



Halving Waste to Landfill

Sustainable Construction: Topic Support Network

Herriot Watt University, 8th August 2012





Content

- Waste (Scotland) Regulations
- Construction waste issues
- Halving Waste to Landfill commitment– Actions
- Case studies
- Tools and guidance
- Summary



Zero Waste Scotland

- Single dedicated delivery programme for the Scottish Government Zero Waste Plan
- One-stop-shop for support to all key audiences
- New Business Plan (2011-15)
- Four programmes:
 - Business Support
 - Campaigns
 - Market Development
 - Resource Management

Zero Waste Plan



A society where we:

- avoid unnecessary waste
- treat waste as a resource not a problem
- benefit from the economic potential of waste/resources
- minimise the impact of waste on environment



50% Household waste

**60% Household waste
70% Construction and Demolition waste**

**70% Recycling all waste
5% Landfill**



Waste (Scotland) Regulations

- Passed by parliament 9th May 2012
- Focus on ALL wastes, regardless of source...
- Waste is a valuable resource!

Information on key points outlined in the new Waste (Scotland) Regulations available at:

<http://www.zerowastescotland.org.uk/content/waste-scotland-regulations>

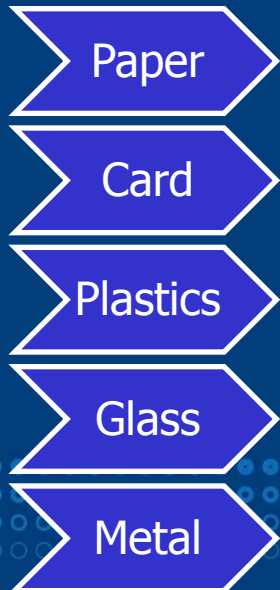
A screenshot of the Zero Waste Scotland website. The page has a dark blue header with the Zero Waste Scotland logo on the left and a navigation menu with links for HOME, INDIVIDUALS, COMMUNITIES, BUSINESS SUPPORT, and RESOURCE. The main content area is white and features the title "Waste (Scotland) Regulations" in bold. Below the title is a paragraph of text explaining that the regulations were passed by the Scottish Parliament on 9 May 2012, marking a significant change in how waste is managed in Scotland. The text highlights that waste is a valuable resource and that the new regulations aim to boost the economy and create green jobs.

Waste (Scotland) Regulations

Waste (Scotland) Regulations were passed by the Scottish Parliament on 9 May 2012. This signifies a landmark step-change in the way individuals and businesses in Scotland manage their waste. The new regulations are designed to make the most of the fact that waste is a valuable resource which, when treated appropriately, holds the potential to significantly boost Scotland's economy and create green jobs.

Waste (Scotland) Regulations

- For **ALL** businesses, by end 2013, **mandated** source segregation of dry recyclables: Paper, Card, Plastic, Glass, Metal.
- This means a legal minimum of...



Residual
Waste

NO
Recyclables

Waste (Scotland) Regulations

- For **FOOD** businesses, by end 2013, **mandated** source segregation of food waste e.g...
 - Preparation waste;
 - Leftovers;
 - Plate scrapings;
 - Out-of-date ingredients etc...

Smaller food businesses (<50 kg per week) exempted until end-2015

- Ban on the use of macerators / food waste disposal units / some de-watering equipment



Waste (Scotland) Regulations

“By end 2013, all businesses to take **all reasonable steps** to apply the Waste Hierarchy to their products, services and operations”



High Savings

**FOLLOW
THE
MONEY !**

No Savings



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CONSTRUCTION WASTE ISSUES





Construction waste in Scotland

Construction industry single largest producer of waste in Scotland = 7.47Mt in 2010*

approx. 44% of total Scottish waste

26% of construction waste is packaging

13% raw materials discarded unused

**SEPA Waste Data Digest 12*

Why take action?

Take action to:

- Reduce costs (inc. Landfill tax, true cost of waste);
 - Reduce environmental impact; and
 - **Meet UCCCS targets** for waste reduction, recycling and responsible disposal.
-
- Eliminate common causes of waste across all stages of construction.
 - Procurement;
 - Design; and
 - Construction.



HM Revenue
& Customs



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HALVING WASTE TO LANDFILL - ACTIONS





Halving Waste to Landfill Commitment

*"We agree to **play our part** in halving the amount of construction, demolition and excavation waste going to landfill by 2012.*

We will work to adopt and implement standards for good practice in reducing waste, recycling more, and increasing the use of recycled and recovered materials"

- >750 signatories to date
- >£40bn of projects have set procurement requirements
- Scottish Government has signed up to the Commitment
- Local Authorities following too.....



Some selected signatories...



Clients and Developers - Actions

"We will:

1. **set a target** for reducing waste to landfill and assign a team member with responsibility for delivery;
2. **embed the target** within corporate policy and processes;
3. **set requirements** in project procurement processes and **engage with your supply chain**;
4. **measure performance** at a project level relative to a corporate baseline; and
5. **report annually** on overall corporate performance.





Specialist and SME Contractors - Actions

"We will:

1. **estimate** how much waste we will produce on our projects;
2. work with our clients and suppliers to find ways to **reduce waste**;
3. **avoid waste** on-site by proper handling, storage and use of materials;
4. find ways to **recycle more waste**; and
5. **record** the waste we produce (where we manage our waste), and **report** this to our clients."





Collaborative working is important



Pre-construction

Tendering & appointment

Model wording



Outline design

Prevent waste

Designing out waste tools/guidance



Detailed design

Forecast waste
Reduce waste
Increase RC

Net Waste Tool



Construction

Waste reduction
Waste recovery
Measure performance

SWMP Template



Post-construction

Review performance
Benchmarking

SWMP Tracker Reporting Portal



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CASE STUDIES





Dunedin Canmore & Lovell

Collaborative working with client, designers and contractor leads to savings.

- Escalating porch costs due to:
 - unforeseen ground conditions affecting the substructure; and
 - requirement to divert services to where the porches were to be built.
- Re-design the porches to:
 - omit some glazed panels;
 - omit specialist cladding, replace with larch; and
 - omit feature steel.

Saving of £4,000 per porch structure
Total savings = £68,000 (over 17 porches)





Robert Gordon University

Garthdee Campus – working together to minimise waste to landfill.

- BREEAM “Very Good” rating;
- Model wording used to set targets through tendering, procurement and appointment.
- Contractor Standard Work Instructions – designers to assist in meeting project waste targets.
- Recovery of 80% construction waste.
- <1.3% project waste to landfill - Oct 2011 to Apr 2012.



**ROBERT GORDON
UNIVERSITY · ABERDEEN**



University of the West of Scotland

Ayr Campus – innovative waste management approach achieves exemplary recovery rates.

- BREEAM “Excellent” rating;
- Recycling and Waste Services - dedicated waste compound on site;
- Data reporting and identifying of poor practices;
- 96% waste diverted from landfill (~1152 tonnes); and
- 87% waste produced reused or reprocessed / recycled.

UWS UNIVERSITY OF THE
WEST *of* SCOTLAND



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SUPPORT & GUIDANCE





Support

FREE support available at:

<http://www.zerowastescotland.org.uk/category/sector/construction>

Areas included:

- Halving Waste to Landfill;
- Tools and guidance;
- Waste reduction;
- Aggregates Directory;
- Case studies; and
- Events and training.

The screenshot shows the Zero Waste Scotland website interface. At the top, there is a navigation bar with links for News, Events, Jobs, Tenders, Funding, and Contact Us. Below this is a search bar and a menu with options: HOME, INDIVIDUALS, COMMUNITIES, BUSINESS SUPPORT, RESOURCE MANAGEMENT, and ABOUT. A secondary menu includes 'Around the UK'. The main content area is titled 'Construction' and features two primary sections: 'Halving Waste to Landfill' with a 'Join the commitment' button and text stating 'Over 500 signatories have now signed up to Halving Waste to Landfill.', and 'Aggregates Directory' with a map of Scotland and text 'Search for suppliers of high quality aggregates in Scotland.'. To the right, there is a 'Filter by' section with dropdown menus for Role, Sector, Subject, and What we offer. At the bottom, a 'Latest' section displays two news items: a 'PRESS RELEASE' from 18 Apr 2012 about resource efficiency in house-building, and a 'WEBFORM' from 4 Apr 2012 for a 'Directory of Recycled Aggregate Producers in Scotland - Bookings'.



Guidance

FREE publications available include:

- SWMP Template;
- Trade information sheets;
- Waste recording and reporting;
- Case studies;
- Construction waste packaging guide;
- **Working with your waste and recycling contractor;** and
- House builders guide.



Site Waste Management Plan 'Lite'

Clients, design teams and contractors.....

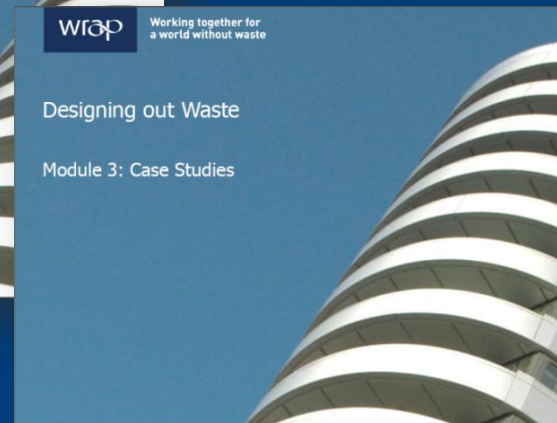
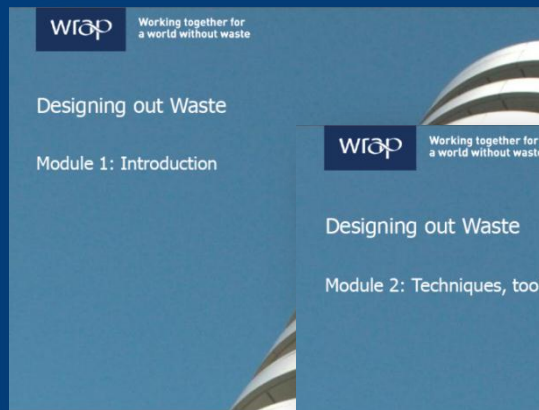
- Three worksheets:
 1. Estimated waste
 2. Actual Waste Movements
 3. Project Summary
- Data entry on only *two* sheets... third sheet automatically provides summary of previous two....



Tool available at: <http://www.wrap.org.uk/content/site-waste-management-plan-template-%E2%80%98lite%E2%80%99>



Designing out Waste module series



1.25 hours CPD credit

Available at: <http://www.wrap.org.uk/content/designing-out-waste-video-tutorials>





Available summer 2012

- Construction Material Exchange; and
- Poster creator.

Currently available:

- Business Reuse and Recycling Database (BRRD) –
<http://brrd.zerowastescotland.org.uk/>

Events | Funding

HOME RETURN TO MAIN SITE

Business Re-use and Recycling Directory

Welcome to the Zero Waste Scotland Business Re-use and Recycling Directory.

Please use the form below to search for re-use and recycling services in your area, including both collection services and recycling centres.

Search for:
Collections OR Recycling Centres

Area(s):
National

Materials:
All Materials

HELP RESET FORM SEARCH Advanced Search

| yes please | no thanks |
|--|---|
| <input checked="" type="checkbox"/> bricks | <input checked="" type="checkbox"/> timber |
| <input checked="" type="checkbox"/> blocks | <input checked="" type="checkbox"/> mixed waste |
| <input checked="" type="checkbox"/> plaster | <input checked="" type="checkbox"/> paper |
| <input checked="" type="checkbox"/> rubble | <input checked="" type="checkbox"/> packaging |
| <input checked="" type="checkbox"/> roof tiles | <input checked="" type="checkbox"/> plasterboard |
| <input checked="" type="checkbox"/> select | <input checked="" type="checkbox"/> canteen waste |
| <input checked="" type="checkbox"/> select | |

SITE SPECIFIC INFORMATION HERE

INSERT LOGO INSERT LOGO INSERT LOGO

ZERO WASTE SCOTLAND



Summary

- Waste (Scotland) Regulations – step change! Moving from waste disposal society to closed loop...
- Taking action to reduce, reuse and recycle wastes is key – important for legal compliance and to meet targets (i.e. UCCCS)
- HWTL actions will help manage wastes and to deliver resource efficiency improvements under new agreement 2013
- Case studies – collaborative working and setting targets key to waste reduction.
- Plenty of guidance and support available - to you and your suppliers...



Questions?

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