



Saving on waste disposal - through waste segregation in construction

A timber waste management case study - Construction

The achievement

Established in 1944, Simons Construction is a national building contractor and now has offices in London, the Midlands and the North with a current turnover of £200M per annum. Over a three-year period at its central offices the total waste, total cost of waste and waste to landfill were reduced by 73%, 76% and 87% respectively, while waste recycled was increased to 125 tonnes from 0.



At its Sweet Street construction site, four-skip waste segregation was implemented through close cooperation with a local materials recycling facility (MRF). This led to over 50% of all waste (by volume) being recycled on this site.

Key management issues

- Implementing a training programme for all staff and inductions for trade contractors (TC's) so all operatives understand the importance and benefits of segregating waste
- Negotiating and developing mutually beneficial relationships with MRFs but if none are available to continue implementing segregation, which fosters good site discipline and reduces total waste output.
- Using proactive waste management to develop a clean, tidy, and safe site so operatives can feel good about working in a professional way in a good working environment.

Key benefits

- Financial savings on waste disposal costs
- Improved environmental performance and health and safety on site.
- Green, environmentally sound image/reputation on which to develop new business and satisfy client requirements.

Background

Simons Construction is the construction arm of the privately owned Simons Group, which is headed by brothers Paul and Philip Hodgkinson. In recent years the company has been acknowledged by the industry (winning awards) for its approach to environmental issues and waste management. Simons is committed to a company policy seeking to reduce environmental impact and continuously improve environmental performance. Reducing total waste, waste to landfill and waste costs, while increasing recycling is at the heart of Simons Group waste management policy, which has been implemented to great effect.

Waste segregation coordinated in close liaison with materials recycling facilities (MRF's) has been key in achieving this and has been applied to waste management at both its office and construction sites. On its Sherwood Park development, Simons has worked closely with Wastecycle, an MRF which recycles construction and industrial waste, providing savings and sustainable waste management solutions. Waste segregation on Simons construction sites has



been developed over a number of years and has proven to be a pragmatic way to reduce the cost of waste disposal.

The waste management methods employed by Simons Construction have practical application for other SME construction companies where real savings could be made on many different projects throughout the UK.

Approach to the wood waste problem

At Sherwood Park, one of the company's most recent construction projects near Nottingham, a six-skip segregation scheme has been set up for General, Inert, Metals, Timber, Plasterboard and Hazardous waste. Although this particular example may not be feasible for the smaller company or smaller project, more simple versions have sound practical application. Simons Construction has developed a "20-40-60 rule" targeting a 20% reduction in total waste, a 40% reduction in waste disposal costs and 60% reduction in waste sent to landfill. In reality it generally exceeds these targets on sites where waste is segregated, which indicates how, even on smaller sites, a substantial saving is a realistic target. A secondary benefit from operating a segregated waste disposal system is that sites become more orderly and organised, leading to safer working conditions. The system also acts to satisfy clients and develop business through building a good reputation for site safety, cleanliness and environmental performance.



Construction waste and segregation

General (active) waste constitutes 52% of all building site waste and is composed of timber, plastics, gypsum material, paper/card and bio-organic material. All these elements of general waste are recyclable if the infrastructure is in place. Gypsum is sometimes taken away free of charge in take back schemes, timber can often go to a local recycler, paper and card should be easy to recycle. However, a single MRF can usually manage all materials if separated out and offer concessions on skip prices as a consequence. Inert waste is composed of hard material, cast formless and soil which is 42% of all waste material on the average building site. The 6% which remains constitutes metals and hazardous materials (see Table 1).

When segregated out, active waste costs approximately £60/tonne for landfill disposal, which is similar to the cost of mixed waste of all types. Inert waste sent for recycling can cost as little as £10/tonne and timber (when separated from general material) £25/tonne if a suitable recycler is available. If metals are separated out these may be taken away free of charge by the waste handler. From these figures it is easy to see how money can be saved through a simple separation of waste into Inert, Timber, Metal and General waste.

The key to these savings is being able to develop long-term relationships with a reliable materials recycling facility/waste management company which offers different disposal rates for a range of waste types. Contracts can then be negotiated on a project-by-project basis, depending on the main waste types involved and their potential to be recycled. The company would then try to separate out as much waste as possible into different types using labelled skips, to maximise the savings on each type of waste.

In future the general (active) waste sent to landfill (such as timber) is set to become even more expensive to dispose of as landfill taxes rise. This is due to EU directives that are taking effect on UK environmental policy. The savings on separation of timber waste will therefore be even higher in future.

Hard Material	32%
Timber	24%
Plastics	15%
Cast formless	9%
Gypsum material	6%
Metals	6%
Paper / card	4%
Bio-organic	3%
Soil	1%
Chemicals / paint	0.3%

Active waste	Inert waste	Metals	Hazardous waste
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The implementation of waste segregation on a site must be approached in a well-ordered logical way. Allocating a clearly marked, easily accessible area for separate skips is important. Having one or two people take on responsibility for the skips and monitor that the correct materials are disposed of in each is also key to successful waste segregation. Penalty costs can be incurred (costing the company) if mixed waste skips are picked up following agreements that only separate single waste types would be submitted to the waste handler .

At Simons Construction's Sherwood Park development mini skips were placed around the site or on higher levels for easy access by operatives. The forklift driver was made responsible for emptying these mini skips into larger skips and for monitoring waste segregation. The site was generally kept tidy and organised at all times to keep the flow of waste moving to the correct disposal point and relevant skips. Trade contactors (TC's) are trained through an induction process when beginning work. Through following site organisation, waste and storage protocol, TC's themselves save money in reduced waste and damage to materials they use.

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