HSE Bulletin (Ref: 12 in 2014)

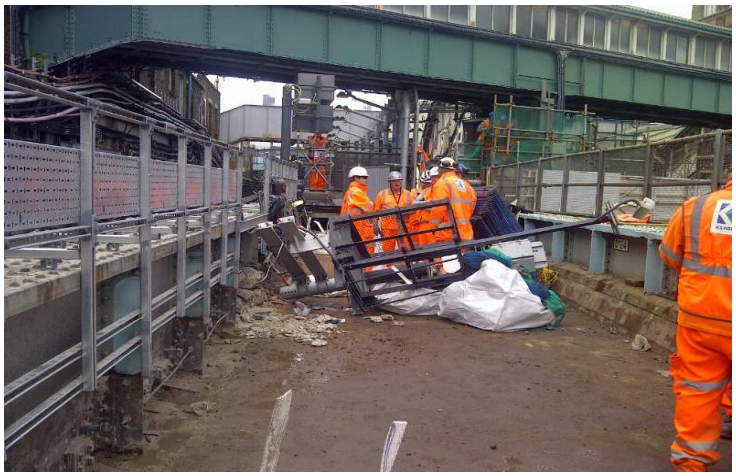
Use of Lindapter Clamps for fixings

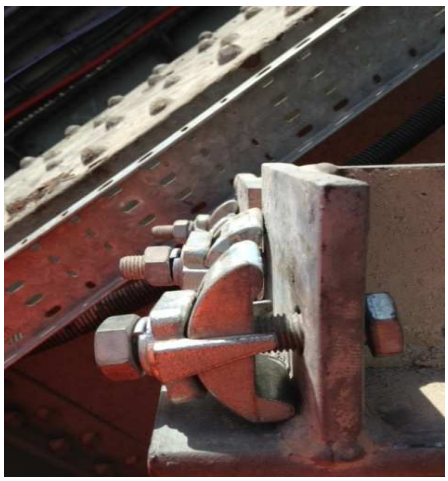
Date of issue: 25 June 2014

Background

On 24 May during Crossrail works to prepare LU bridge D124B at Whitechapel for partial demolition, an existing LU signal post EN37 fell into the worksite fracturing a worker's leg. The signal post had been fixed to the vertical web stiffeners of the bridge girder using Lindapter LR-16 clamps. An investigation is underway into the cause of the failure; however, it is apparent that a significant factor was the failure of the Lindapter clamps to hold the signal post to the bridge girder web stiffeners, whilst concrete was being broken out nearby.

Lindapter clamps are widely used for securing secondary steelwork to structural members without the need for on-site drilling or welding. However, structural stability is reliant on maintaining the clamping force. It is essential that vulnerability to reduction or loss of clamping force e.g. from vibration, is considered in design and installation to ensure the long-term security of the fixing.





Instruction

Steelwork fixings should be specified, designed and correctly installed by competent persons who have an adequate understanding of structural behaviour. Designers should address any vulnerability to a reduction or loss of clamping force in a fixing to ensure structural stability is maintained for the design life of the asset. This will include consideration of the impact of vibration, and the preparation of the metal surfaces to achieve maximum friction.

Consideration should be given to the impact of any works on existing steelwork connections e.g. from physical contact or transmission of vibration and the required mitigation measures.
Before fixing to or supporting from any existing structural member, refer to LU Category 1 Standard S1063 Civil Engineering - Cutting, grinding, drilling, fixing to and supporting from existing structures.

Please communicate this alert to your teams, projects and suppliers as appropriate

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