

# What's happening?

## Lessons learned at *Blackfriars* Temporary Works Design

### Overview:

A large amount of temporary works have been designed and implemented on the Blackfriars Station and Bridge Redevelopment Project. Temporary works are works that Balfour Beatty carry out that will not be in place at the end of the project. As these works are defined by the method by which we wish to complete the permanent works, the design is not completed by the client but by Balfour Beatty as principle contractor.

Scaffold structures, bridge structures and staircases are a few examples of temporary works which have been constructed to date.

At present it is estimated that the total cost of the design and installation of temporary works will be in excess of £40 million. With such a vast amount of temporary works involved it is vital to ensure that sustainability is considered from the design stage to the installation.

### Lessons learned:

The engineering team, in reviewing the design briefs, take care to ensure that proposals put forward are as sustainable as possible. However, it was felt by both engineering and environment teams that more could be done to remind engineers to consider sustainability during the creation of the Design Briefs (TW2); TW2 is the basis of the whole design.

The TW2 allows the originator to identify their preferred method and material for temporary design. The decision was made to modify the TW2 proforma to encourage engineers to consider whether there may be a

more sustainable way to construct their temporary works and a section on the proforma now refers the engineer to the BRE Green Guide to Specification, the engineering and the environment teams. The new TW2 has been reissued project wide and as such, sustainability will be considered by engineers during this process.

H	Additional Information:	Preferred Materials**	<input type="checkbox"/>	<input type="checkbox"/>
		Preferred Method**	<input type="checkbox"/>	<input type="checkbox"/>
*Please consider if this is the most Sustainable solution feasible; for guidance consult either the Engineering or Environmental Teams				
	Others (specify)		<input type="checkbox"/>	<input type="checkbox"/>

### Best Practice:

When the TW2 for edge protection in spans three and four were received by the engineering team they were able to design in a system using scaffold and debris netting only, rather than an existing design for a timber hoarding used by the Construction Team in span five. Therefore, through the new TW2 process, two full pallets of 18mm plywood were not procured and less scaffold was used.

### Meeting our objectives & targets:

The project objectives and targets below have been met by modifying the TW2 proforma:

- Network Rail's Sustainable Design and Construction Strategy and Balfour Beatty Civil Engineering's Blackfriars Sustainable Action Plan - *Minimise waste production, Use sustainable materials in a sustainable way*
- CEEQUAL – *Material Use*