

Shared Learning

Key learning following a serious incident



A landslide at Harbury Cutting during remedial works

Issued to: All Network Rail line managers, safety professionals and RISQS registered contractors

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Location: Harbury Cutting, between Leamington Spa and Banbury

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Overview

On 14 February 2014 during winter storms part of Harbury cutting in Warwickshire failed. The cutting landslide was approximately 30m deep and 100m in length.

Two weeks earlier work was underway to repair the slope at Harbury cutting on 31 January 2015 when a landslide occurred in the Blue Lias Formation consisting of bands of Shale and Limestone geology.

Harbury cutting was constructed between 1847 and 1852 and parts of the cutting have suffered landslides since construction.

The cutting was widened in 1884 to make its slopes shallower to reduce the risk of further landslides.

Underlying causes

The slope failure was caused while excavating for construction of drainage trenches and to reduce the slope angle.

Slope stability analysis did not adequately take into account the history of failure in the cutting and the presence of low strength layers caused by previous cutting failures and geological features.

Key message

For very large, complex earthworks or earthworks with a history of ground movement there is a need to carry out sufficient site research, investigation and monitoring to meet the design and investigation requirements of Eurocode Geotechnical Category 3 (BS EN 1997-1).

Assurance should be more intrusive where there is greater project complexity or a history of ground movement.