

Overview of Demolition Waste in the UK

Background

This study forms part of the Construction Resources & Waste Platform (CRWP) programme, which provides industry focused support in the area of construction resource efficiency and works in partnership with Government in terms of developing evidence for policy.¹

The construction and demolition industries are interlinked and interdependent. The quantities of demolition waste depend on the volume and quality of structures and buildings constructed in the UK.

This study reviewed current drivers and requirements on the demolition Industry in relation to the type and quantity of materials they are processing and working with and includes four case studies. In addition to reviewing the latest findings on non-aggregate waste streams arising from demolition activities and how they are managed. Furthermore regulatory drivers in terms of environmental, technological and health and safety have been assessed.

Regulatory and Policy

Current regulatory drivers and policy requirements placed on the demolition industry have been reviewed by this study.

This study has shown that there are many regulatory and technological drivers affecting the demolition Industry in the UK today. The aims of these instruments are to ensure that the workforce adheres to safe practices as a result of the stringent Health and Safety regulations. There is an increasing level of environmental regulation being implemented to drive the industry towards sustainable waste management practices to ensure the effective recovery of materials.

Demolition Waste Arisings

The demolition industry has grown significantly in the last decade demonstrated by the increasing value of work undertaken and workforce employed, which showed a 7% increase between 2006 and 2007.

- In 2007 the demolition industry processed 32.7 Mt of demolition arisings.
- Approximately 88% of the inert materials handled by the demolition contractors are either recycled and used on site or recycled on site and sent for off site sale.

The members of the National Federation of Demolition Contractors (NFDC) report on aggregate demolition arisings and hazardous waste arising. Currently the Industry, via the NFDC is not reporting on the non-aggregate materials such as timber, insulation, plasterboard, and plastics.

Based on BRE's pre-demolition audits, it is estimated that demolition arisings are made up of:

- Concrete (59%), inert (21%) metals (10%) timber (7%) and plasterboard (1.4%);
- Insulation and plastics materials are both below 1% of the overall quantity of demolition arisings.

With the increase in the use of popularity of Modern Method of Construction (MMC) and Off Site Manufacturing (OSM) techniques and more innovative construction products that incorporate composite materials it is likely that demolition contractors will encounter materials in the future that cannot be as readily recycled as current demolition arisings.

BRE and others offer the service of pre-demolition audits whereby the building, and the components within it, are audited to determine what the key demolition products are and make recommendations for their reuse (on and off-site), recycling or final disposal. The main aim of

1. For more information please go to: www.constructionwaste.info

these audits is to maximise materials available for reuse and recycling and to minimise materials going to landfill. Four pre-demolition audit case studies have been written to provide the industry with assistance in achieving resource efficiency through auditing and setting appropriate targets, which is becoming more imperative when re-development and refurbishment projects get the green light.

Recommendations

The following recommendations have been identified:

- Measurement** – the demolition industry needs to be more transparent about the type and quantity of waste they produce on an annual basis; a system to collect data based on pre-demolition audits and SWMPs should be devised.
- The future recyclables of materials** – with the increase in MMC predicted for the future it is also likely that the use of composite materials will be more prevalent in the new build and refurbishment sectors. Research on new recycling or recovery technologies that could efficiently deal with the rising quantities of specialist building products such as insulation panels, timber products and composite building elements would be beneficial for the future.
- Raising the awareness of clients** – through tools such as pre-demolition audits and Site Waste Management Plans (SWMPs), awareness of the importance of demolition in terms of resource efficiency should be addressed. This includes providing appropriate timescales for the demolition of a building/structure to ensure full recoverability of the demolition arisings including high value reuse.
- Environmental assessment** – the savings in environmental impact should be measured in terms of diverting demolition waste from landfill and replacing raw materials; this should be embedded into pre-demolition audits and SWMPs.

PROJECT PARTNERS

