

Refurbishment Waste Benchmarking Report

This project, carried out under the Construction Resources and Waste Platform (CRWP), aims to address a gap in information in the construction industry. Its focus is to address the shortage of data on waste from refurbishment projects and to produce refurbishment waste benchmarks as guidance information for both government and refurbishment project managers.

In 2006, 8.1 million homes were deemed to be non-decent; 6.8 million in the private sector and 1.3 million in the social sector. Studies to determine the value of repair and maintenance works carried out in Great Britain during 2007 amounted to a total of £52,163M. Half of this was spent on housing and half on other works. This was evenly split between the public and private sectors.

Refurbishment benchmarks have been generated using BRE's established waste monitoring tool, SMARTWaste. This tool has been used by many construction contractors for both public and private sector projects over a number of years and is a reliable source of data on different types of construction projects.

The SMARTWaste tool was developed principally with new build construction projects in mind and as such

collects data, in measurement terms, more closely aligned with these projects. The overall objective of this project is to capture an increased amount of refurbishment waste data to enable the generation of reliable benchmarks for refurbishment projects and, more latterly, to determine how the waste monitoring tool could be adapted to meet the requirements of refurbishment projects.

As there are a limited number of datasets on refurbishment projects, the initial benchmarks produced include preliminary values for each type of refurbishment project as classified by the SMARTWaste system. These have been generated in line with the new build construction work Performance Indicators where waste volume or tonnage is related to 100 m² floor area and to £100k project value. The functional unit for refurbishment activities are defined in a different way to new build projects and therefore it is proposed that indicators more appropriate to refurbishment projects could be produced, such as tonnes of waste per kitchen. This would provide practitioners with a more useful measure with which to compare the performance of different refurbishment projects.

The preliminary refurbishment waste benchmarks are:

	m ³ /100m ²	m ³ /£100k	tonnes/100m ²	tonnes/£100k
Commercial Retail	13.5	9.0	10.3	4.6
Commercial Offices	14.1	12.9	6.4	6.2
Education ¹	-	27.9	-	18.9
Leisure	-	13.9	-	5.0
Residential ²	17.8	26.4	10.9	16.2

1 - Three projects have contributed to the calculation of these indicators. However, the values appear to be high and may not be an accurate reflection of these refurbishments. Their accuracy will improve with increased numbers of datasets.

2 - The project cost related indicators are high for residential projects and may be a result of relatively low project costs being scaled up to £100k.

These benchmarks are a starting point for those practitioners who currently have no historical data upon which to base their waste forecasts. With increased project data, the accuracy of these benchmarks will improve. Development of SMARTWaste Plan to include a refurbishment capability will potentially generate a number of benchmarks appropriate for different types of refurbishment activities and will be aligned with the requirements of the Site Waste Management Plan Regulations.

In conclusion, further work to capture additional refurbishment project data will generate better performance benchmarks. This work would include:

- Continuing discussions with stakeholders representative of a broad range of refurbishment sectors to inform the development of the tool and seek their opinions
- Revision of the paper-based template following wide stakeholder consultation, if required.
- Agreement of standard refurbishment building components/elements, appropriate measurement units and functional units.
- Collation of data on 'default' building elements for residential refurbishment taking into account those activities likely to be carried out to meet minimum standards for government initiatives such as Decent Homes and Welsh Housing Quality Standard.
- IT development of SMARTWaste Plan to include specific refurbishment waste capability.
- Determination of appropriate refurbishment benchmarks and key reporting statistics for use by practitioners.
- Promotion of the enhanced SMARTWaste Plan to capture more data.

PROJECT PARTNERS

