Shared Learning

Network Rail

COSTAIN

Issue Number: TLP065   Title: Fire Alarm Cable Cut

Overview of Event:

As part of planned works associated with the construction of a spandrel wall in an area adjacent the Temporary Ticket Office (TTO), a Sub Contractor was undertaking a 200mm deep track saw cut through granite slabs previously laid as part of the permanent works. During this cutting process cables associated with the fire alarm systems, installed as part of the project enabling works, were struck.

The Sub Contractor Building Controller witnessed a significant number of faults on the fire panel generated by legacy areas. Not recognising the actual fault status [75 devices lost], the Building Controller incorrectly assigned the fault as a 7-day action and not the appropriate 2-hour. The weekly fire alarm test conducted 5 days later identified that the fire alarm zone affecting the Shard retail area was not working. It was subsequently identified that 75 devices were not in operation i.e. registered as being in a fault condition as a result of the service strike. During this time fire detection was not in operation in the affected areas.

General Key Messages:

- **Service drawings:** all known service drawings must be available to those breaking any ground
- **Roles & responsibilities:** must be clearly defined and understood by persons undertaking specific roles e.g in this case those based in the Integrated Station Control Room (ISCR) who were specifically responsible for responding to faults
- **Management arrangements:** must be clearly documented / briefed, in particular, on the escalation of faults found on systems and the necessary reporting arrangements

Actions Taken As a Result of the Investigations:

- A discussion with the Authorised Person included re-training on the Permit to Dig process, risk perception and risk management. On going coaching being undertaken.
- The Front Line Superson was included in a minimum of 2 No. Deep Slice inspections as part of a rehabilitation exercise. Continued coaching will be given. The supervisor was re-trained in the use of the Permit to Dig.
- A Lessons Learnt briefing from this incident is being delivered by the Front Line Supervisor and Appointed person.
- The Building Controllers in the ISCR were personally advised of the risks inherent in failing to act correctly to alarms. This included a briefing in the new fire alarm procedure.
- Sub Contractor and Network Rail delivered a training familiarisation session to all personnel working in the ISCR, in particular the Building Controllers.
- An alternative programme of testing has been developed to eliminate or minimise the risk of confusing alarm activations. This is planned as being testing on night shift only.
- Works to be carried out during engineering hours or agreed period where there is a Fire Commissioning engineer by the panel to monitor all faults.
- Enhanced monitoring by scheduled inspections by named individuals / MEP Construction team inspecting the panel twice a day am/pm to see total faults.
- MEP Fire engineer to taking ownership of managing the fault status and providing daily updates.
- Sub Contractor has introduced a new fire alarm works procedure and briefed this to all parties engaged in the works including regular checks and briefings.

Causes:

The principal causes of the service strike incident are associated with the failure to adequately manage and implement the Permit to Dig process. Importantly, there followed failures at an orgnisational level by the Mechanical and Electrical contractor, specifically the failure to manage the clash between planned testing and planned works resulting in an inadequate response to the loss of functionality of a fire alarm zone. Parts of the station – Shard concourse were left without adequate fire detection.

Immediate Cause – The track saw blade cutting through fire alarm loop cables for Node 26, which cover the Shard – station concourse retail area.

Photo of Event :