# Lessons Learnt from a Significant Event

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## Issue Number: TLP009

**Title:** London Bridge Station Redevelopment - Spigot Failure on a Bespoke Mobile Platform

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### Overview of Event

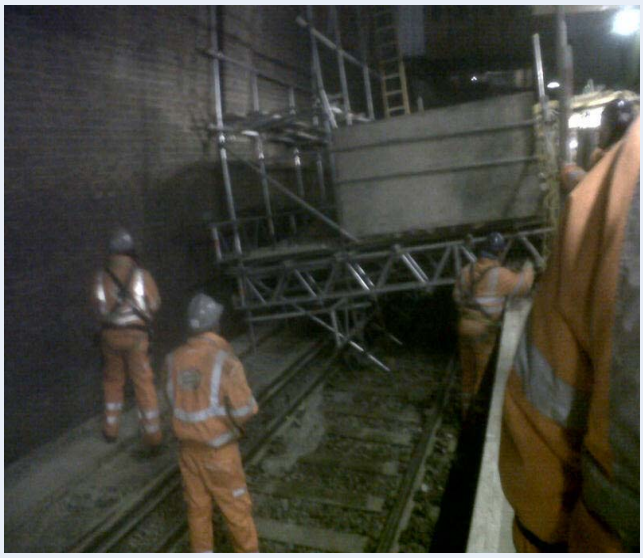
- At 01:20 hrs 05 April 2013 the spigot wheels on a bespoke tube & fit scaffold tower failed on London Bridge Station Redevelopment.
- The team were undertaking an operation which progressively deconstructed the top part of a retaining wall to reduce it's height. To assist the operation, a scaffold platform had been erected on track mounted wheels. Threaded spigots had been welded directly onto the wheel cages to enable the platform to be moved on the tracks.
- On the evening of the event it became clear that the planning had not highlighted an over bridge and it's impact on the work method.
- At the time of the accident the scaffold working platform was being moved from the area adjacent to the over bridge eastwards to allow rubble from the demolition activity to be removed from the platform.
- Whilst the platform was being pushed along the track all four spigots broke away from the castor's wheels as a result of the welds simultaneously failing.
- Fortunately nobody was injured and no infrastructure was damaged as a result of the event

### Underlying Causes:

There are a number of underlying facts that contributed to the accident: -

- The tower was not designed to be moved under load, however this was never actually specified in any of the documentation (design drawing/WPP/TBS).
- When demolishing the wall adjacent to the stairs, the arisings could not be removed as planned by the mini excavator without moving and repositioning the tower.
- Consequently the scaffold tower was pushed with the arisings from the demolition on the platform. The horizontal movements with a load on the platform caused the welds to fail.

The Photographs below show the scaffold platform resting against the retaining wall after the spigot welds had failed; and also the points at which the spigots broke away from the wheel cages.



Key Message:

- Always consider Temporary Works designs in line with the work methodology (design drawing/DRA/WPP/TB etc.), in this instance had the constraints of the platform been correctly denoted within the methodology (WPP/TB) the event would have been prevented.
- The contractor has subsequently introduced a 'safety readiness review' for higher risk and less standard work activities. Such a review would have been likely to pick up the proximity of the staircase to the scaffold tower and the issues this would cause in the planning stage.
- If towers or other equipment (particularly those of a bespoke design) have load or movement restrictions; make sure that there is effective signage on the equipment clearly stating these.