

What's happening?

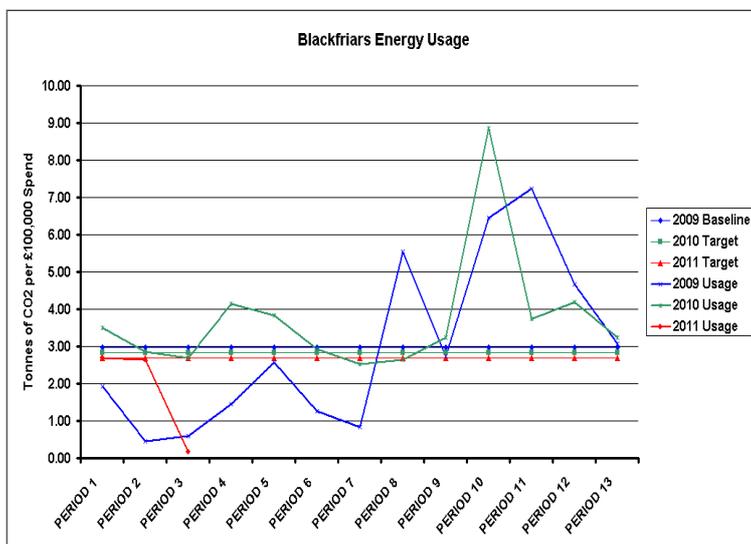
Best Practice at *Blackfriars* Reduction of Carbon Emissions

Overview:

Under the Thameslink Programme significant improvements are being made at Blackfriars to both the Thameslink and London Underground Stations. These are due to be complete by spring 2012. To help meet this deadline the project is currently running 24 hours a day 7 days a week; therefore using large amounts of energy.

As part of the Balfour Beatty Civil Engineering's Blackfriars Sustainable Action Plan we are aiming to reduce CO₂ emissions by 5%, year on year against NR period 1-13 2009 data, normalised by period spend.

The project went beyond the aim for carbon emissions for 2010 (Graph 1). One of the areas highlighted by the Balfour Beatty Mechanical and Electrical (M&E) team, as a way of reducing some of our carbon emissions, was reducing on-site generator usage.



Graph 1 – Blackfriars Energy Usage per £100,000 spend

Best Practice:

By redesigning a significant part of the construction power supply, the number of generators from the original design requirement for all tower cranes and site temporary power were able to be reduced from four to three.

This saved approximately -

- 2.8 tonnes of CO₂
- £1200 per week in hire costs
- Alleviated H&S risks
- Reduced fuel movements.

To ensure that construction work can continue on the bridge without the need for multiple generators, a power cable has been routed across it. This also reduces fuel movements and associated noise and air quality issues.

The environment, M&E and plant teams are also investigating the possibility of conducting a trial of bio-fuel energy generation on site to see if it is feasible.

Meeting our objectives & targets:

The project objectives and targets below will be being met by reducing on-site generator usage:

- Network Rail's Sustainable Design and Construction Strategy - *Restrict Carbon Emissions*
- Balfour Beatty Civil Engineering's Blackfriars Sustainable Action Plan - Reduce CO₂ emissions by 5% year on year against NR period 1-13 2009 data normalised by period spend baseline data
- CEEQUAL – Evidence of contractor considering energy usage during construction