



**Focus on Food Waste  
Dundee 01/09/10**

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Advisor**



# What is Zero Waste Scotland?

- A new single programme being created by the Scottish Government to support delivery of its Zero Waste Plan (June 2010).
- It will integrate the work of:  
*WRAP Scotland, Waste Aware Scotland, Keep Scotland Tidy, Remade Scotland, Envirowise in Scotland, NISP in Scotland, and some programmes delivered by the Community Recycling Network for Scotland.*





## Format

- **15:15-15:40 Food Waste Management & Recycling** (*Mark Weglarski , Zero Waste Scotland*)
- **15:40-16:00 Gleneagles Hotel, Auchterarder - Case Study** (*Fiona Smith, Gleneagles*)
- **16:00-16:20 Food Waste Recycling Service Provider, CORE** (*Ryan Paschke, CORE*)
- **16:20-16:30 Netregs Food Waste Tools** (*Alan Parnell, SEPA*)
- **16:30-17:00 Questions & Networking**





# Managing Food Waste





## Why Focus on Food Waste?

- 18-20 million tonnes of food waste per year in UK; 12m tonnes is commercial
- Increasing legislation & waste disposal costs
- Organic wastes break down in landfill producing greenhouse gases
- Most food waste is recyclable!





## Current & Forthcoming Drivers

- Landfill Tax rises
- Animal By-Products Regulations 2003/2009
- Municipal Waste Targets; EU Landfill Directive - *35% reduction of biodegradable municipal waste by 2020*
- CSR Reporting / Stakeholder Pressure
- Scotland's Zero Waste Plan June 2010
- Defra/Welsh Government Consultation on restrictions on landfilling





# Driver - Animal By Products Regs

*Meat/fish and other material from animals become animal by-products when the material is no longer intended for human consumption (even if still edible)*

- Animal carcasses and parts of animal carcasses (including fish) , gut contents , manure from farmed animals , shellfish and crustacean waste , feathers, wool, hair and fur
- Includes raw meat & fish; & cooked meats from factory processing
- Animal by-products cannot go directly to landfill until processed at approved facility (incineration, rendering etc)

**Catering Waste** (restaurants, catering facilities and kitchens) generally exempt from ABPs i.e can currently be landfilled

- Unless going to composting or biogas, to be fed to animals or derived from means of international transport (e.g. waste from foreign vessels)





# Driver - Animal By Products Regs

## Category 1 & 2 - High Risk Animal By-Products

- materials infected or suspected of being infected by BSE or Scrapie etc
- diseased animals, and animals which are not slaughtered for human consumption.

**Category 3 – Former Foodstuffs** fit (but not intended) for human consumption

- parts of slaughtered animals, blood, raw milk, fish caught in the open sea, and shells.

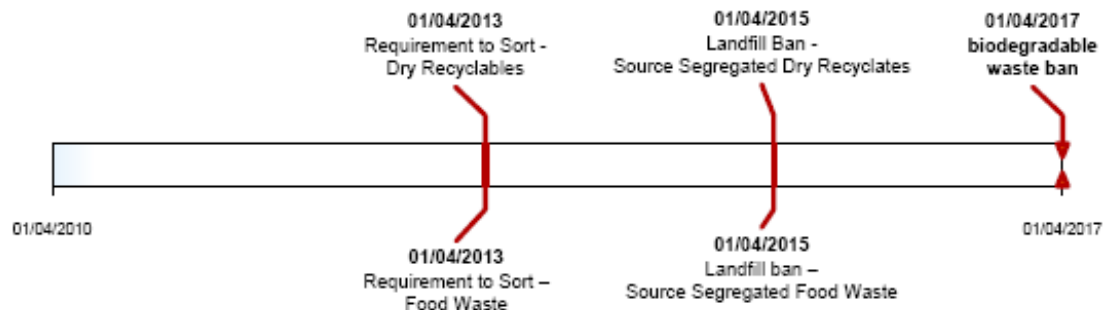
All banned from landfill without prior treatment (e.g. incineration, Composting, Anaerobic Digestion)





# Driver - Scotland's Zero Waste Plan 2010

- Proposed Ban on Biodegradable Waste to Landfill By 2017
- Proposed legislation to be introduced in 2011 & implemented by 2017 – Consultation on proposal in Autumn 2010
- Would apply to all households and businesses (including catering)

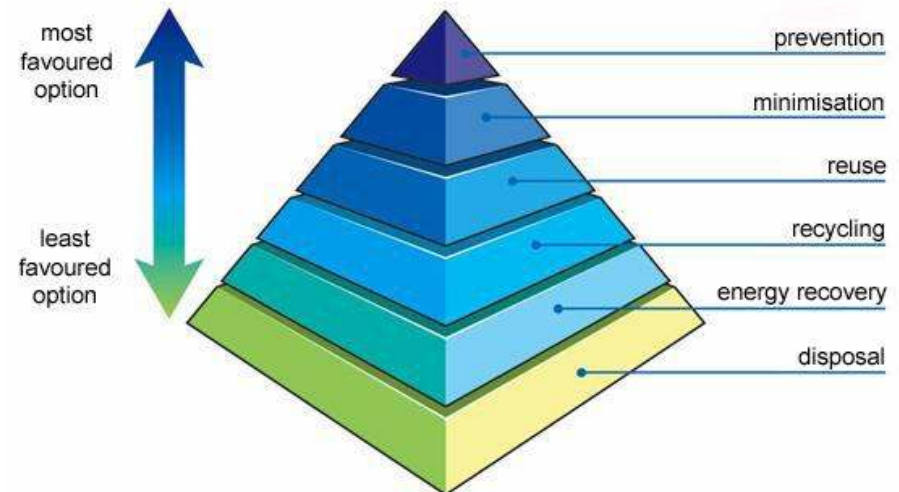




# First Steps: Reduce/Reuse Food Waste

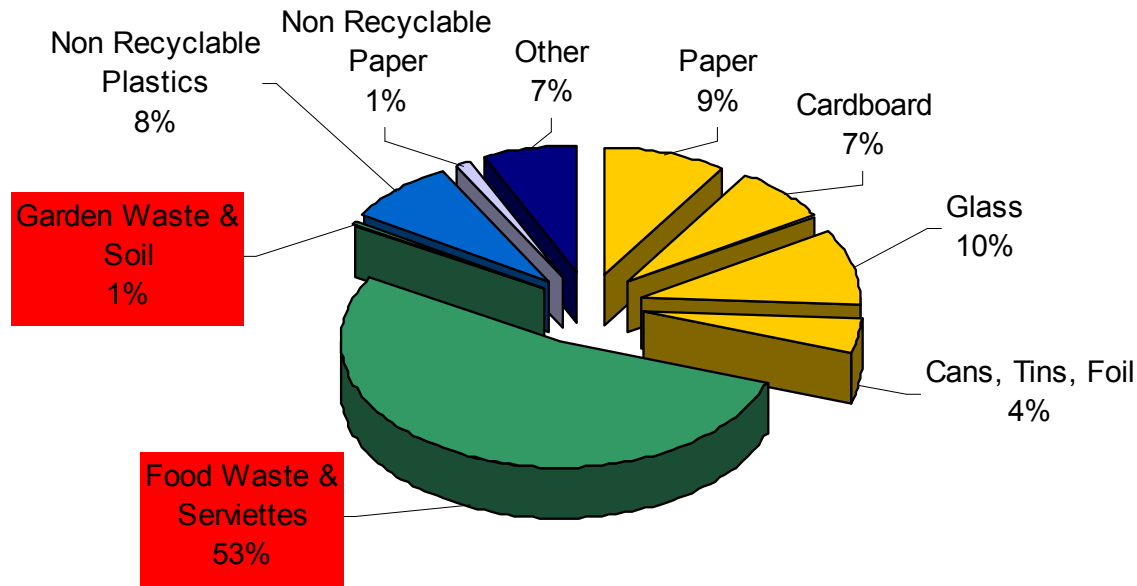
## Why is Food Thrown Away?

- Food rejection
- Not planning meals
- Not checking stocks
- Not taking a list
- Temperature in store
- Unclear about dates
- Unsure about storage
- Poor portion control
- Lack of confidence with "leftovers"
- Changing plans





# Breakdown of Waste for Average Hotel with Restaurant



[www.business.brookes.ac.uk/research/files/WasteCounts.pdf](http://www.business.brookes.ac.uk/research/files/WasteCounts.pdf)





# Waste Minimisation: Monitoring & Measuring

- Create inventory of your materials and processes to identify ways to minimise waste.
- Estimate % of food waste in skips, weigh or use conversion figures ~200kg/cubic metre\*
- Create benchmark figures e.g. volume of waste/cover/yr. Set KPI's
- Request Free Waste audit/assistance from ZWS if needed!



# Waste Segregation & Staff Awareness

- Prioritise and Set Action Plan & Targets
- Staff Training / Awareness Campaign
- Waste Champion and Green Team
- Good Signage and Segregation



[www.wasteawarebusiness.org.uk/poster.asp](http://www.wasteawarebusiness.org.uk/poster.asp)

**Keep  
Communicating**

**Can Recycling**  
let's get it sorted.

Can recycling points are located in all offices. Please use them to recycle your cans. Thank you.

**Paper Recycling Point**

Please use this Recycling Point to recycle paper:

<b>Yes Please ✓</b>	<b>No Thanks ✗</b>
Office paper	Envelopes
Newspapers	Laminated paper
Magazines	Plastic and glue bindings
Telephone directories	Staples
Brochures	
Catalogues	
Unwanted mail	

Thank you. The paper that you recycle will be collected and baled before being sent to reprocessors and used to make new paper products, such as newsprint and tissue paper.

For more information about Reducing, Reusing and Recycling at work visit [www.wasteawarebusiness.org.uk](http://www.wasteawarebusiness.org.uk)

Logos: natural Scotland, Waste Aware Business, Inven logo box, Waste Aware Business





# Food Waste Recycling Options

- On site Treatment: Green Cone & Green Johanna
- In-vessel Composting
- *Options to use compost on your land or*
- *Reduce mass of waste and hence disposal costs.*
  
- But check legislation!
- Can only compost meat included waste if obtain Waste Management Licence from SEPA





# On Site Food Waste Recycling – Small Scale

Green Cone & *Green Johanna* <http://www.greatgreensystems.com>

- Can process cooked and uncooked food waste.
- Cones can process meat but not allowed under Waste Management legislation without licence.
- Require Paragraph 12 SEPA exemption for small scale composting\*.
- Cone £70; Approximately 4.5 litres of food waste every 2 days.
- Commercial sites use up to 5 in rotation, diverting ~4.1m<sup>3</sup> of food waste/yr or 3.7x1100 litre bins of food waste.
- Johanna £99; up to 15 litres per day (330L capacity; 4-6 months processing)



# On Site Food Waste Recycling – Larger Scale

- Contained and controlled environment for composting.
- Food waste + garden waste at ratio of 1:1 by volume.
- Continual process, load materials once per day.
- Fully automated
- 10-14 days for compost with 4-8 weeks to mature.

*Examples - [www.quickcompost.co.uk](http://www.quickcompost.co.uk); Rocket Composters.  
Susteco AB [www.susteco.se](http://www.susteco.se); Big Hanna.*

## Example costs:

- 1) T40 Big Hanna; 400 litres/wk; £8,350
- 2) A700 Rocket; 700 litres/wk £14,245 or £324/month to lease



# Composting Waste Legislation

## Waste Including Meat:

- Waste Management Licence - *Annual fee (£1,290) + application fee (£962)+ Certificate of Technical Competence (~£5,000)*
- *Collection and offsite treatment at licensed site*

## Meat Excluded Waste Exemptions:

- 1) Paragraph 12 Small Scale Composting <math> < 2\text{m}^3 </math> capacity units
- 2) Paragraph 12 Composting <math> < 400\text{T}</math> at any one time.
- *No charge to register for exemption if process <math> < 1000 \text{ tonnes/yr}</math>*
- *Must use compost produced on own land*
- *Exemption Reference and details placed on SEPA public register.*
- *Meet exemption conditions to protect environment & human health*





# Food Waste Recycling Options

- **Off site Food Waste Collection:**

- Large scale in-vessel composting sites
- Anaerobic Digestion Plants

- *Ideal if lack time or space for on-site composting*
- *Meat included food waste can be recycled*





## Useful Guides and Further Information

- Cost-Effective Management of Organic Waste from the Food & Drink and Hospitality Sectors (*Envirowise GG808*)
- Managing Food Waste Cost-Effectively (*Envirowise EN957*)
- Food Preparation (*Envirowise EN796*)
- Disposal of Fats, Oils, Grease and Food Waste: Best Management Practise for Catering Outlets (*Water UK*)
- Better Management of Fats, Oils and Greases in the Catering Sector (*Envirowise GG809*)

*Hospitality / Food & Drink Section on Envirowise website  
Including monthly TastE Bulletin: [www.envirowise.gov.uk](http://www.envirowise.gov.uk)*





Thank you for your time

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