

Letter of instruction

Information for users

The following document:

NR/L3/OCS/043/7.4 Issue 3

has had changes made to it, most recently, with effect from **11 November 2013**.

Instructions for use

It is essential that you first read and understand each letter of instruction pertaining to the standard before proceeding to use the standard. You must then apply the requirements of each letter to the standard.

NR/BS/LI/319	Issue 1	expired March 2015	Proceed to letter ►
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For further information, please contact:

IHS Customer Support

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National Control Instructions

and

Approved Code of Practice

Section 7.4

Bridge Strikes from Road Vehicles and Waterborne Vessels

This section contains:

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Appendix C	Damage limits for Bridge Strike Nominees to permit the movement of trains at Normal Speed

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7.4 **Bridge Strikes from Road Vehicles and Waterborne Vessels**

7.4.1 **Introduction**

7.4.1.1 **Application**

This Section shall be applied when a Bridge Strike is reported at a Bridge over or under the railway involving a:

- road vehicle, or a
- waterborne vessel

7.4.1.2 The requirements of this Section are not applicable to an incident in which rail borne plant collides with a Bridge. Such incidents shall be managed, recorded and reported as a possession irregularity.

7.4.2 **References**

7.4.2.1 **Railway Group Standards**

- [GE/RT8000/TS1](#) General Signalling Regulations: Regulation 17.2 Bridge strikes
- [GE/RT8000/TS1](#) General Signalling Regulations: Regulation 20 Examination of the line
- [GE/RT8000/TW1](#) Preparation and movement of trains: General: Section 16 Examining the line

7.4.2.2 **Network Rail Standards**

- [NR/L3/CIV/076](#) Management of the risk of Bridge Strikes from Road Vehicles and Waterborne Vessels
- [NR/L3/CIV/176](#) Management of reports on Bridge Strikes
- [RT/CM/SO/P/305](#) Emergency Services Rail Incident Protocol
- [RT/CM/SO/P/302](#) Safety for the Emergency Services

7.4.3 **Definitions**

Bridge

A structure of one or more spans greater than or equal to 1,800mm, whose prime purpose is usually to carry traffic or services over an obstruction or gap, but excluding Culverts.

For the purposes of this Instruction, structures whose prime purpose is to carry services (utilities) over an obstruction or gap are excluded.

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Bridge Strike

An incident in which a road vehicle or its load, or a waterborne vessel or its load, impacts with the fabric of a Bridge.

Bridge Strike Examiner (BSE)

A person who has been certificated as competent to permit the movement of trains up to Normal Speed over or under Bridges following a Bridge Strike.

Bridge Strike Nominee (BSN)

A person who has been certificated as competent to permit the movement of trains at Normal Speed over or under Bridges following a Bridge Strike, when the damage is within defined limits.

Controlling Signaller

A person appointed by Network Rail with responsibility for controlling train movements over or under a Bridge following a Bridge Strike.

Late Reported Bridge Strike

A Bridge Strike when the first report of a Bridge Strike at an Underline Bridge is received by the Operations Controller either (a) after rail traffic has passed over the Bridge on one or more lines since the Bridge Strike occurred, or (b) when there is insufficient time to prevent rail traffic passing the protecting signal on the approach to the Bridge.

Normal Speed

In the context of Bridge Strikes, Normal Speed is the maximum speed on each line that applied immediately before the Bridge Strike occurred or was reported.

Operations Controller

The person appointed by Network Rail to control the operational safety of trains on Network Rail infrastructure within a defined geographical area or on a Route.

Operating Instruction (for Late Reported Bridge Strikes)

A set of instructions required by a Controlling Signaller to perform his/her duties, and which in the context of management of the risk from Bridge Strikes, specifies the criteria for rail traffic to be authorised to pass over a Bridge following a Late Reported Bridge Strike until the Bridge has been examined, and the speeds applicable.

Overline Bridge

A Bridge carrying non-rail vehicular traffic over one or more operational railway lines. An Overline Bridge usually carries a road and may also be referred to as an overbridge.

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Signal Box Special Instructions (SBSIs)

A set of instructions required by a Controlling Signaller to perform his/her duties, and which in the context of management of the risk from Bridge Strikes, specifies for a particular Underline Bridge or Bridges (a) the criteria for rail traffic to be authorised to pass over the Bridge following a Bridge Strike until the Bridge has been examined, and (b) the speeds applicable.

Signal Box Special Instruction (SBSI) Bridge Strike Appendix Schedule

A list of bridges issued in conjunction with a Signal Box Special Instruction listing details required for the management of a bridge following a reported Bridge Strike.

Significant Damage

Any damage greater than the defined limits according to the type and material of the Bridge up to which a Bridge Strike Nominee is authorised to permit the movement of trains.

Underline Bridge

A Bridge carrying one or more operational railway lines. An Underline Bridge usually carries the railway over a road or watercourse and may also be referred to as an underbridge.

7.4.4 Immediate action when a Bridge Strike is reported

7.4.4.1 Underline Bridge

If a report is received by the Operations Controller that an Underline Bridge may have been struck by a vehicle or waterborne vessel, the Operations Controller shall contact the Controlling Signaller responsible for the area and the movement of trains over the affected Bridge must be stopped in accordance with GE/RT8000/TS1 General Signalling Regulations (GSR): Regulation 17.2 until the Bridge has been examined to confirm that it is safe for trains to pass, except and until any of the following have been established beyond any doubt:

- the movement of trains on any specified lines over the Bridge is authorised by a SBSI that has been issued for the Bridge, and there are no other safety reasons requiring trains to be stopped;
- the Operations Controller has confirmed that the Bridge Strike is a Late Reported Bridge Strike and has instructed the Controlling Signaller to authorise the movement of trains on each line in accordance with the Operating Instructions in Appendix B;
- the strike is due to a small pleasure craft or other small vessel on a navigable waterway;
- the strike is due to a light vehicle at a Bridge identified in the SBSI Bridge Strike Appendix Schedule (See Appendix A) as suitable to permit the movement of trains following a strike by a light vehicle.

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The Operations Controller shall in conjunction with the Controlling Signaller establish whether either Regulation 17.2 or other Instructions apply (e.g. SBSI, Instruction for Bridge Strikes by light vehicles Strikes (See Appendix A) or Operating Instruction for Late Reported Bridge Strikes (See Appendix B).

Until the applicability of an authorised Instruction has been established beyond doubt, the requirements of the Regulation 17.2 must be implemented.

It is permissible for more than one train to traverse an Underline Bridge at the same time whilst an examination of the line over the Bridge is being carried out. When the driver of the first train on a line is examining the line, the passage of trains on adjacent lines authorised in accordance with this instruction may continue whilst the examination is taking place.

Examination of any line by a train driver shall be undertaken independently for each line.

7.4.4.2 Overline Bridge

If a report is received by the Operations Controller that an Overline Bridge may have been struck by a vehicle, the Operations Controller shall contact the Controlling Signaller responsible for the area and in accordance with GE/RT8000/TS1 General Signalling Regulations: Regulation 17.2, the driver of the first train on each line is to be required to examine the line in accordance with GE/RT8000/TS1 General Signalling Regulations: Regulation 20.

If the driver of the first train reports that there is no debris on the track or visible damage to the parapet, the Controlling Signaller may permit subsequent trains to pass under the Bridge at 20 mph until the Bridge has been examined to confirm that it is safe for trains to pass.

7.4.4.3 People trapped, vehicle on fire or wedged under a Bridge

When advice is received that a road vehicle is on fire, the movement of trains on all lines over the Bridge shall be stopped.

When advice is received that a road vehicle is wedged under a Bridge, the Operations Controller shall establish from the informant whether:

- persons are trapped in the vehicle;
- the vehicle is carrying, or is for the purpose of carrying, hazardous materials;
- the fire brigade have been contacted.

Train movements over the Bridge may be permitted in accordance with the Instructions in Appendix A or Appendix B as applicable until it is established and confirmed that the vehicle is wedged under the Bridge.

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The movement of trains on all lines over the Bridge shall be stopped when confirmation is obtained that a vehicle is wedged under the Bridge and any of the following apply.

- persons are trapped in the vehicle, until the persons have been removed;
- the vehicle is carrying, or is for the purpose of carrying, hazardous materials, until the vehicle/load has been removed.

Train movements over the Bridge may be permitted in accordance with the Instructions in Appendix A or Appendix B if the criteria above are not able to be established and confirmed.

Train movements may be permitted or allowed to continue if it is confirmed that the vehicle is wedged under a collision protection beam only.

Train movements shall also be stopped when a vehicle is confirmed as wedged and:

- the vehicle or load is confirmed as substantial by a BSN or BSE (which prevents examination of the Bridge) until the vehicle or load has been removed;
- the vehicle or load is being removed, unless the BSN/BSE confirms that the wedged part of the vehicle or load is not substantial and removal will not affect the continued safe use of the Bridge.

Examples of insubstantial vehicles are buses and curtain sided and aluminium bodied lorries.

Substantial vehicles may be low loaders carrying plant, container lorries and skip wagons.

7.4.4.4 Signal Box Special Instructions (SBSIs)

For Underline Bridges that have been assessed as having sufficient robustness and strength against the effects of Bridge Strikes a SBSI may have been issued to authorise the movement of trains over the Bridge following a Bridge Strike until the Bridge has been examined.

The SBSI will state the actions to be taken for each line at each Bridge, determined from the range of permitted actions identified in Appendix A. The Controlling Signaller shall only authorise trains to proceed in accordance with the instructions in the SBSI.

In the assessment of strength and robustness, the damage that has been assessed as safe may exceed the limits defined for a BSN. For any Bridge, the acceptability of actual damage which exceeds the BSN limits must be confirmed by a BSE or the on-call Civil Engineer.

The Operations Controller shall arrange for the Bridge to be examined by a BSE or BSN as soon as reasonably practicable.

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7.4.4.5 Late Reported Bridge Strikes

Appendix B specifies the actions to be taken to permit the movement of trains following a Late Reported Bridge Strike until an examination of an Underline Bridge is carried out. These actions apply to all Underline Bridges and do not require the Bridge to have been assessed for robustness or strength, although this will have been undertaken where a SBSI has been issued.

Operating Instructions for a Late Reported Bridge Strike do not apply at an Overline Bridge.

The Operations Controller shall:

- establish whether any safety reasons that require trains to be stopped apply to the Bridge Strike, as identified in Appendix B;
- establish whether an SBSI has been issued for the Bridge;
- establish the numbers of trains that have passed on each line without reports of any track defect, noting the different requirements identified in Appendix B regarding the class of trains and the prohibition of freight or engineering train movements;
- decide which of the control actions specified in Appendix B is to be applied to each line;
- instruct the Controlling Signaller to authorise the movement of trains on each line accordingly;
- arrange for the Bridge to be examined by a BSE or BSN as soon as reasonably practicable.

7.4.4.6 Bridge strikes by light vehicles or manually powered vessels at Underline Bridges

The Instructions in Appendix A include requirements to enable the movement of trains to be permitted over identified Bridges until the Bridge has been examined, where the strike has been caused by a light vehicle (a motorcycle, car or light van such as or smaller than a Ford Transit van), or a manually powered vessel.

The Bridges to which these requirements apply are identified in the SBSI Bridge Strike Appendix Schedule.

If the Bridge has been clearly identified by the informant and the Operations Controller can establish that all of the criteria identified in the Instruction are satisfied beyond all doubt, the movement of trains may be permitted in accordance with the Instruction, until the Bridge has been examined.

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7.4.4.7 Obtaining information about the Bridge Strike

The Operations Controller shall obtain and record in the control log all available information on the Bridge Strike from the informant including but not limited to the following:

- the Bridge type – rail over road (Underline), road over rail (Overline), rail over navigable waterway (Underline);
- identification (ELR and Bridge number or (for Western Territory) mileage) and details of the Bridge involved (location, name, roadway, span involved, and where applicable other information shown on the Bridge identification plate);
- details of the vehicle or vessel involved, vehicle registration number, name and address of the driver (and company if different) and insurance details;
- extent of the damage to the Bridge;
- which side of the Bridge has been struck;
- the time of the incident, and time details were received by the Operations Controller;
- the name, address and telephone number of the informant;
- if the informant is British Transport Police or Civil Police, the appropriate reference number for the incident.

There is no legal impediment under the Data Protection Act to the Civil Police providing the Operations Controller with information including the name and address of the driver(s), details of the vehicle owner(s), and the registration number(s) of the vehicle(s) involved in a Bridge Strike.

The following times shall also be recorded:

- estimated arrival of the BSN or BSE;
- arrival and departure of the BSN and BSE from site;
- when normal working was restored on each line;
- when the British Transport Police or Civil Police are advised of the Bridge Strike;
- when the Network Rail National Operations Centre is advised of the Bridge Strike.

7.4.4.8 Arranging an examination of the Bridge and notifying relevant people

The Operations Controller shall implement rapid response arrangements for the Bridge to be examined by a BSE at the earliest opportunity following a reported Bridge Strike.

If a BSE is not immediately available the Operations Controller shall arrange for a BSN to examine the Bridge at the earliest opportunity. A BSE is still required to examine the Bridge after the BSN to confirm the decisions made by the BSN.

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A BSE is required to attend a Bridge Strike as part of the rapid response when:

- the damage is confirmed by a BSN or suspected from the report of the Bridge Strike as exceeding the limits up to which a BSN is authorised to permit train movements;
- the Bridge is identified in the SBSI Bridge Strike Appendix Schedule (see Appendix A) as a Bridge at which a BSN is not authorised to permit train movements following a reported Bridge Strike (See 7.4.6.3).

When the Bridge is to be examined by a BSN, the time of attendance of the BSE will be decided taking the following into account:

- whether a SBSI has been issued for the Bridge, and the classification of the lines
- whether the BSE should attend at night or in daylight hours, and in particular:
 - the safety of the BSE including considering lone working at night and the need for protection for track access that might affect train movements;
 - quality of the examination (both track and structure);
- the quality of information obtained as to details of the reported Bridge Strike and vehicle involved.

In such cases, Operations Control will to be advised as to the time of attendance of the BSE.

7.4.4.9 Other organisations to be notified

All Bridge Strikes at Underline Bridges spanning a road, or at an Overline Bridges carrying a road, shall be reported to the Civil Police as a road traffic collision using the 999 system (irrespective of whether the strike causes damage only).

There is a statutory duty under the Road Traffic Act to report damage to roadside property caused in a road traffic collision. Thus the name and address of the driver(s), details of the vehicle owner(s), and the registration number(s) of the vehicle(s) involved in a Bridge Strike incident should be reported to the Civil Police.

In addition, British Transport Police should be notified (using the non-urgent BTP MICC phone number (see National Control Directory) in the event that contact is required).