

## Recommendation(s) Status: Collision with debris from bridge GE19 near London Liverpool Street

This report is based on information provided to the RAIB by the relevant safety authority or public body.

The status of implementation of the recommendations, as reported to us, has been divided into six categories:

### Key to Recommendation Status

<b>Implemented:</b>	All actions to deliver the recommendation have been completed.
<b>Implemented by alternative means:</b>	The intent of the recommendation has been satisfied in a way that was not identified by the RAIB during the investigation.
<b>Implementation ongoing:</b>	Work to deliver the intent of the recommendation has been agreed and is in the process of being delivered.
<b>In-progress:</b>	The relevant safety authority has yet to be satisfied that an appropriate plan, with timescales, is in place to implement the recommendation; and work is in progress to provide this.
<b>Non-implementation:</b>	Regulation 12(2)(b)(iii) = recommendation considered and no implementation action to be taken.
<b>Awaiting response:</b>	Awaiting initial report from the relevant safety authority or public body on the status of the recommendation.

RAIB concerns on actions taken by organisations in response to recommendations are reflected in this report and are indicated by one of the following:

-  The red triangle shows recommendations where the RAIB has concerns that no actions have been taken in response to a recommendation.
-  The blue triangle shows recommendations where the RAIB has concerns that the actions taken, or proposed, are inappropriate or insufficient to address the risk identified during the investigation.
-  The white triangle shows recommendations where the RAIB notes substantive actions have been reported, but the RAIB still has concerns.

Note: The tables which follow, report the status of recommendations on 31 December 2015. In some other cases the end implementer has already sent information to the relevant safety authority about the actions it has taken, or proposes to take and the safety authority is considering whether it is satisfied that those actions and the associated timescales are accepted.

Number/ Date/ Report No/ Inv Title / Current Status	Safety Recommendation	Summary of current status (based on latest report from the relevant safety authority or public body)
1 28/05/2008 22/2009 Collision with debris from bridge GE19 near London Liverpool Street Status: Implemented	Network Rail should review its Safety Management System, and procedures, to satisfy itself that the following points are covered before approving construction work, particularly by third-parties, on or over the operational railway: a. The requirement for an approved design, method statement and risk assessment for any remedial activity involving load-bearing temporary works. This should include consideration of a range of failure modes, and inspection against known parameters after the structure or temporary works have been knowingly disturbed (paragraph 311a); b. The means of safely adjusting the horizontal position of a structure should this become necessary (paragraph 311b); c. The requirement to specifically consider the risks arising from the use of unrestrained low-friction surfaces, such as PTFE, which may be subjected to unpredicted lateral loads and disturbing forces during construction activity. This should include the reduction in the coefficient of friction which can occur when a sustained horizontal force is applied (paragraph 311c); d. The means of securing permanent formwork and other construction materials, to protect against sudden or unplanned structural movement (paragraph 311d); e. The need for method statements to contain accurate information on all construction stages, and to consider the effects of thermal movement where structures are supported on bearings (paragraphs 312a and 312e); f. The need for contractor's risk assessments to include consideration of low probability high impact risks associated with temporary works (paragraph 312b); g. The need for independence in the routine inspection of complex temporary works, which should not be delegated to the	ORR has reported that Network Rail has taken actions in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.

organisation responsible for providing them (paragraph 312c);  
h. The means to prevent rain water collecting directly above 25 kV electrification equipment due to the risk of flash-over if the water is released in an uncontrolled manner (paragraph 314e);  
i. The requirement for the intermediate certification of structures, including temporary works, for which the existing Form E process may be inadequate (paragraph 316); and  
j. The benefit to all parties on major projects of adopting a common categorisation for risk assessments, to enable a coherent risk profile to be generated and to avoid the risk of confusion (paragraph 322).

<p>2            28/05/2008    22/2009</p> <p>Collision with debris from bridge GE19 near London Liverpool Street</p> <p>Status: Implemented</p>	<p>London Underground Limited, Rail for London, the Heritage Rail Association, the Light Rail Engineering Group and Northern Ireland</p> <p>Railways should establish processes so that information is available to any potential suppliers of similar projects or assets regarding the issues raised within this report.</p>	<p>ORR has reported that London Underground Limited, Rail for London, the Heritage Rail Association, the Light Rail Engineering Group and Northern Ireland Railways have taken actions in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>3            28/05/2008    22/2009</p> <p>Collision with debris from bridge GE19 near London Liverpool Street</p> <p>Status: Implemented</p>	<p>Network Rail should establish procedures so that information is available to operations staff where construction activities could reasonably affect the safety of the railway. These should include, in particular:</p> <p>a. the provision of emergency contact details for identified project representatives out-of-hours (paragraph 315); and b. information on the location of each site, and the signal numbers necessary to protect the line (paragraph 324).</p>	<p>ORR has reported that Network Rail has taken actions in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>4            28/05/2008    22/2009</p> <p>Collision with debris from bridge GE19 near London Liverpool Street</p> <p>Status: Non-implementation</p>	<p>Network Rail should expand NR/L2/OCS/250, the National Emergency Plan to:</p> <p>a. make provision for maintaining or extending the command structure in place following the exit of the emergency services from the site to ensure that post-incident activities are managed properly (paragraph 318);</p>	<p>Network Rail has carried out a review in response to this recommendation and concluded that its existing arrangements cover the intent of the recommendation. Network Rail propose no further action. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>

Number/ Date/ Report No/  
Inv Title / Current Status

**Safety Recommendation**

**Summary of current status (based on latest report  
from the relevant safety authority or public body)**

b. reinforce arrangements for managing non-railway organisations during the incident recovery phase and prevent persons being exposed to risk due to a lack of site coordination (paragraph 314d); and  
c. require route controllers to positively confirm what trains are involved in an incident, establish the location and ensure communication with all trains requiring assistance (paragraph 319).

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5            28/05/2008    22/2009  
Collision with debris from bridge GE19 near  
London Liverpool Street  
Status: Implemented

Network Rail should enhance the incident management training given to operations staff to reflect the requirements of Recommendation 4.

ORR has reported that Network Rail has taken actions in response to this recommendation.  
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.

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6            28/05/2008    22/2009  
Collision with debris from bridge GE19 near  
London Liverpool Street  
Status: In-progress

The Health and Safety Executive should:  
a. draw the attention of the Standing Committee on Structural Safety (SCOSS) to the issues identified in this report regarding the safe use of PTFE in construction to ensure a wider promulgation amongst the civil engineering community (paragraph 311c); and  
b. approach companies known to be involved in moving large loads using PTFE to check they have appropriate guidance and internal procedures to address the safe use of PTFE (paragraph 328).

HSE have reported that work is ongoing to check that there is appropriate guidance and internal procedures to address the safe use of PTFE. Update due July 2014.

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7            28/05/2008    22/2009  
Collision with debris from bridge GE19 near  
London Liverpool Street  
Status: Implemented

National Express East Anglia should review their procedures relating to the appointment of a TOLO, or other site representative, in response to major railway incidents involving passengers (paragraph 321).

ORR has reported that National Express East Anglia has taken actions in response to this recommendation.  
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.