national highways

Quality Alert

No.: 01/2025

Issue Date: Feb'2025

WORKING ON BRIDGE DECKS:

HYDRAULIC MACHINE MOUNTED BREAKERS

THE ISSUE:

During works to waterproof and resurface a bridge the structural concrete deck was damaged requiring extensive remedial works.

This has occurred at two separate bridges in different regions over the past few months. And there are historic instances of similar occurrences.

The damage was caused by the excessive force of an excavator with a hydraulic breaker which penetrated the deck.

Works were carried out to break out the concrete along the central reservation plinths and drainage channels using an 8-tonne excavator with a hydraulic breaker attachment under the direction of a banksman. Multiple hydraulic brakers were used.

Root causes identified as poor planning, management, and supervision of the work activity.

KEY LEARNING POINT:

Machine mounted hydraulic breakers should not be used on bridge decks.

Also, any works in the vicinity of bridge decks should be carefully planned with the associated Risk Assessment Method Statements.

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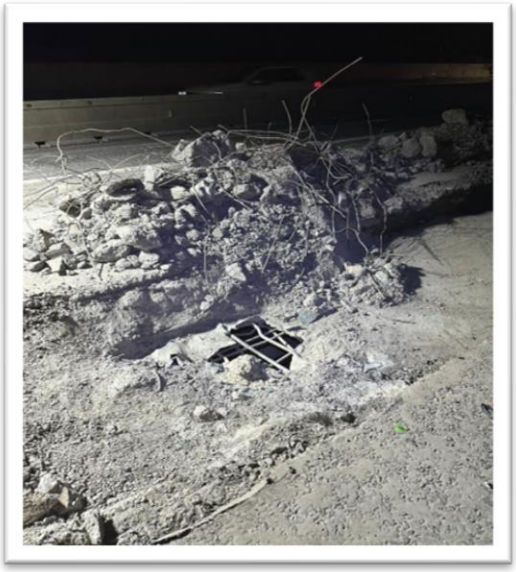
Link to NH Quality Alerts: QualityinConstruction	**WHO IS THIS GUIDANCE FOR:** Designers, Contractors, Site Staff, Project Managers.
About NH Quality Alerts: We have developed Quality Alerts to share knowledge of quality issues to assist teams in eliminating error. Any feedback, please send it to: Quality.Alerts@nationalhighways.co.uk	**IMPACT:** Structural Damage to the bridge deck. Significant remedial works with the associated impact on: • Safety • Customers • Costs • Carbon • Programme
 	**THE LEARNING:** • Reminder and awareness of the risk of using hydraulic breakers in the vicinity of bridge decks. • Planning for any work involving a machine mounted hydraulic breaker should include identifying the locations of existing structures, as well as the potential presence of hidden, buried structures, so that appropriate control measures can be implemented to prevent damage. • Are key personnel responsible for reviewing Risk Assessment Method Statements competent and adequately trained for the working methods they are responsible for approving? • Clearer defined roles for reviewing works methodologies which reflect the works complexity and risk levels. • Consider how you might improve your supervisor onboarding process, where all supervisors are assigned a 'buddy' via an experienced site agent and/or supervisor. • Toolbox talks to provide site operatives, to cover hazards and safe methods of breaking ground.