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## The Construction Commitments: Halving Waste to Landfill

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### Benchmarks for target-setting

#### Defining your commitment

As a client, developer or contractor, if your organisation has committed to reducing construction waste to landfill, you need to:

- set a target;
- embed the target within corporate policy and processes;
- set corresponding requirements in project procurement and engage with your supply chain;
- measure performance at a project level; and
- report annually on overall corporate performance relative to a baseline year.

*This note provides advice on setting a corporate target. Key steps are:*

<b>1 Define your timeline</b>	Define your baseline year and your target year.
<b>2 Assess your potential to improve performance</b>	<ul style="list-style-type: none"> <li>■ If you already have data across your portfolio for your baseline year, check that the data conform to the measurement and reporting method formulated by the UK Contractors Group (available at <a href="http://www.wrap.org.uk/reportingportal">www.wrap.org.uk/reportingportal</a>), and adjust if necessary.</li> <li>■ Otherwise, select a sample of past projects and ask contractors for data.</li> <li>■ Compare your wastage rates with sector benchmarks (<i>see below, or use benchmark data from Constructing Excellence or BRE</i>).</li> <li>■ Compare your recovery rates with sector benchmarks (<i>see below</i>).</li> <li>■ <i>Optional:</i> compare your use of recovered material with typical projects (<i>see below</i>).</li> </ul>
<b>3 Assess your market position and ambition</b>	<ul style="list-style-type: none"> <li>■ Identify targets being adopted by your peers.</li> <li>■ Identify targets being adopted by your contractors.</li> <li>■ Consider what fits with your policy on corporate responsibility (e.g. do you aim to be seen as a sector leader, or sector average?)</li> </ul>
<b>4 Quantify your target</b>	<p>Set your target for a percentage reduction in CD&amp;E waste to landfill. (<i>This should reflect your potential for improvement, and could be more or less than half of current performance</i>). For example:</p> <ul style="list-style-type: none"> <li>■ "X% reduction in tonnes of waste to landfill per £100k of construction value by FY2012/13 compared to FY2008/09 baseline"</li> </ul>
<b>5 Report your target</b>	Enter your target at WRAP's web-based 'Waste to Landfill Reporting Portal'.

## Measuring your achievement – metrics and KPIs

You should report totals for the following metrics to WRAP's Waste to Landfill Reporting Portal as evidence of progress towards your target. Use tender/contract requirements and direct engagement to obtain the data from your contractor and supply chain.

Annual reporting of waste metrics:	Baseline	2009	2010	2011	2012
Tonnes					
Tonnes to landfill					
Construction cost/value					

*(These data may be disaggregated into construction, demolition and excavation waste streams if desired. WRAP provides model wording for procurement documents to support the measurement and reporting process. The baseline year can be set earlier than 2008 if reliable data are available.)*

The reporting portal will generate the following KPIs (which you can use, for example, in your organisation's annual report on Corporate Responsibility):

Annual reporting of waste KPIs:	Baseline	2009	2010	2011	2012
Tonnes to landfill per £100k					
Tonnes per £100k					
Recovery rate %					

Your headline target will be the reduction in tonnes to landfill per £100k by 2012 relative to 2008 (or other time period as appropriate) – so use this KPI to demonstrate performance against your corporate commitment.

You may also wish to set targets for waste reduction and recovery rate, and use these in setting requirements at project-level in tender and contract documents.

The following metrics and KPI are **optional**, and demonstrate use of recovered material to close the 'resource efficiency loop':

Annual reporting on reused and recycled content:	Baseline	2009	2010	2011	2012
<i>Metrics:</i>					
■ % RC by value ( <i>reported per project or aggregated up to a corporate average</i> )					
■ Construction value (£)					
■ Amount of material reused on site (t), if known					
<i>KPI:</i>					
■ % RC by value (averaged across all construction output)					

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In order to set targets initially, you will need data on your current performance – either from a sample of projects or across your portfolio. Data may be available for:

- waste generation;
- waste recovery; and
- reused and recycled content.

The following benchmarks provide an overview:

<b>WASTE GENERATION: (tonnes/£100k)*</b>	<b>Baseline practice</b>	<b>Good practice</b>
<b>Housing</b>		
Masonry	33	14
Timber	14	7
Flats (concrete-framed)	4	2
Refurbishment (e.g. Decent Homes)	12	12
<b>Offices</b>		
Concrete-framed	5	3
Steel-framed	3	1
Fit-out Cat A (small)	10	10
Fit-out Cat B (large)	10	10
<b>Education</b>		
Primary school	5	2
Secondary school	6	3
Halls of residence	7	3
<b>Healthcare</b>		
Hospital	3	2
<b>Retail</b>		
Supermarket	6	3
Refurbishment – small	31	29
<b>Industrial / other</b>		
Warehouse	11	4

\* Benchmarks taken from projects modelled using WRAP's Net Waste Tool<sup>1</sup>

<sup>1</sup> The Net Waste Tool is a resource for forecasting construction wastes and identifying opportunities to increase the recycled content of a building using the project specification and quantities. It is freely accessible at [www.wrap.org.uk/nwttool](http://www.wrap.org.uk/nwttool).

<b>WASTE RECOVERY: (%)</b>	<b>Baseline practice<sup>2</sup></b>	<b>Good practice</b>	<b>Comments</b>
Construction	50%	70–80%	Benchmarks based on WRAP research.
Refurbishment/strip-out	50%	70–80%	
Demolition	50%	80–90%	
Excavation (non-hazardous)	50%	100%	

<b>REUSED AND RECYCLED CONTENT: (% of project materials value)</b>	<b>Baseline practice</b>	<b>Good practice</b>	<b>Comments</b>
Commercial retail	11–32%	21–44%	Benchmarks taken from projects modelled using WRAP's Net Waste Tool. The variability in benchmark performance is high, reflecting the impact of the specification type on recycled content level. <b>For this reason, WRAP recommends that a requirement is set for at least 10% recycled content (RC) plus evidence of good practice on the top (5-10) cost-competitive options for higher RC specific to the project.</b>
Commercial offices	10–22%	12–30%	
Education, healthcare	12–20%	15–30%	
Residential	6–26%	16–31%	
Infrastructure	8–36%	25–49%	

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<sup>2</sup> In this case, baseline practice is the recovery rate that would be assumed (e.g. by members of the UK Contractors Group) if no attempt to secure a higher recovery rate can be demonstrated. In practice, many waste management companies can achieve higher recovery rates (particularly for demolition and excavation materials).