

What's happening?

Best practice recycling at *Borough Viaduct*

Overview:

Borough Viaduct required a lightweight fill material for the four metre deep vaults beneath a road without causing settlement to surrounding buildings. It was determined that a high-density polystyrene void former was the most suitable solution; however environmental and economic concerns were raised over its disposal.

The Skanska Engineering, Environment and Procurements teams worked together to ensure that the supplier of the polystyrene could collect off cuts at the same time as redelivering the new polystyrene blocks. These would then be re manufactured as insulation products.

An agreement was made with Jablite our supplier to collect all the void formers post use on return journeys from other deliveries in the area, so that these could also be processed and recycled. This reduced transports costs as well as the carbon emissions from transportation.

Resource management was a concern for the team at the beginning of the project. The site required all operatives to wear blue hard hats to identify new recruits for the first couple of months. Concern was raised regarding disposal of the hard hats as reuse for their intended purpose was not possible. Thanks to our proactive Procurement and Commercial teams, the supplier is now collecting the hard hats for recycling savings on landfill space and disposal costs

Benefits:

- *Environment – Disposal of polystyrene is bad for the environment as it takes a long time to biodegrade and takes up valuable landfill space and reduces the demand for*

raw material (oil) required for new products, savings resources.

- *Cost savings – Polystyrene has a high volume and low weight so large volumes of storage space at place of production is required prior to disposal and skip would fill up quickly. A saving of approx. £15 000 achieved*
- *Carbon savings – It is estimated 90 skip collections have been avoided reducing carbon emissions and congestion of busy London Roads. Vehicles travelled 13 miles for each collection journey and 1170 miles have been eliminated utilising back haulage, free of charge, saving 8076kg of CO2*
- *Closing the loop – the polystyrene is collected and returned to supplier for processing and manufacturing into new products. Diverted 480 cubic metres from landfill.*

Lessons Learned:

- *Allow approximately two weeks for negotiating and agreeing requirements with the Environment Agency. Do agree in writing prior to commencing*
- *If the polystyrene is returned and reused in original state it is not classified as wastes but if processed it is considered a waste*
- *Waste Transfer Notes, Waste Carrier Registration and valid Waste Exemption required and checked for this activity in accordance with Duty of Care Regulations*

Meeting our objectives & targets:

Purchasing agreements and supplier negotiations are improving resource efficiency, meeting recycling objectives and targets set

- *Prudent use of natural resources*
- *Reducing waste and recycling and project recycling rate of 95% of construction waste.*

- Reducing energy consumption

Photographs of polystyrene & hard hats being collected for recycling



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