

## Scaffold Guards

A Power Company through its supply chain has recently applied for a licence and once this was granted subsequently erected a series of Scaffold Guards over Highways England Network. The requirements for the licence, design and approval of Scaffold Guard Structures are described within CHE memorandum 15/94. A typical scaffold guard is shown below



### Investigation / findings:

The requirements of CHE memorandum 15/94 are not widely known and installations have potentially been allowed to proceed without formal agreement being in place. The stability of the scaffold towers rely on cable stays fastened to kentledge blocks or ground anchors. It was unclear as to the required testing regime, effects of anchor interaction and the required design safety factor. The ground investigation was not agreed by Highways England and was initially rejected. (The GI did not take into account site specific conditions with only partial investigation of the site).

There were inconsistencies and errors within construction drawings that implied a reliance on site staff to decide whether the ground was suitable to meet design criteria. The initial submissions enclosing signed Design and Check Certificates were rejected, and required amendment after a further check being carried out by a third party, employed by National Grid.

Delays to the programmed work required further strengthening to the scaffold to account for ice loading. There are two loading conditions summer and winter (to account for ice loading). On site amendments were required during installation due to a lack of appreciation of vehicle restraint requirements. Supervision levels vary between service providers.

### For further information about this incident please contact:

Martin Sunderland, Structures Advisor, Professional & Technical Services. 0300 4706165 or email [martin.sunderland@highwaysengland.co.uk](mailto:martin.sunderland@highwaysengland.co.uk):

## Actions

- The requirements of CHE memorandum 15/94 must be followed
- Applications for Scaffold Guard licences should be closely scrutinised and the Section 169 Licence must be in place prior to Structures Technical Approval.
- The design check must be undertaken by a competent person.
- The ground investigation must be adequate for the complexity of design.
- Competent personnel should ensure on site tests are performed correctly to ensure acceptable safety factors are maintained. Anchor integrity should not be compromised by the close proximity of an adjacent anchor.
- The designers should consider the risk of malicious damage or theft of components, which could lead to catastrophic failure on to the highway.
- Maintaining Organisations should consider the use of additional onsite supervision and audit.