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Getting to grips with demolition

RVA Group managing director Richard Vann looks at dealing with the issue of demolition waste and how to salvage and recycle from this stream

Since its inception the demolition industry has been a committed recycler, acknowledging the commodity value and demand for materials that can be salvaged during domestic, commercial and heavy industrial executions of work.

In reality it was probably one of the first 'green' disciplines.

For decades, contractors have yielded a revenue stream from the recycling of materials such as bricks, slates, and copper nails and piping to name but a few.

However, as environmental pressures mount and legislative developments continue apace, a greater number of contractors, consultants and clients have heightened their commitment to the 'reduce, reuse and recycle' mantra. Sustainable working practices have rocketed up the project agenda and as a result, organisations have experienced multi-faceted benefits from the careful and continuous management of demolition projects' waste streams.

Even the soft-strip (internal clear out) and subsequent demolition of a small domestic building can enable recyclates to be recovered. Yet the larger and more industrial the programme of works is, the greater the scope for advanced salvaging methods and the wider the variety of materials that can be retained.

A vast number of processing plant owners throughout the UK and EU are closing their sites as they rationalise their activities, relocate their operations or prepare to upgrade their equipment. Consequently, they face the predicament of determining the safest, most cost-effective and environmentally sound route for their plant. Many variables affect the methodology adopted for a given site, but organisations' commitment to EHS excellence often sees decommissioning projects excel in terms of material collection, processing and trade.

A fundamental driver is to reduce the amount of 'waste' going to landfill, which of course supports the country's impending targets and reduces waste disposal costs. Concrete and brick for example can be crushed for use as backfill, road sub-base and levelling.

Elsewhere selected items of plant can be carefully salvaged for reuse. For instance I have overseen the meticulous disassembly of a 500m long, 6,500 tonne papermaking machine that was sold for re-erection overseas. Of course such an exercise is not without its complexities, but a comprehensive grasp of the commercial environment means that plant buyers can regularly be secured and income can be generated for the original asset owners, which contributes to the overall project cost. This is perhaps the ultimate in recycling and waste stream management.

The general recycling of project materials is also very prevalent in industrial demolition due to the commodity value of arisings such as scrap metals for instance. Process vessels are often made from exotic alloys and high-value metallurgy can generate a significant income stream. We have worked on projects in the past where the monies earned from scrap materials have not only covered the cost of the works; they've been cash generative for the client.

This is clearly not possible with every project but the sum that can be earned from recycling does frequently determine whether the works go ahead, or not. In every case it is a matter of achieving the 'best value' outcome for the client concerned. One customer, a cast iron foundry owner, sought the creation of a precisely-engineered salvaging system to enable the reclamation of timber, plastic and scrap metal and uphold the organisation's ongoing environmental commitment. The resulting 'production line' saw suitable material graded and segregated according to whether it met the appropriate specification and should be retained for reuse on the client's other sites, or whether it should be sold to the industry via the usual recycling channels in the UK.

Many would wrongly perceive our industry as a somewhat grubby and unrefined engineering discipline that lacks scientific precision. But the better-informed people become, the more they realise that decommissioning, demolition and dismantling engineers are highly skilled professionals that display an unparalleled commitment to sustainability and environmental excellence. It therefore cannot be disputed that the future of recycling within this arena is bright.