Best Practice at Farringdon – Waste recycling

Overview

The construction industry produces around 120 million tonnes of waste in the UK each year, of which approximately 20 million tonnes is sent to landfill unused (WRAP). Due to the large amount of waste generated by the construction industry, waste management and minimisation has been identified by the UK Government as an area that could be significantly improved as part of a strategy to improve how waste is generated and disposed of. Implementing a strategy in dealing with waste effectively so that it pays close attention to conserving natural resources and does not damage the environment is a key element.

The Farringdon project has been given opportunities to reduce, reuse and recycle materials used on site. Where possible, this is implemented and all materials are considered as a resource to reduce the amount of waste produced which in turn lifts the burden on the environment resulting from construction.

Innovation

At Farringdon we are committed to halving the amount of waste that goes to landfill. Since May 2011 we have achieved 100% diversion of waste from landfill.

Reduce

One of the areas targeted for waste reduction at Farringdon was packaging. Suppliers for site clothing such as shoes and PPE have removed shoe boxes and packaging.

With pallet returns, an agreement has been made with the delivery company to pick up pallets each time they deliver materials to site. This reduces disposal costs, saves space, diverts waste from landfill and utilises a vehicle which would usually return to the depot empty. These pallets can then be reused and returned with new materials. In the past month 135 pallets have been reused.

Re-use

At Farringdon polystyrene has been used in large quantities as track protection when working on NR and LU rails and some of the polystyrene protection is now redundant. Rather than sending it away as waste, the site have given the protection to another local site – in total 16m³ of polystyrene has been re-used.

In addition to this, approximately 35,200 cubic metres of muck away and arisings have been reused off site. Contaminated soil has been sent to soil treatment facilities for processing and eventual reuse.

Recycling & energy recovery

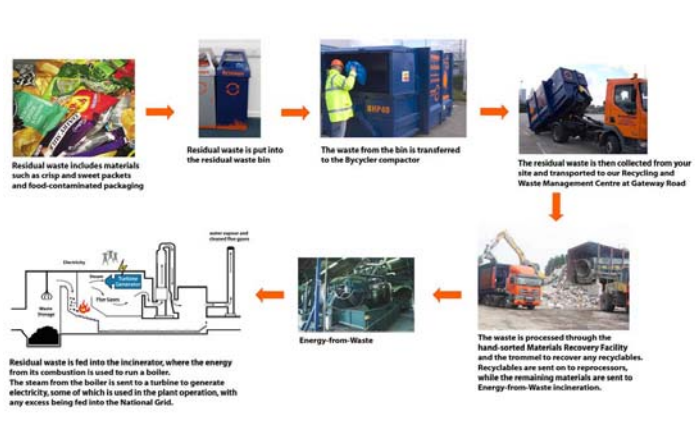
200m of steel hoarding has been ordered for use on Farringdon instead of using traditional wooden hoarding. The benefits of this material:

- manufactured from steel with minimum 83% recycled content.
- fully re-usable and recyclable at end of life.
- quick to erect, more secure, flexible and durable and there are no maintenance costs.
- avoid disposal costs inherent with timber at the end of the project – can be re-used on other projects or sold on as scrap metal.
- cheaper and quicker dismantling and ground re-instatement at the end of the project.
- high quality construction and materials for product longevity.
- pre-finished to the site's corporate colour, no painting required on site.

The cost for the steel hoarding is £7000, whilst the cost for traditional heras fencing is approx £1600. However, the scrap metal produced from the steel panels would be worth approximately £4000 based on current scrap metal prices and the maintenance costs is nil.

For site waste that cannot be reduced or re-used, a large number of recycling bins within the site offices and canteens have been provided. In addition to the office recycling, waste is segregated into different waste streams. All these different wastes are then sent to a transfer station, where recyclables are separated out using a Materials Recovery Facility (MRF) and trommel.

Approximately 95% of the waste is removed and sent to different recycling and processing facilities. The 5% residue that is left over is bulked and goes to the Belvedere energy from waste plant. The material is then burned to produce steam to power a turbine, which in turn will power the plant itself and also the surrounding homes.



Benefits

- Less waste for landfill
- Better understanding of the materials used on site and informing procurement and design decisions to use more sustainable products.
- Recycling produces reusable materials and has a lesser impact on the environment than virgin materials.
- CO_2 emissions reduced because there is no transfer of waste when materials are reused on site.
- Costs are reduced.

Targets and objectives

The recycling of waste on the Farringdon project has helped us meet our targets and objectives in the following areas:

- CEEQUAL – material use; energy; waste management; transport;
- Farringdon Sustainable Design and Construction Strategy - transport; energy and carbon; waste; sustainable material
- Farringdon Targets and Objectives – minimise waste; restrict carbon emissions; use sustainable materials in a sustainable way.

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