

Don't Waste Excellence

The Government's drive to build three million homes by 2020, with attendant infrastructure, presents many challenges; none more so than managing construction waste. What is being done to reduce it?

90 million tonnes a year of construction waste currently goes to landfill, 15 per cent of which is new unused material. This is a financially and environmentally unacceptable situation and there is huge pressure to reduce it. Two projects led by the South East England Development Agency's (SEEDA) sector consortium for the construction industry, the South East Centre for the Built Environment (SECBE), will seek to start the process of controlling the waste.

The construction process, whether site clearance and demolition, raw material excavation, material manufacture or building itself, shows a very varied picture of sustainability. Demolition contractors say that 95 per cent of their waste is reused but the bulk of the output, such as tiles and bricks, tend to be used for low value activity such as site levelling, although products like fire doors or windows can be resold. The economics of demolition are tight and often little time is given to audits of materials and their potential before work starts.

From the manufacturing viewpoint, new materials such as bricks or concrete contain on average only five per cent recycle – real and perceived barriers have to be overcome to increase the levels being used. The management of waste during building itself is hindered by difficulties in segregation on site, lack of data from the contractors responsible for collection, and the costs of managing the process.

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SECBE Chief Executive, Derek Rees, says: “The market conditions have got to be created to allow the industry time to assess materials better and to recover and reuse more, reducing overall project costs including lost occupier revenues if more time is spent managing waste delaying project completion.”

“Zero Waste Region” is a strategy that will be launched shortly for the South East, the aim of which is to beat national and regional waste targets, initially in relation to construction waste: by reducing, reusing, and diverting from landfill. It is a SEEDA-led partnership involving Waste & Resources Action Programme WRAP, Environment Agency, SECBE, EnviroBusiness, the National Industrial Symbiosis Programme and Constructing Excellence UK.

As part of this ambitious overall strategy, SECBE will lead a pilot programme involving all the project partners to better understand the content and destination of construction and demolition waste. The aim is to maximise recovery and reuse of materials within a local loop. The project team will work with all sectors of the industry and are actively looking for test bed development sites where demolition will be immediately followed by new build. Flows of key materials will be assessed to collect data on every aspect of the process so that these can be analysed and costed. The results will be used to develop innovative actions, systems and technologies to reduce the volume and to increase the value of the waste stream. These loops could also include the development of local ‘Construction Consolidation Centres (CCCs)’.

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The CCCs would be the single location in an area which might be described as a building materials hypermarket, holding all the materials required for local developments. Supplies could be dispatched to sites with much more precise loadings and with greater immediacy for ‘just in time’ build. The same vehicles could also collect and return unused materials to the CCC for future delivery or return to the manufacturer. The CCC could also be integrated on a single site with a Material Recycling Facility which would receive and sort used materials for reprocessing and re-use rather than being sent to landfill.

A feasibility study has already been conducted on North Kent – an executive summary can be found at http://www.secbe.org.uk/productivity/construction_consolidation_centres All these ideas will be evaluated so that action plans can then be prepared for roll out across the region.

Hand in hand with this project is a plan to create a campaign targeted at architects and designers to ‘Design Out Waste.’ The first step will be to organise a series of local workshops which will focus on four key areas. Designing more recycled and reused products into new buildings is the first target and the second, conservation through making the most of what is on an existing site such as refurbishing an old building for new uses. The next is re-engineering design to eliminate construction site waste by, for example specifying plasterboard at the same size as it is manufactured to save off-cut waste, and, lastly, planning for future alternative uses and designing for deconstruction at the end of the building’s life.

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The aim will also be to develop an accredited training programme, encourage knowledge transfer through international study visits and to use the media to report on the outcomes of the project.

“The work to reduce waste in developing our built environment is critical to sustainable development. Our programmes are ambitious but if we do not generate new ideas between all sections involved in development and construction we will not make progress,” concludes Derek Rees

More information on the SECBE website www.secbe.co.uk

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SECBE - South East Centre for the Built Environment

The South East Centre for the Built Environment (SECBE) is a consortium of business leaders that exists to inform policy and drive business-to-business learning and networking. They take regional strategies and industry issues and develop action plans to improve business performance throughout the sector. SECBE is a not-for-profit company limited by guarantee - owned and driven by its business members. SECBE aims to help businesses operating across the South East – Oxon, Bucks, Berks, Hants, Surrey, Sussex and Kent to create a sustainable built environment through better business.