 Availability of recycling information to the public**

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Presenting reliable and understandable information to the public on what happens to recycled materials will be key to supporting the behavioural changes needed to deliver the step changes in recycling rates required to deliver the zero waste plan targets- if we expect the public to do more we must retain, and where necessary, build trust in recycling (BOX 3).

In addition to these actions and the actions being taken forward by individual local authorities, we still see an opportunity to provide the public and other stakeholders with clear and accurate information on how waste is being managed in their area.

We are therefore in discussion with COSLA on the roll out of a voluntary commitment with all local authorities to produce biennial reports setting out:

- a summary of the destination of material collected for recycling;
- actions to apply the waste hierarchy so as to encourage options that deliver the best overall environmental outcome;
- actions being taken to coordinate investment in infrastructure to promote high quality and quantities of recyclables.

Our intention is to work with COSLA to develop appropriate templates and guidance that will ensure that these reports are short, focused and tailored to the target audience- the public. If agreement can not be reached through COSLA and its members prior to the Regulations being laid before parliament, our intention is to introduce a statutory requirement to produce and publish these reports.

### **BOX 3: New recycling services- Scottish local authorities**

Local authorities across Scotland are already taking important steps to meet the ambitious agenda set out by the Government's Zero Waste Plan. Examples include:

**City of Edinburgh Council** began the rollout of food waste collections to 20,000 households in April this year, including 5,000 high-density households. They now have plans, supported by Zero Waste Scotland, to roll this service out to households across Edinburgh.

**Fife council** have rolled out a new collection service which has seen recycling rates of up to 65%. The new collection service focused on a simple swap in the size of the bin used to collect waste for landfill allied to the provision of new recycling services for food waste, cans and plastics.

**East Ayrshire Council** rolled out a food waste collection and plastics collection to 10,000 households in December 2010. The Council have been overwhelmed with the response from residents and are expecting to exceed 40% recycling. Responding to the success of this initiative, the Council are considering the options to expand the service.

**Falkirk, Clackmannanshire, North Ayrshire, Perth & Kinross and Inverclyde Councils** are all either planning to, or already have in place, an integrated waste strategy encompassing all waste streams from all sectors, in line with the Zero Waste Plan and meeting the requirements of the Regulations.

## 6. Thermal Treatment and Landfill Bans

### 6.1 Government policy on residual waste management

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It is the intention of the Zero Waste Plan and Regulations to:

- maximise the amounts of material available for recycling;
- minimise the need for residual waste management capacity; and
- ensure that only those materials that can't be recycled require some form of residual treatment/management.

There will of course always be a requirement for some form of residual waste treatment, but the measures being taken forward through the Zero Waste Regulations will significantly reduce both the volume and type of materials that will require residual waste treatment, e.g. incineration – the feedstock simply won't be available to feed large-scale plants or an extensive network of incinerators across Scotland.

### 6.2 Separately collected materials

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As set out in the consultation, we intend to introduce a ban on separately collected dry recyclables and food waste going to landfill. This ban is universal and applies regardless of the source of the waste. Banning these materials from landfill does not mean that they must be removed from mixed/unsorted waste prior to disposal in landfill sites. The ban will however ensure that materials that have been collected for recycling remain available for recycling. Mandatory source segregation and the household waste services provided by waste collection authorities, supported by education and enforcement will, over time, remove the key recyclable materials from the unsorted waste stream. We have not included a specific requirement to pretreat residual waste prior to landfill to remove key recyclates as the ban on biodegradable waste going to landfill will drive the residual waste stream into some form of pre-treatment that will provide an opportunity to remove further recyclates.

The consultation also set out restrictions on inputs to thermal treatment facilities that meant that only residual waste could go to incineration. We intend to retain this type of restriction, but for clarity we intend to simply place a ban on separately collected materials going to incineration. To ensure that the ban can be implemented in a practicable manner, it will be accompanied by a provision allowing rejects from sorting facilities to go for incineration.

We intend to introduce the ban on separately collected materials going to landfill and incineration in 2013, including the mixing of these materials. These measures will ensure that efforts put into recycling are not undermined later by poor management.

The lead in period before introducing these bans will give SEPA and Zero Waste Scotland time to:

- promote and support source segregation in a co-operative manner;
- communicate a strong regulatory position to stimulate activity; and
- avoid issues where a lack of processing infrastructure means that separately collected materials (e.g. plastics used in agriculture) go to landfill.

### **6.3 Pre-Treatment Prior to Incineration**

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To further avoid key recyclates that have not been separately collected being incinerated, we intend to include a provision requiring best available techniques to be used to remove marketable recyclate from residual municipal waste prior to incineration. This requirement will be introduced in a way that will allow the materials that are considered 'marketable' to be reviewed over time to reflect market trends and the viability of technology to extract materials. The initial focus will be on metals and dense plastics. The process of removing marketable recyclate can be done either on-site immediately before incineration or off-site with the residual element subsequently transported to the thermal treatment facility.

To avoid the need for transitional arrangements for existing EfW facilities, we intend to introduce the requirement to pre-treat at existing facilities from 2015. This will provide time for these facilities to set up the necessary pre-treatment arrangements, e.g. a simple MRF to extract these materials.

### **6.4 Ban on biodegradable material to landfill**

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As set out in the consultation on the draft regulations, the Scottish Government proposes to introduce a landfill ban on biodegradable material. The purpose of this landfill ban is:

- to reduce the volumes of waste being landfilled by directing unsorted waste to pre-treatment.
- to extract remaining resource value from the unsorted waste stream.
- to protect the environment from the climate change impacts of landfilling biodegradable waste.

Under this framework, unsorted waste will need to be treated to (i) remove recyclable materials, (ii) create a waste stream that can be used to recover energy, e.g. refuse derived fuel and (iii) produce a stabilised fraction for landfill.

This ban, which is the first of its type in the UK, is a key component of our zero waste agenda and will help us meet our ambitious waste and carbon emissions targets. By providing policy certainty to industry, the ban would also act to drive investment in new waste infrastructure across Scotland in alternatives to landfill.

We have listened carefully to concerns raised around the scope of the ban on biodegradable waste going to landfill, the date on which the ban would come into force and on how the biodegradable component of waste would be measured.

Specific concerns were raised through the consultation that the ban on landfilling biodegradable material could leave certain industrial wastes without a technically or financially viable outlet. We intend therefore to limit the scope of the ban to residual municipal waste. This captures over 90% of the biodegradable waste currently landfilled but keeps landfill as a 'home of last resort' for certain industrial wastes. Residual municipal waste is what is commonly understood to be 'black bag' waste and is the fraction remaining after the source separation of municipal waste fractions, such as food and garden waste, plastic, paper and card, metals or glass.

For example, industrial wastes such as tannery sludges and fleshings, fish and other animal waste, water treatment sludges, sewage works screenings, scrubbers from thermal treatment facilities would not be covered by the scope of the ban and will be permitted to move direct to landfill without pre-treatment.

We intend to push back the ban on biodegradable (municipal) waste going to landfill to 2020. Providing a longer lead in time between separate collection and the requirement for alternative residual waste treatment will allow for recycling behaviours and practice to become more established and ultimately ensure that residual waste treatment is aligned to Scotland's future waste needs and not over specified.

A number of respondents presented views on how biodegradable content should be defined and measured. To ensure that we adopt a practicable approach, we propose to use the definitions contained in the 2<sup>nd</sup> Draft of the Biowaste Directive ([http://www.compost.it/www/pubblicazioni\\_on\\_line/biod.pdf](http://www.compost.it/www/pubblicazioni_on_line/biod.pdf)) for the threshold. This approach uses different thresholds for wastes which have undergone different treatment processes.

If residual municipal waste undergoes a mechanical biological treatment prior to landfilling, the achievement of either a Respiration Activity after four days (AT4) below 10 mg O<sub>2</sub>/g dm or a Dynamic Respiration Index below 1,000 mg O<sub>2</sub>/kg VS/h shall deem that the treated residual municipal waste is no longer biodegradable waste in the meaning of Article 2(m) of Directive 1999/31/EC (the Landfill Directive).

If residual municipal waste is incinerated prior to landfilling, the achievement of a Total Organic Carbon value of less than 5% shall deem that the incinerated residual municipal waste is no longer biodegradable waste in the meaning of Article 2(m) of Directive 1999/31/EC (the Landfill Directive).

## 7. Implementing the Regulations

### 7.1 Implementation programme

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It is our intention to establish a joint implementation programme with Zero Waste Scotland and SEPA to support roll out of the Regulations. This will include establishment of sector specific support programmes, which may include realignment of existing programmes of support.

Some of this work is already underway, for instance the food waste programme is helping local authorities roll out food waste collection services, as well as supporting investment by business in food waste processing facilities. Similarly, a best practice project on collection systems is underway as is work to establish industry standards for inputs and outputs of material recycling facilities.

Communication will be vital to the successful implementation of the proposals and early campaign work to raise awareness of the new measures will be important. Successful implementation should significantly reduce the need for stringent enforcement measures being taken at a later stage. The delivery of effective communications and awareness raising and engagement of the waste management sector in delivering the messages directly to their customers will be key.

SEPA, Zero Waste Scotland and the waste management industry will have an important role in providing communications and advice to business ahead of and during implementation of the Regulations. It is envisaged that this work will take a number of forms for example,

- high level campaign work – trade press etc;
- preparation of materials for waste management companies to use when engaging with customers;
- one to one advice to business.

SEPA will engage with its regulated industries and others to advise on the new requirement. Zero Waste Scotland has a SME support and advice programme with the intention of reaching 3000 businesses per year.

## **7.2 Enforcement**

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The power to enforce Section 34 of the Environmental Protection Act 1990 is shared by both SEPA and the Local Authorities. It is vital that any draft legislation and Duty of Care Code of Practice maintains this position in order to maximise efficiencies in implementation and enforcement.

With regard to food waste collection, Local Authorities already visit many businesses to carry out trade waste inspections. For example, in North Lanarkshire the duty on businesses to produce waste contracts is used regularly by Environmental Protection Officers and Environmental Health Officers. In the financial year 2009/10 over 1000 duty of care inspections were made as part of their investigations into fly tipping complaints or proactive visits to businesses checking that appropriate arrangements are in place for waste removal.

SEPA's work tends to focus more on waste management facilities including illegal sites. SEPA regulates over 60 active landfills and the list of incinerator facilities making it well positioned to enforce the landfill and incinerator bans.

Although Zero Waste Scotland does not have a statutory function with respect to enforcing the regulations, their role is crucial. Effective communications and campaign actions should lead the rest of the work.

Detailed discussion with Local Authorities and SEPA on their specific roles will be taking place in the coming months to clarify roles and ensure that proportionate system of regulation and enforcement is established.

## **7.3 Guidance**

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A series of guidance papers will be issued to coincide with the Regulations coming into force as will a new Duty of Care Code of Practice. Drafts of these papers formed part of the consultation on the draft Regulations.

In summary, SEPA will issue guidance for landfill operators on the ban of separately collected materials going to landfill. They will also issue revised thermal treatment guidelines setting out how the restrictions on inputs to incinerators will be implemented.

Further guidance will also be issued by SEPA at a later date on the ban on biodegradable waste going to landfill. This will include guidance on the measurement of biodegradability.

As outlined earlier, the Scottish Government also intends to issue guidance on applying the waste hierarchy. Based on discussion with local authorities and the waste industry, the Scottish Government may issue further guidance on implementing certain aspects of the regulations.

## 7.4 Landfill Allowance Scheme

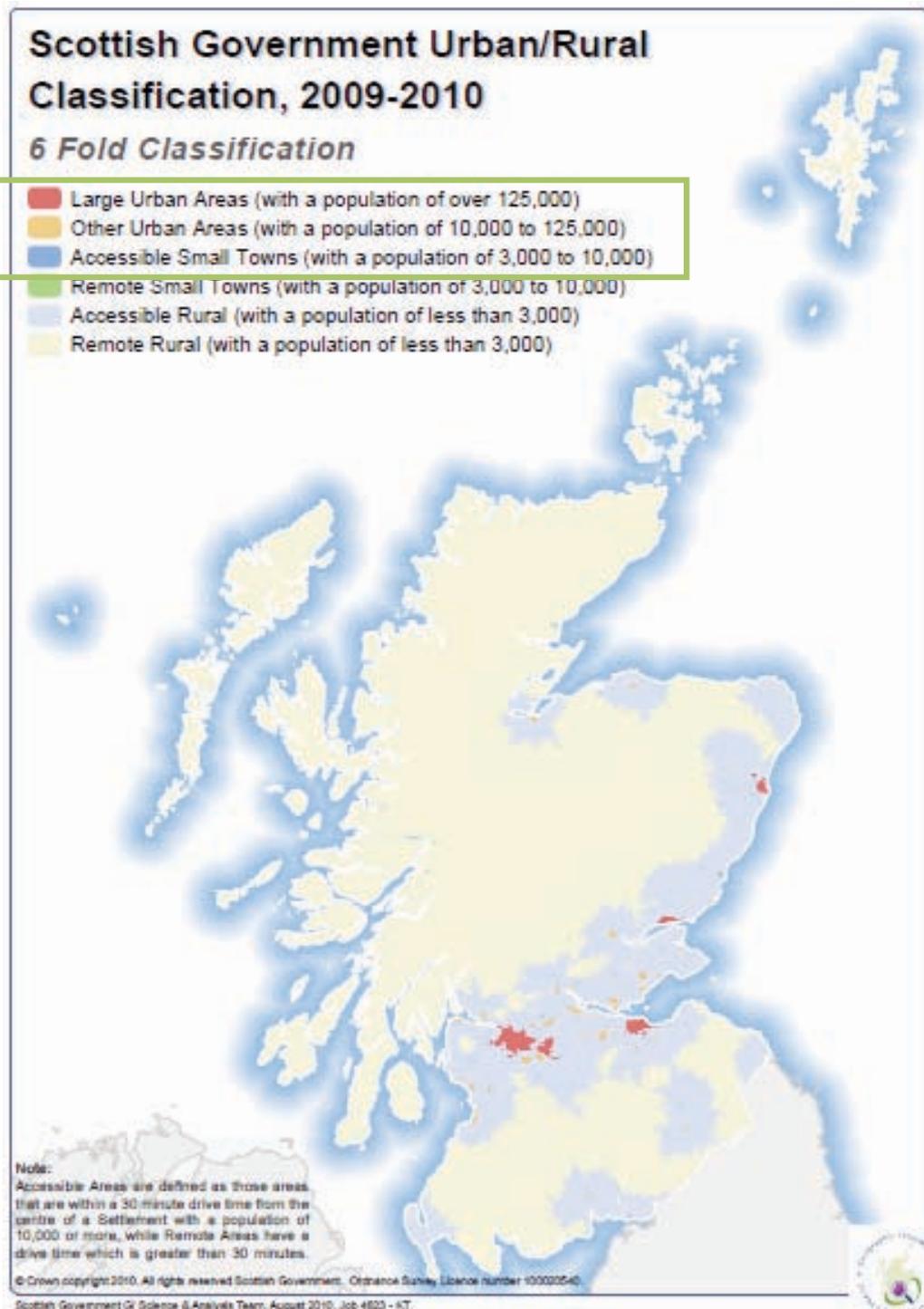
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When enacted the Zero Waste (Scotland) Regulations will revoke most of the requirements set out in the Landfill Allowance Scheme (Scotland) Regulations 2005 (the LAS Regulations). Whilst the Landfill Allowance Scheme has been successful in reducing the volumes of local authority controlled waste going to landfill, it is an approach that could only take us so far, particularly with the focus now being on maximising both the quantity and quality of recycling. The LAS Regulations were introduced in Scotland to deliver the landfill targets set out at article 5 of the Landfill Directive. However, under this Directive it would still have been permissible to landfill 1.26 million tonnes of municipal biodegradable waste in 2020. The Zero Waste Regulations go much further than this and aim to reduce to zero the amount of biodegradable municipal waste that can be landfilled beyond 2020. There is then good reason to revoke the majority of the requirements under the LAS Regulations.

It is our intention however that the requirement on local authorities to report waste data through Waste Data Flow be retained. Local Authorities will have a statutory duty to report quarterly no later than 42 days after the end of each quarter. It is also proposed that SEPA move towards publishing annual reporting, instead of quarterly, and that future reporting be based on a calendar year. Recycling figures can vary significantly from quarter to quarter in response to things like season trends. Publishing annual recycling figures will ensure that only true trend in recycling rates that reflect the effort the householders and business to recycle are presented.

## Annex 1

Criteria and map of areas where local authorities will be required to offer a food waste collection service.





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