

Shared Learning

COSTAIN
The Thameslink Programme

 Issue Date: 12th August 2015 - For further info contact sharon.fink@networkrail.co.uk

Issue Number: TLP036
Title: Fire Alarm Activation (24th June 2015)

Overview of Event:

Whilst undertaking waterproofing installation for the St Thomas Street façade shop front (Arch 77) at London Bridge Station the fire alarm system was falsely activated (knocked).

The fixing detail required chemical anchors to be installed which required drilling activity. The drilling created dust-like arisings, which were then blown under a monoflex which was acting as a screen within the arch. The dust was interpreted as smoke and detected by a smoke sensor in a Network Rail operational room. Communications between the station Reception team and the project site team established that a fire was not present; the alarm was 'accepted' and the system reset.

If the system had incurred a 2nd knock at any point during the first activation then the station would have been evacuated in the middle of morning peak.

Causes:

Immediate - The use of a leaf blower to 'clean up' the dust-like arisings was the immediate cause of the incident. This was significant.

Root and Underlying Causes

- **Procedure:** When the works reached Arch 77, an operational interface then existed i.e. a 'sensitive' alarmed area. This was not identified in the WPP or TBS. An isolation of the smoke sensors was not stated as a requirement. This was significant. The failure to specify in the WPP or TBS the method of cleaning up the dust was Also contributory.
- **Hardware:** The ill-fitted Monoflex sheet failed to prevent the passage of dust [under the 150mm gap] through to the operational asset and smoke sensor.
- **Design:** The Monoflex separation detail was not the optimum solution; this left scope for alteration and loss of seal. A more rigid and fixed separation e.g. plywood, would create a better 'seal' preventing ingress of dust and / or debris.
- **Procedure [and training]:** The team had determined that the monoflex was sufficient so as to avoid the need for the team to have station acceptance for the works as it protected the operational asset this was incorrect.

Actions Taken As a Result of Investigation:

- Revisions to the WPP and TBS to include more detail on Blue Topper areas and the requirements attached thereto;
- Replacement separation detail between operational and Costain working areas to prevent contamination of the NR asset];
- Improvements to the signing of Blue Topper areas through information boards;
- Briefing sessions to improve and educate engineering teams and operatives of the risks to operational areas from construction activities;
- Development of clearer emergency protocols to enable effective communications in the event of emergency incidents.

Diagram/ Photo of event: Arch 77, St Thomas St Façade – work place



General Key Messages:

- Project teams should be aware of fire alarm activation points
- Project teams should consult with the owner regarding protective measures