

Report 22/2016: Structural failure at Lamington viaduct

On publication of RAIB's report concerning a structural failure caused by scour at Lamington viaduct, South Lanarkshire, Simon French, Chief Inspector of Rail Accidents, said:

"It was 29 years ago that four people lost their lives when a train fell from a collapsed bridge at Glanrhyd in Carmarthenshire. The investigation that followed recommended improved procedures for checking the integrity of bridges over rivers, especially at times of flood, and more effective management of the risk of scour.

"Our recent investigation into the partial failure of the viaduct at Lamington, in South Lanarkshire, serves as a reminder that, under certain circumstances, the scouring effect of a swollen river can undermine bridge piers to the point where the structure above starts to fail. The risk of scour is often higher for older bridges, particularly those with shallow foundations.

"It is of particular concern to me that the vulnerability of this structure to scour had been identified at least 10 years previously. Despite this, insufficient action had been taken to protect the piers from scour, or to monitor the integrity of the viaduct at times of high water flow. The continued operation of trains over this high risk structure, despite a previous report from a driver of a rough ride, provides vivid evidence that the risk of scour was not generally appreciated by those involved.

"Of even more concern was our finding that there were no effective scour mitigation measures in place for over 100 of the most vulnerable structures across Scotland. We discovered that a previous process for managing scour risk on Scotland Route had fallen into disuse, at least in part due to organisational change, and that this had not been recognised by Network Rail.

"The railway has seen numerous organisational changes over recent decades. Although change is inevitable, and often for the better, it is vital that the railway industry finds ways to retain its corporate memory of its own assets and the associated management systems. It is my view that the safety of assets can only be assured if those responsible clearly identify the control measures that are in place, how they contribute to safety and what must be done to keep them in place into the future.

"I hope that the future will see a much greater use of remote sensing equipment to monitor the condition of structures (and earthworks). Recent advances in technology make this easier to do, and I am encouraged that Network Rail is already working towards extending the use of such equipment.

"I hope, and believe, that Network Rail will think carefully about what it needs to do to assure itself that any emerging gaps in its asset management regime are detected, and then corrected, long before there is a risk to the travelling public".

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