Zero Waste Regulations

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ZERO WASTE SCOTLAND

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Overview

- Setting the Context
- Zero Waste Regulations – What are the requirements
- How should you manage your waste?
- ZWS Public Sector Engagement Programme

Setting the Context – Resource Demand

Increasing resource demand

- Global demand for energy and raw materials is accelerating at an alarming rate
- During the global downturn of the last 4 years, Chinese demand has increased:
  - 23% for oil;
  - 68% for copper;
  - 18% for cotton;
  - 16% for soya. (Economist – June 2011)
- 300% global increase in demand for natural resources by 2050 is predicted (Defra – May 2011)

Declining resource availability

- Developed nations are '*three-planet-living*' (WWF 2006)
- Critical resources from conventional (*virgin*) sources are running out:
  - Indium (LCD screens): <10 years;
  - Silver (industrial catalyst): <30 years;
  - Zinc (galvanized construction steels): <40 years. (UN IEA – Aug 2010)
- Costs are increasing above-inflation across ALL resource groups: energy, food, materials

Setting the Context – Resource Demand

Securing continued resource availability

- De-coupling economic growth from virgin resource consumption is now essential
- Valuable resources must not be lost to the economy
- Recycling and recovery now essential, not just preferable
- Increasing value of recycled materials reflects growing market demand

Landfill capacity

- ~6 years landfill capacity remaining in Scotland at current fill rates
  (SEPA Landfill Capacity Report 2010)
- Remains best environmental solution for some materials
- Landfill space is a valuable resource

Setting the Context – Waste Costs

Understanding longer term trends...

The cost of conventional waste disposal is rising well ahead of the rate of inflation.

Landfill Tax is charged by HMRC at.....

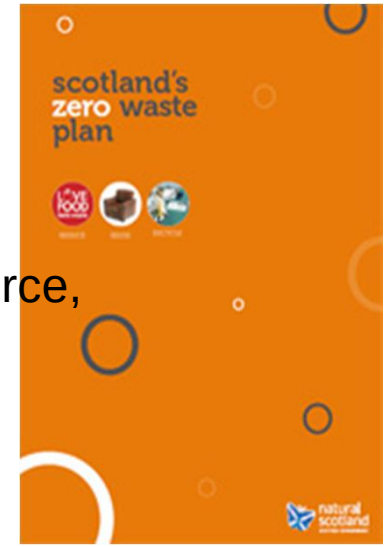
- 2011 - £56 per tonne;
- 2012 - £64 per tonne;
- 2013 - £72 per tonne;
- 2014 - £80 per tonne;

.....plus VAT!

For further education sector this is equivalent to an increase in costs of £85,000

Scotland's Zero Waste Plan

"*Zero Waste means reducing the unnecessary use of raw materials; re-using products where possible and recovering value from products when they reach the end of their lives either through recycling, composting or energy recovery*" ***(Zero Waste Plan - June 2010)***



- Managed transition to an economy where waste is seen as a resource, not a problem!
- Valuable resources are not lost to the economy
- Only small amounts of '*problem*' materials to be landfilled

The plan includes:

- 15-year policy roadmap, including targets to increase recycling to 70% by 2025;
- mandated source segregation of wastes, incl. food waste and dry recyclables by 2013;
- landfill bans for specific waste types, incl. food waste and dry recyclables by 2015;
- mandated business waste data capture and analysis to help manage improvement.

The Zero Waste (Scotland) Regulations

Will introduce new regulatory measures that seek to:

- manage waste in line with the Waste Hierarchy;
- maximise the quantity and quality of materials available for recycling;
- realise the resource value of materials in the waste stream;
- minimise need for residual waste treatment capacity;
- significantly reduce environmental impacts of waste disposal.

The Zero Waste (Scotland) Regulations

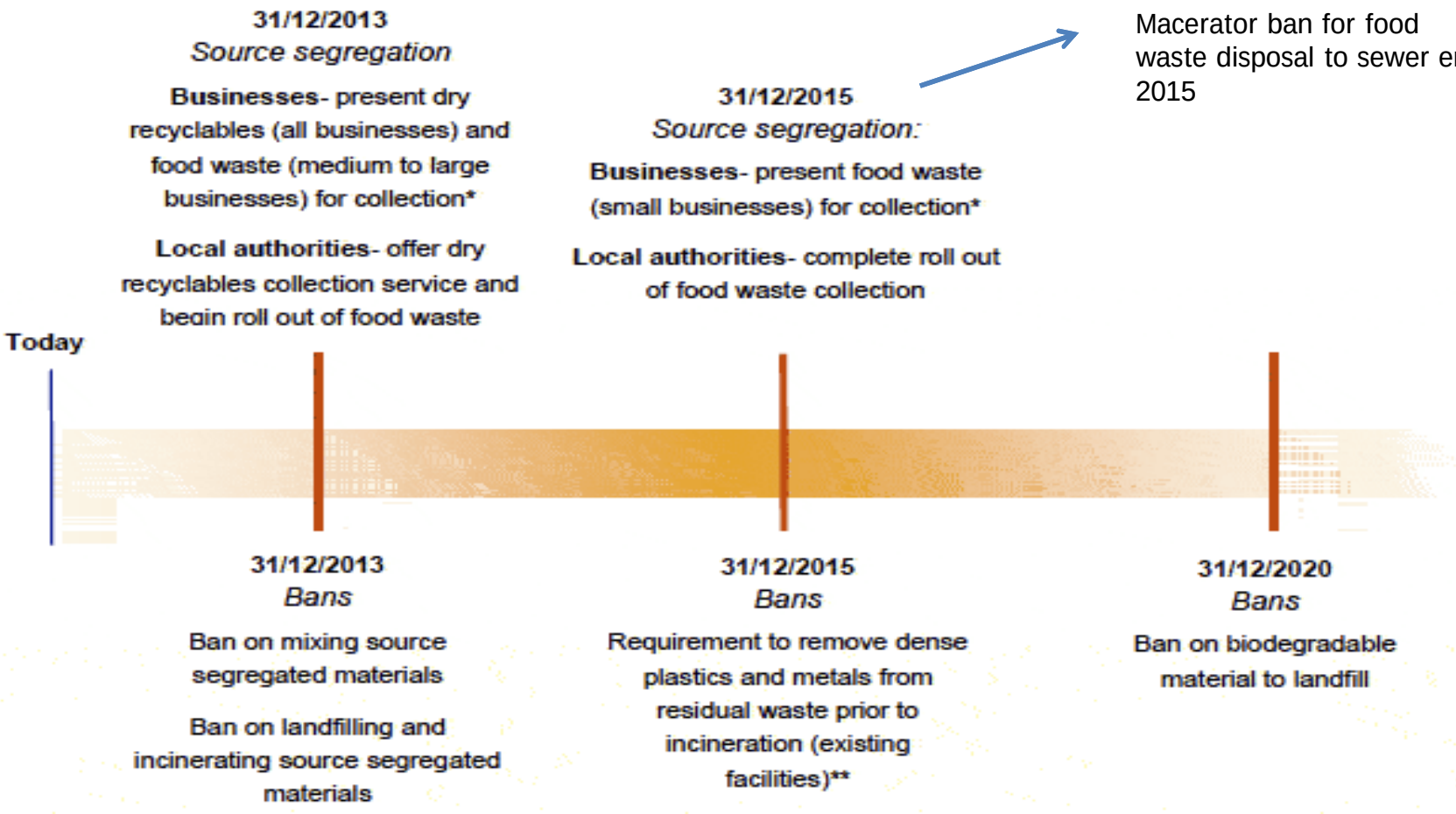
Specifically the Zero Waste Regs will:

- require source segregation & separate collection of key recyclable materials – paper, card, glass, metals, recyclable plastic and food waste.
- ban the mixing of separately collected materials.
- ban the landfilling & incineration of separately collected materials.
- restrict the inputs to thermal treatment facilities.
- ban residual municipal biodegradable waste from landfill.
- ban the disposal of macerated food waste to the sewer network.

Waste Producers – Specific Responsibilities

- Present plastic, glass, paper/card, metals separately from other waste for collection.
- Present food waste separately for collection if involved in food production, food retail, food preparation (this is extended to 2015 for businesses with <50 employees)
- Take responsibility for any waste that you hold during storage.
- Only transfer your waste to an authorised waste carrier.
- Ensure that the transfer of waste is covered by a waste transfer note.
- Ensure if carrying your own waste that you are registered with SEPA.

Timeline for new statutory measures



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Zero Waste Regulations Implementation Programme

Guidance / Codes of practice

Govt	SEPA	ZWS
Waste hierarchy Biennial reporting Recycling QS Infrastructure strategy	Duty of care Implementation guides- bans	Recycling industry std Collection best practice guide

Support, engagement and comms

Govt	SEPA and LAs	Industry	ZWS
Campaigns (food waste)	Direct engagement Web info	Direct engagement leaflets	Food waste programme Business support General comms

Enforcement

- Face to face business support work.
- Publish Factsheets for key sectors affected by the regulations.
- Publish and continually review FAQs on the regulations.
- Coordinate provision of information through our websites- create web portal for Regulations?
- Publish a simple guide to the regulations.
- Publish GIS information on recycling facilities.
- Publish guide to on-site composting and food available waste technology that complies with regs.
- Capture and publish case studies
- Hold training/Workshops.
- Coordinated awareness raising efforts.

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Food Waste – The Great Debate!

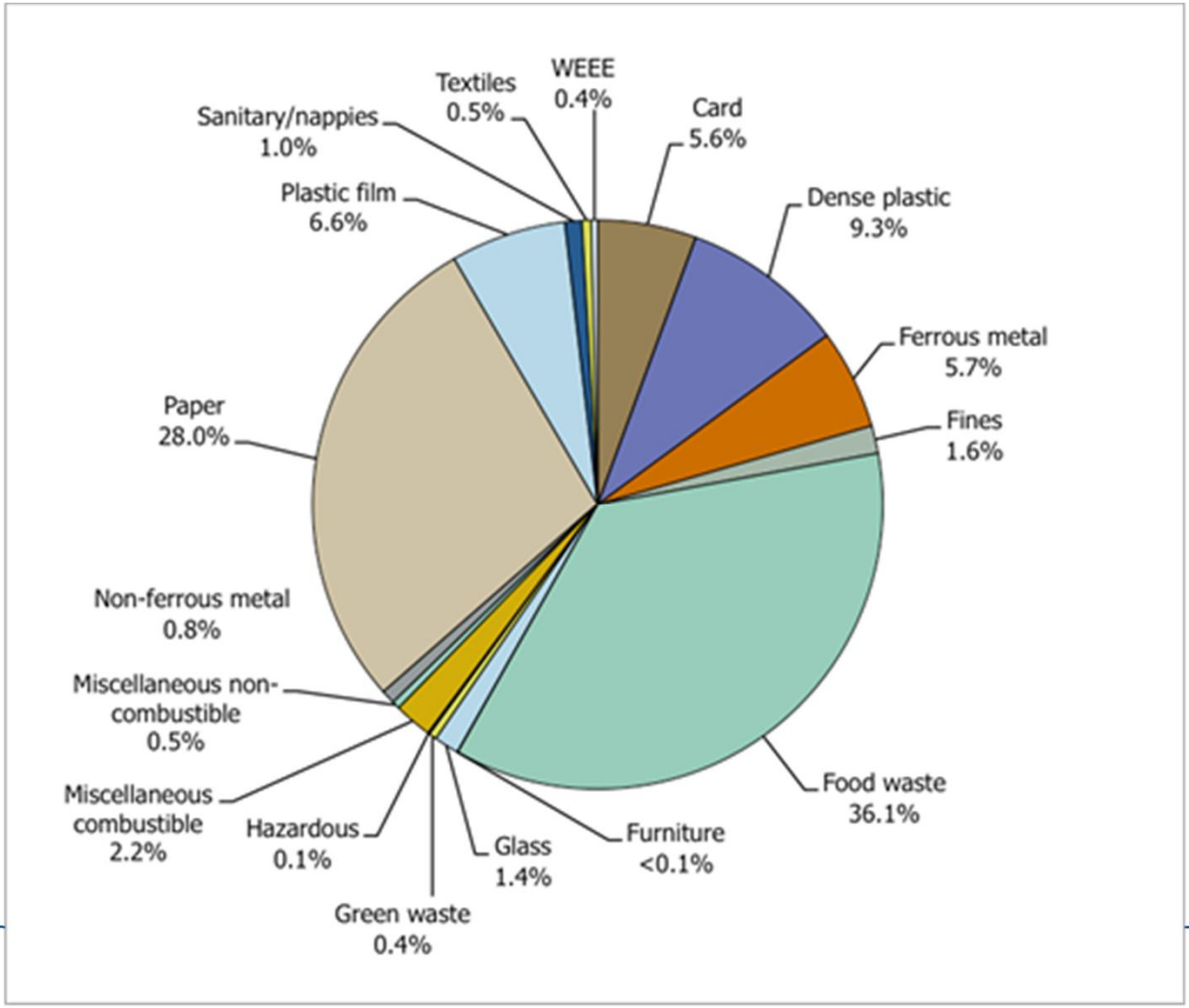
- Food is 20% of UK GHG emission
- Food waste has a value!
  - 1 tonne of food waste = 300kWh electricity (37% efficiency)
  - 1Nm^3 biomethane ~ 1 litre petrol
  - Biofertiliser: inorganic fertiliser replacement - 5t CO_2e saved per tonne of nitrogen displaced

- Turning food waste into a resource meets a number of Government objectives:
  - Zero Waste Plan recycling targets & landfill diversion
  - Climate Change (Scotland) Bill 2009
  - Renewable's Action Plan target, de-carbonised heat sector by 2050
  - Improved sustainability of food production (reducing GHG emissions)
  - Reduced carbon impact of transport

Food Waste in Further Education Sector

ZWS Study of C&I Mixed Waste from the Education Sector early 2011

- Study estimates waste arisings of 3,540T
- Of which food waste accounts for 36.1% (exc. that disposed to sewer), or 1278T (~£80k charges)
- Recent survey of EHOs suggests that number of macerators installed in sector is very low



How should you manage your waste?

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Your contract....

1. Have you assessed the service provision of your current contract and how much is it costing you?
2. Does the amount you need collected actually match what you are paying for?
3. What waste data can you get from your contractor?
4. Does your current contract meet the requirements of the new regulations?
   - Don't be afraid to ask questions of your contractor!
   - Set your framework tender requirements correctly!

Your waste.....

1. Map your waste – where does it come from?
2. Monitor and measure – if you don't measure you can't manage

Be Aware! The Waste Information Regulations passed in 2011, mandatory waste data request (quantities, types), enforceable by SEPA

3. Benchmark and consider setting realistic targets for increased recycling e.g. 880T of waste arisings identified as widely recyclable!
4. Consider the waste hierarchy for further cost savings

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*http://www.legislation.gov.uk/ssi/2010/435/made

How should you manage your waste?

Tendering the Service – What should you ask for? What does it need to deliver? It should:

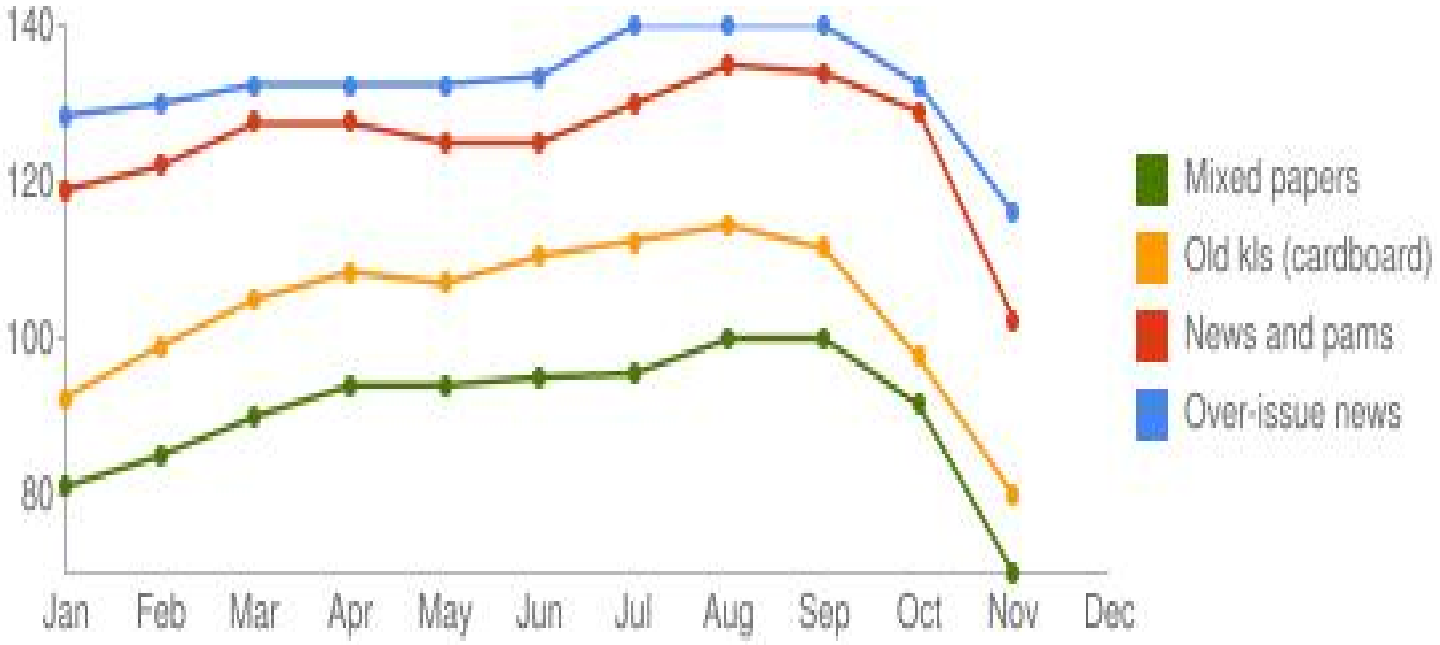
- ✓ Comply with all relevant current and future legislation
- ✓ (Meet the requirements of the Zero Waste Scotland Regs)
- ✓ Identify opportunities for recycling and recovery which minimises environmental impact and maximises financial return
- ✓ Provide a monitoring and reporting structure which identifies wastes and their associated tonnages, allowing further identification of re-use and recycling opportunities
- ✓ Be reliable, efficient and cost effective

Co-mingled or Source Segregation?

- Co-mingled collection of dry recyclates will still be acceptable, although not the preferred option. Complete off-site sorting of waste will no longer be an option
- Co-mingled collections will be more expensive than if materials are fully segregated, as the materials still have to be sorted – additional cost to the waste management company, but.....
- Clearly this has to be balanced with the additional space required for individual bins, both internally and externally
- In all cases, there is an issue with training and education. Co-mingled collections still suffer from contamination issues! Black bags don't allow contamination to be easily spotted
- Generating segregated waste streams can of course result in revenue opportunities

Valuing your Recyclates...

Mill Prices 2011 – paper



Baled cardboard £75-£120/tonne at mill, waste management companies will pay producers for mill size bales

Consider opportunities for centralised collection of materials?

ZWS Public Sector Support Programme

- ZWS currently undertaking a mapping study of the public sector in relation to waste arisings, waste management practices, related training and education around resource efficiency

- Aim to identify key sub-sectors to work with; initial research has suggested these would be Further Education, Emergency Services and NGPBs

- Current activities which require input/assistance from EAUC:
  - Data: no access to data on waste arisings from colleges
  - Access to the EAUC website members area to review information which is already available
  - Fieldwork: we aim to make site visits to 6-10 further education facilities and would welcome suggestions!

Conclusions

- The Zero Waste Regulations come into force at the end of 2013, with a ban on macerator use for food disposal to sewer in force end of 2015
- The Further Education sector will be impacted by the regulations and should consider their strategy on how to meet the requirements. This should include reviewing their current waste management contracts across their Estate to ensure compliance with forthcoming regulations.
- Given the mandatory requirement to report on waste arisings, the sector should seek to improve on current data sets, in order to benchmark their current position and set targets for reduction.
- At least 25% of their current mixed waste is widely recyclable indicating that there is room for improvements to be made on how waste is managed
- Further, 36% of the general waste has been identified as food waste with an estimated future disposal cost of *ca* £80k based on current collection costs
- Complete source segregation is the preferred (but not only) option for dry recyclates and could provide revenue if centrally collected and managed
- ZWS are seeking to engage with the sector to identify opportunities for support

Thanks and any questions?

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