Lessons Learnt from a Significant Event

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Issue Number: TLP 030

Title: London Bridge – Scaffold Overturn (28th January 2015)

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Overview of Event:

A scaffold screened with monoflex was erected in area of the site to prevent the migration of debris and dust from demolition works to other populated areas of the site; these areas all being 'underground' in the arched structures below the existing railway station. The scaffold overturned and fell landing on a section of the Green Route (safe pedestrian walking route for the site team). There were no injuries. The scaffold was in in excess of 5 metres high and therefore classified as a Dangerous Occurrence.

Underlying Causes:

When the planned demolition activity broke through into the arched structure, in which the screened scaffold was erected, airflow was introduced flowing towards the scaffold. This caused a wind load on the structure and the overturn event. The absence of a suitable number of suitable ties to the surrounding structure resulted in the scaffold not being of adequate strength and stability to withstand the imposed wind load. The root cause of the event was misinterpretation of the scaffold standard TG20:13. The team incorrectly assessed the screened scaffold as falling within the guidance and did not obtain a scaffold design. Underlying causes included:

- Design – failure by the team to request a designed scaffold due to it being deemed as a 'basic independent scaffold'. Wind loading was not considered and there were inadequate ties (2 No. screw jacks were used between the structure and the arch masonary)
- Procedures – the documented site team scaffolding process was not always being adhered to with verbal requests being made rather than the documented request for scaffold form. Additionally a procedure was in place that stated all classes of temporary works / scaffold should be on a register which this was not.
- Organisation – responsibilities of the management team were unclear and therefore there was lack of visibility about the non-compliance with the agreed procedures.
- Procedures – the scaffold works were not included in any of the WPPs or TBSs and additionally did not feature in any point of work risk assessments.
- Communications – whilst the scaffold requirement was discussed on site the Temporary Works Planning meeting did not cover the scaffold screens
- Training / Organisation – the work gang that erected the scaffold screens were not adequately supervised. An advanced scaffolder was not present during the erection and subsequent fitting of the monoflex.

Actions Taken As a Result of Investigation:

- All sheeted scaffolds are now to be designed
- The request for scaffold forms now include environmental factors to be considered
- All scaffold requests are to utilise the request for scaffolding form and go via the Scaffolding Manager
- Scaffold supervisors are to undergo refresher training
- An additional scaffold supervisor will be employed to reduce workload on the scaffold supervisor
- An independent scaffold inspector will inspect scaffolding
- The roles and responsibilities of the Scaffolding Manager has been reviewed and briefed to him
- The temporary works team have been briefed on the scaffolding process
- The temporary works meeting agenda has an item added regarding scaffold installations
- A revised audit process has been implemented to monitor compliance on the scaffold process

General Key Messages:

- Temporary works arrangements should be clear and understood by the wider site team
- Audit / compliance checks should be in place to make sure processes are working as intended
- Adequate supervision arrangements should be in place for all works

Diagram/ Photo of event: