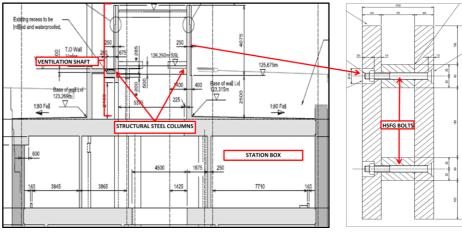
QUALITY ALERT

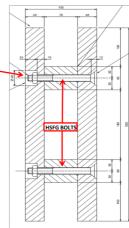
Non-Compliant High Strength Friction Grip Bolts

It has been observed that approximately 1000 No. M16 High Strength Friction Grip Bolts (HSFG) used in the fabrication of structural steel work at Paddington Station have been supplied by a Tier 4 supplier to the standard BS4395, which was withdrawn and superseded by the standard specified by Crossrail, EN14399. As the bolts do not comply with any harmonised standard they do not meet the requirements to obtain CE Marking.

The Construction Products Regulations 2013 specifies that for standard products under harmonised standards CE marking required. Nonis compliance with the standard also creates issues when it comes to providing assurance for the structure where these bolts have been used.

This has resulted in a Category 1 NCR.





CONTRIBUTORY CAUSES OF FAILURE

- Lack of understanding of CE marking and legal requirements by the supply chain.
- The Materials Compliance Record (MCR) was not submitted in advance of fabrication works commencing.
- Lack of communication/checking of Sub-Contractors/Suppliers further down the supply chain regarding Design requirements.



TAKE ACTION NOW

- $\overline{\mathbf{A}}$ Improve communication with Tier 2, 3, 4, 5, etc... suppliers to ensure design requirements are effectively passed down. (request sight of suppliers un-priced purchase orders).
- $\mathbf{\Lambda}$ Before any off-site manufacture commences; Tier 1 contractor to visit the premises of manufacturers to complete a physical check that materials used match those contained in the accepted MCR.

