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Requirements for Speed Restrictions and Managing Overspeed Events

This document sets out requirements and guidance for the implementation of speed restrictions and the management of overspeed events.

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Synopsis

This document sets out requirements and guidance for the implementation of speed restrictions and the management of overspeed events.

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Issue record

Issue	Date	Comments
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Superseded documents

This standard does not supersede any other Railway Group documents.

Supply

The authoritative version of this document is available at www.rssb.co.uk/standards-catalogue. Enquiries on this document can be submitted through the RSSB Customer Self-Service Portal https://customer-portal.rssb.co.uk/

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Part 1 Purpose and Introduction

1.1 Purpose

1.1.1 Trains going too fast can result in a range of dangerous events. Derailment, collisions, injury or, in exceptional cases, fatalities to staff and passengers or other members of the public and damage to assets can all occur when a train exceeds the maximum safe speed for that type of train in a particular location.

1.1.2 RIS-3772-TOM sets out requirements and guidance for those involved in the implementation of speed restrictions and the management of overspeed events.

1.1.3 Some of the requirements in this standard are aimed solely at the railway undertaking (RU) or the infrastructure manager (IM). Where the requirement is aimed at both, the term transport operator has been used.

1.2 Application of this document

1.2.1 Compliance requirements and dates have not been specified because these are the subject of internal procedures or contract conditions.

1.2.2 If you plan to do something that does not comply with a requirement in this document, you can ask a standards committee to comment on your proposed alternative. To get their opinion, submit an application to RSSB. You can find advice and guidance on using alternative requirements on RSSB's website.

1.3 User's responsibilities

1.3.1 Industry experts representing railway industry stakeholders are involved in the process for setting the content of documents that are prepared in accordance with the procedures set out in the Railway Standards Code and Manual.

1.3.2 Users of documents published by RSSB are expected to be competent or should take specialist advice before following or applying any practices or principles contained within them and are reminded of the need to consider their own responsibilities to ensure safe systems of work and operation, health and safety at work and compliance with their own duties under health and safety legislation. While documents published by RSSB can be used to help inform and devise safe practices and systems of work, their content has not been designed or prepared for:

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1.4 Structure of this document

1.4.1 This document sets out a series of requirements that are sequentially numbered. This document also sets out the rationale for the requirement, explaining why the requirement is needed and its purpose and, where relevant, guidance to support the requirement. The rationale and the guidance are prefixed by the letter 'G'.

1.4.2 Some subjects do not have specific requirements but the subject is addressed through guidance only and, where this is the case, it is distinguished under a heading of 'Guidance' and is prefixed by the letter 'G'.

1.5 Approval and authorisation of this document

1.5.1 The content of this document will be approved by Traffic Operation and Management Standards Committee on 24 June 2025 [proposed].

1.5.2 This document will be authorised by RSSB on 25 July 2025 [proposed].

Part 2 Terminology

2.1 Terminology

Guidance

G 2.1.1 *Table 1* describes the common terms used on the GB mainline railway in relation to speed restrictions.

G 2.1.2 Where the terminology included in this section defines the different types of speed restrictions, it does not describe the reason for them such as wind or heat speeds.

Term	Definition
Blanket speed restriction (BSR)	A precautionary speed restriction, applied to a defined area to account for environmental conditions, which is not published but is notified to drivers by Operations Control via the signaller or by other means. Lineside signage is not provided, and stop and caution procedures do not apply. A single speed value applies, and the restriction may apply only to selected train types.
Differential speed	A value of permissible speed or speed restriction that is only applicable to certain trains. Differential speeds include: a) Standard differential speed - Two values of permissible speed, or two different speed values for a temporary speed restriction, each of which is applicable to one of two standard categories of trains, as defined in the Rule Book. b) Non-standard differential speed - A permissible speed for a specific type of train, which is different from that for other types of trains on the same section of line. This comprises 'Permissible speed indicators with letters' and 'Enhanced permissible speed indicators' as described in the Rule Book. Non-standard differential speeds are not applicable to temporary or emergency speed restrictions.
Emergency speed restriction (ESR)	A speed restriction which is imposed in response to a fault or risk. An ESR is not shown in the Weekly Operating Notice (WON), or might be more restrictive than shown, or applies at a time other than that shown in the WON. Trains can be cautioned at the ESR until equipment is installed on-site to help notify the driver of the speed restriction. Rule Book module GERT8000-SP gives further information on ESRs.
Overspeed	The amount by which the actual speed of a train exceeds the permissible speed for any reason.
Overspeed event	Where a train has exceeded the maximum permitted or train-related speed.

Term	Definition
Permissible speed (PS)	The maximum permitted speed as shown in the Sectional Appendix.
Permitted speed	The maximum speed a train can be driven as defined by the PS, BSR, TSR, ESR or restrictions applied to the rolling stock.
Temporary speed restriction (TSR)	A speed restriction which is imposed in response to a fault or risk and has equipment on site to help notify the driver of the speed restriction. Current TSRs are published in the Weekly Operating Notice (WON).

Table 1: Terminology

G 2.1.3 Further requirements and guidance on differential speeds can be found in RIS-2711-RST Lettered Differential Permissible Speeds Classification, RIS-0734-CCS Signing of Permissible Speeds and RIS-7704-INS Calculation of Enhanced Permissible Speeds for Tilting Trains.

Part 3 General requirements for speed restrictions

3.1 Identifying the need for a speed restriction

3.1.1 The infrastructure manager (IM) shall have processes in place to assess when a speed restriction is required due to:

a) An infrastructure defect;
b) A forecasted weather event or an occurring weather event; or
c) An event that could affect the safety of the railway or people.

3.1.2 When an ESR or TSR has been identified as needed, the IM shall arrange for a speed restriction design for the relevant location to be created.

3.1.3 In the case of a BSR being identified as necessary, the IM shall define the optimal location where the speed restriction is required.

Rationale

G 3.1.4 Trains going too fast can result in a range of dangerous events. Derailment, collisions, injury or, in exceptional cases, fatalities to staff and passengers or other members of the public and damage to assets can all occur when a train exceeds the maximum safe speed for that type of train in a particular location.

G 3.1.5 The Railway Safety (Miscellaneous Provisions) Regulations 1997 state that a person in control of any infrastructure for a transport system shall ensure, so far as is reasonably practicable, that appropriate procedures are in place to prevent derailment of vehicles on account of excessive speed.

G 3.1.6 The Health and Safety at Work etc. Act 1974 (HSWA) places a duty on employers to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all employees.

G 3.1.7 The HSWA also places a duty on employers to conduct their business in such a way as to ensure, so far as is reasonably practicable, that non-employees are not exposed to risks to their health and safety.

G 3.1.8 Every employer has a duty under The Management of Health and Safety at Work Regulations 1999 (MHSWR) to make a suitable and sufficient assessment of the risks arising from their activities to both their employees and non-employees.

G 3.1.9 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS) give transport operators a specific duty to carry out risk assessments and put in place the measures they have identified as necessary to make sure the transport system is operated and managed safely.

G 3.1.10 ROGS requires transport operators to have a safety management system to keep written records of arrangements for managing safety risks. The safety management system is the basis for making sure the transport system runs safely and in line with ROGS.

G 3.1.11 ROGS place a duty on transport operators to cooperate to make sure the transport system is run safely.

Guidance

G 3.1.12 The IM's processes and procedures for implementing speed restrictions will typically include but are not limited to:

a) The differentiation between each type of speed restriction (BSR, ESR, TSR);
b) The application and removal of each type of speed restriction; and
c) Who needs to be informed and by which method(s) of communication.

G 3.1.13 Reports of track faults, defects or other hazards affecting the railway can come from different sources such as infrastructure maintainers, drivers, other train crew, and members of the public.

G 3.1.14 When deciding if a BSR is needed due to a weather event, the IM can:

a) Use weather-related monitoring and alert tools, such as a convective rainfall alert tool (CAT), to help decide if a BSR is to be implemented at short notice;
b) Conduct an Extreme Weather Action Teleconference (EWAT) call to discuss impending severe weather and to agree on plans and actions with all relevant stakeholders; or
c) Use a tool that accounts for system risk and the relationship between weather and infrastructure risk to determine the most effective operational response for each type of rainfall event in a specific area.

G 3.1.15 RIS-0735-CCS sets out requirements, rationale and guidance for the signing of TSRs and ESRs on the Great Britain (GB) mainline railway.

G 3.1.16 The RSSB 'Taking Safe Decisions' framework outlines the stages in planning and decision making when contemplating a change.

G 3.1.17 See section *3.2* for further information on the design of speed restrictions.

3.2 Designing the speed restriction

3.2.1 When the need for a speed restriction has been identified, the infrastructure manager (IM) shall have a process in place for the design and approval of speed restrictions.

3.2.2 The IM shall use a competent designer to design ESRs and TSRs.

3.2.3 When a BSR is identified as needed, the IM shall consult with the affected railway undertakings (RUs) to agree on the:

a) Start and end locations of the speed restriction; and
b) Appropriate speed for trains to travel through the identified area.

3.2.4 When designing speed restrictions, the IM shall check for any existing or proposed speed restrictions in the same location that might overlap.

Rationale

G 3.2.5 A speed restriction design identifies:

a) The optimal locations where slower speeds need to be applied for trains to mitigate the risk of derailment, collisions, injury or, in exceptional cases, fatalities to staff and passengers or other members of the public and damage to assets;

b) The required speed to be imposed; and
c) Where equipment is to be placed to protect the asset and ensure drivability.

G 3.2.6 A competent designer has the technical expertise to produce a design to standard.

G 3.2.7 Checking for existing or proposed speed restrictions in the same location can help mitigate the implementation of a speed restriction where one exists and reduce confusion.

Guidance

G 3.2.8 An effective design ensures that the speed restriction is:

a) The optimal speed;
b) In the correct location;
c) Visible to the driver;
d) Enabling suitable risk control; and
e) Minimising operational delays.

G 3.2.9 When designing speed restrictions, it is good practice for the IM to provide the designer with:

a) The most recent signalling plans to provide information about the signalling layout;
b) The most recent gradient data;
c) The permissible speed information which is stated in the Sectional Appendix;
d) Any relevant information to allow them to take into account the train's braking distance to ensure that drivers apply the speed restriction at the correct location;
e) Areas of potential conflict for the positioning of lineside equipment such as:
    i) Automatic warning system (AWS) magnets;
    ii) Lineside equipment already in place;
    iii) Areas of limited clearance;
    iv) Level crossings; or
    v) Trackside equipment.

G 3.2.10 Designers can use technology to understand the topography and lineside environment as part of the design process.

G 3.2.11 When designing speed restrictions, the IM checks:

a) For any existing or proposed speed restrictions in the same location that might overlap and cause confusion; and
b) Whistle boards or other driver instructions that might mean drivers having to manage multiple tasks simultaneously.

G 3.2.12 Checking designs might help:

a) Reduce confusion;
b) Driver workload;
c) Maximise compliance; and
d) Mitigate a speed restriction being implemented where one exists.

G 3.2.13 The use of equipment that identifies the location of the speed restriction helps drivers identify where to lower speed when necessary.

G 3.2.14 It is good practice for the IM to maintain a list of those identified as competent to design speed restrictions and make it easily available out of hours.

G 3.2.15 It is good practice for the IM to include in their competence management system:

a) The necessary competence requirements for designers; and
b) Those with the necessary skills and knowledge.

G 3.2.16 Drivers might not easily recognise infrastructure features which are meaningful to signallers or designers such as mileposts or structure numbers. Designs using easily identifiable markers related to a driver's route knowledge such as stations or junctions can help drivers comply with the restriction of speed at the specified location, reducing the risk of overspeed events.

G 3.2.17 Where a BSR is required, a geographical area or operational route section can be used to help decision-making and drivability.

G 3.2.18 An operational route section is an area that splits a section of the railway into smaller areas to allow a speed to be applied with minimum impact on performance. It is applied between two easily identifiable points such as stations or junctions and does not include the use of mileage or mileposts.

G 3.2.19 Where a BSR crosses a route boundary, it is good practice to check and use the same timings or speeds across the routes to enhance drivability.

G 3.2.20 To reduce the likelihood of trains approaching red signals, the IM, in consultation with the RU, may consider adjusting the train schedule. For example, when a speed restriction is expected to be in place for an extended period, and the affected geographical area is large and complex, with a high-frequency train service.

G 3.2.21 The IM may create and use a standardised form to easily capture speed restriction design requirements.

G 3.2.22 GKRT0075 specifies the Minimum Signalling Braking Distance (MSBD) and Minimum Deceleration Distance (MDD) for lineside signal spacings and the signing of permissible speed changes.

3.3 Preparing for the implementation of a speed restriction

3.3.1 Before implementing a speed restriction, the infrastructure manager (IM) shall communicate the relevant information to:

a) The affected railway undertakings (RUs); and
b) Staff responsible for placing any associated lineside equipment to identify speed restrictions on the track.

3.3.2 After receiving a speed restriction notification, the RU shall:

a) Review and acknowledge receipt of the speed restriction notification advising of the implementation of a speed restriction; and
b) Communicate the arrangements to their drivers.

3.3.3 The IM shall make available adequate lineside equipment to identify speed restrictions.

3.3.4 The IM shall place speed restriction boards and any associated lineside equipment at the locations identified by the approved speed restriction design.

3.3.5 In the case of an ESR where no speed restriction boards or associated lineside equipment are in place at the identified location, the IM shall tell drivers directly using easily recognisable location markers for drivers.

3.3.6 In the case of a BSR, RUs shall advise the IM when all drivers have been told of the speed restriction to allow them to stop directly telling drivers.

Rationale

G 3.3.7 Effective communication ensures that speed restrictions are appropriately communicated to drivers.

G 3.3.8 Implementing a speed restriction can help to reduce the risk of collisions or derailments.

G 3.3.9 The Railway Safety (Miscellaneous Provisions) Regulations 1997 require a person in control of any infrastructure of a transport system to ensure that, so far as is reasonably practicable and where appropriate, suitable and sufficient equipment is provided and maintained to prevent:

a) Collisions between vehicles;
b) Collisions between vehicles and buffer-stops; and
c) The derailment of vehicles on account of excessive speed or incorrectly set points.

G 3.3.10 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS) place a duty on transport operators to:

a) Carry out risk assessments;
b) Have procedures in their safety management system to ensure that accidents, incidents, near misses and other dangerous occurrences are reported, investigated and analysed; and
c) Ensure necessary preventative measures are taken.

G 3.3.11 The consistent use of easily recognisable location markers enables a clear understanding between signallers and drivers.

G 3.3.12 The Operation and Traffic Management National Technical Specification Notice (OPE NTSN) places a duty on the IM when there is degraded operation associated with the IM's area of responsibility, to give formal instructions to drivers on what measures to take in order to safely overcome the degradation.

G 3.3.13 Directly telling drivers of a speed restriction when no lineside equipment is in place yet helps promote a greater understanding and implementation of the speed and location it is required.

G 3.3.14 When the RU informs the IM that drivers have been advised of a BSR it can reduce the signaller's workload by removing the need to directly tell drivers.

G 3.3.15 Having sufficient lineside equipment available that identifies speed restrictions ensures that any missing or defective equipment can be replaced quickly.

Guidance

G 3.3.16 IMs and RUs collaborate to agree on the most effective way to:

a) Communicate the relevant information; and
b) Acknowledge receipt of the information.

G 3.3.17 See clause *3.4.9* for examples of relevant information to communicate when implementing speed restrictions.

G 3.3.18 It is good practice for the IM to keep and maintain an up-to-date list of RUs who could be affected by speed restrictions.

G 3.3.19 Rule Book module GERT8000-SP sets out the operating rules relating to signaller and train driver actions when trains are required to travel over ESRs and when speed restriction boards or indicators are missing or incorrect.

G 3.3.20 Rule Book module GERT8000-TW1 sets out the operating rules relating to acknowledged safety broadcast calls for missing or obscured TSRs.

G 3.3.21 It is good practice to place speed restriction boards and any associated lineside equipment at the locations identified by the approved speed restriction design:

a) At the earliest opportunity for ESR; and
b) In time for the commencement of the TSR.

G 3.3.22 Where equipment has not yet been placed for an ESR or will not be placed for a BSR, the IM can consider using GSM-R to advise drivers of the required speed and location it applies to.

G 3.3.23 See clause *3.4.20* for examples of other systems or methods that can communicate information on the location and speed of restrictions.

G 3.3.24 RIS-0734-CCS sets out requirements, rationale and guidance for the signing of permissible speeds on the GB mainline railway.

G 3.3.25 RIS-0735-CCS sets out requirements, rationale and guidance for the signing of TSRs and ESRs on the GB mainline railway.

G 3.3.26 GKRT0075 sets out the Minimum Signalling Braking Distance (MSBD) and the Minimum Deceleration Distance (MDD) for lineside signal spacings and the signing of permissible speed changes.

G 3.3.27 RSSB research project T1252 (2021) considered the use of BSRs during periods of extreme weather and provides a consolidated position statement on current practice.

Guidance for the placement of equipment

G 3.3.28 The IM can identify competence requirements in their competence management system (CMS) for staff responsible for placing equipment on the track to identify a speed restriction. This can include:

a) The necessary competence requirements, such as skills and knowledge, for those placing equipment; and
b) A list of those with the necessary skills and knowledge.

G 3.3.29 The IM can make a list of those identified as competent to place equipment to identify speed restrictions on the track and make it easily available out of hours.

G 3.3.30 Where there are reports of missing or failed equipment or reports of equipment in the wrong locations, it is good practice to rectify deficiencies as soon as possible. This can encourage drivers to report these and help to reduce overspeed events.

G 3.3.31 The IM may have a risk-based routine maintenance regime for equipment and signage used to indicate speed limits and speed restrictions.

G 3.3.32 Handbook RS521 gives information on the meaning of signs.

Guidance on changing implemented speed restrictions

G 3.3.33 The reasons an implemented speed restriction can change include:

a) The area or location of the speed restriction changes;
b) The speed changes;
c) The length of time the restriction will apply changes;
d) The type of speed restriction changes, such as from an ESR to a TSR or vice versa;
e) The speed restriction is removed or not implemented;
f) The speed that was advertised has not been implemented, and is indicated by a speed previously advertised terminated early (SPATE) indicator; or
g) It becomes the permissible speed for the section of track.

G 3.3.34 It is good practice for the IM to consider the impact of changes to a speed restriction on a driver or other staff. These impacts can include:

a) Human factors issues, such as the risk of change fatigue from frequent speed restriction adjustments or drivers becoming desensitised to excessive alarms and responding automatically rather than consciously;
b) Increasing workload by having to cancel additional alarms from safety systems; and
c) Having to access the track multiple times to place and maintain equipment, exposing staff to trackside hazards and train movements.

G 3.3.35 When a BSR is put in place, it is good practice for the IM to maintain a consistent speed restriction throughout the line of route. This approach helps to avoid sudden changes in the speed profile over short distances and encourages consistent and smoother driving conditions.

3.4 Communicating speed restrictions

3.4.1 Infrastructure managers (IMs) shall provide all the necessary information for the implementation of speed restrictions.

3.4.2 Transport operators shall communicate the information provided by the IM to those who may have to apply or communicate a speed restriction.

Rationale

G 3.4.3 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS) place a duty on transport operators to cooperate to make sure the transport system is run safely.

G 3.4.4 The OPE NTSN requires the IM in conjunction with the railway undertakings (RU) to define a process to immediately inform each other of any situation that impedes the safety, performance and/or the availability of the rail network or rolling stock.

G 3.4.5 The OPE NTSN places a duty on the IM when there is degraded operation associated with the IM's area of responsibility to give formal instructions to drivers on what measures to take in order to safely overcome the degradation.

G 3.4.6 Communicating the locations and required decrease in speed allows drivers to correctly reduce the speed of the train in time for the restriction.

G 3.4.7 A failure to properly inform all drivers of a speed restriction and its location either verbally, in writing or by the placing of equipment, can lead to an overspeeding event.

G 3.4.8 Overspeeding can cause damage to infrastructure or assets, injure, or, in exceptional cases, fatalities to staff, passengers or other members of the public.

Guidance for communicating with railway undertakings

G 3.4.9 The information the IM can communicate to the RU when implementing speed restrictions includes:

a) Who is imposing the speed restriction, such as name, role and organisation name;
b) The reason for speed restriction;
c) The location the speed restriction is required;
d) The line or lines affected;
e) The required start and end points of the speed restriction;
f) The restricted speed limit required;
g) The date and time the speed restriction is active;
h) If equipment is in place; and
i) Any other relevant information.

G 3.4.10 Those who might have to apply or communicate a speed restriction can include but is not limited to:

a) Train drivers;
b) Signallers;
c) Controllers;
d) OTM operators; or
e) Engineering supervisors.

G 3.4.11 The IM may create and use a standardised form to communicate the relevant information to RUs to ensure the required information is clear and consistent.

G 3.4.12 Examples of communication can include:

a) Late notice;
b) Weekly Operating Notice (WON); and

c) An EWAT.

G 3.4.13 When a BSR is imposed, the IM tells drivers until all affected drivers have been informed by the RU. The RU notifies the IM once all affected drivers have been advised to allow the IM to stop telling drivers.

Guidance for communicating with drivers and signallers

G 3.4.14 Transport operators can request a bespoke WON with information relevant to their routes. This reduces the size of the document and makes it easier for individuals to read and remember information in the WON.

G 3.4.15 RIS-3215-TOM sets out the arrangements for the production of information relating to engineering work, alterations to track and signalling arrangements, local operating instructions and localised amendments to National Operations Publications.

G 3.4.16 Drivers may not easily recognise infrastructure features which might be meaningful to signallers or designers such as mileposts or structure numbers. IMs can use identifiable markers related to a driver's route knowledge to communicate the start and end points of a speed restriction.

G 3.4.17 The consistent use of easily identifiable and meaningful location markers enables a clear understanding between signallers and drivers.

G 3.4.18 IMs can use the Global System for Mobile Communications – Railway (GSM-R) to advise drivers of blanket speed restrictions (BSRs) as described in GERT8000-M3.

G 3.4.19 IMs can use GSM-R to caution drivers for an ESR or TSR as described in the Rule Book.

G 3.4.20 Systems or methods that can communicate information on the location and speed of restrictions include:

a) Driver machine interface (DMI);
b) Driver advisory systems (DAS);
c) Stop and caution;
d) GSM-R advisory broadcasts for BSRs;
e) GSM-R acknowledged (safety) broadcasts for ESRs and TSRs;
f) Lineside equipment and speed restriction boards;
g) The WON; and
h) A late notice case, see clause *3.4.21*.

G 3.4.21 RSSB research which can be found on the RSSB website, Late Notices to Give Speed Restriction Information to Drivers (2024), relating to BSRs found that drivers relying solely on late notices, without lineside signage or radio reminders, are more likely to make errors when recalling speed restrictions. In challenging situations, drivers have to remember multiple notices, manage distractions, and depend entirely on memory, leading to varying error rates. The best-case scenario shows 11 errors per 1,000 events, while the worst-case scenario results in nearly one error in every four events. Other options for communicating speed restrictions can be more effective.

G 3.4.22 Rule Book module GERT8000-SP sets out the operating rules relating to signaller and train driver actions for each type of speed restriction.

G 3.4.23 Rule Book module GERT8000-G1 sets out the operating rules for communication.

G 3.4.24 Rule Book Module GERT8000-M3 sets out the operating rules for reporting damage to structures or earthworks and extreme weather.

G 3.4.25 Rule Book Module GERT8000-TW1 sets out the operating rules for using the train radio safely.

G 3.4.26 Handbook RS522 gives information on the automatic warning system (AWS) and the train protection and warning system (TPWS).

G 3.4.27 Handbook RS523 gives information for using the GSM-R.

G 3.4.28 RIS-8046-TOM sets out requirements for spoken safety critical communications, including monitoring communication.

3.5 Reviewing and removing of speed restrictions

3.5.1 The infrastructure manager (IM) shall change an ESR to a TSR as soon as possible and publish in the earliest WON.

3.5.2 The IM shall have processes in place to assess the risk of a TSR remaining in place where it might be implemented for more than three months.

3.5.3 When a BSR is to remain in place or removed earlier than the agreed time period, the IM shall communicate the information to:

a) Drivers of the affected area; and
b) Railway undertakings (RUs) on the affected route.

3.5.4 The IM shall have processes in place for the removal of speed restrictions.

Rationale

G 3.5.5 The OPE NTSN requires the IM in conjunction with railway undertakings (RUs) to define a process to immediately inform each other of any situation that impedes the safety, performance and the availability of the rail network or rolling stock.

G 3.5.6 The Railway Safety Regulations 1999 define a temporary speed restriction as a speed restriction which is in place for no longer than 3 months.

G 3.5.7 The OPE NTSN places a duty on the IM when there is degraded operation associated with the IM's area of responsibility, to give formal instructions to drivers on what measures to take in order to safely overcome the degradation.

G 3.5.8 The use of an ESR for a prolonged period can affect driver workload such as:

a) Checking late notice cases;
b) Having to cancel additional warnings; and
c) The risk of distraction.

G 3.5.9 The use of a TSR for a prolonged period can affect driver workload and create a risk of habituation from cancelling repeated alarms from safety systems.

G 3.5.10 The use of an ESR for a prolonged period can affect track worker workload with the need to replace or change batteries in lineside equipment. This can increase the risk of harm from train movements.

Guidance

G 3.5.11 A BSR is applied within an agreed time period.

G 3.5.12 Transport operators can use an EWAT to discuss arrangements when a BSR has to remain in place.

G 3.5.13 The period at which a risk assessment may be carried out for TSR that remains in place might be different from that specified in the Railway Safety Regulations 1999 if the IM has an exemption in place. For example, Network Rail has an exemption allowing them to extend the assessment period up to 12 months (Network Rail submission ref. RMDI/TPWS/REP/648).

G 3.5.14 A temporary speed restriction that lasts or is likely to last for longer than six months is classified as a Network Change as defined in the Network Code published by Network Rail.

G 3.5.15 It might be more appropriate for a TSR that has been in place for an extended period of time to become the permissible speed for a section of track reducing workload and habituation for drivers. This might improve sectional running times and delay performance.

G 3.5.16 It is considered good practice for the IM to add the details of a speed restriction to the first available WON after an ESR has been implemented. However, carrying out a risk assessment involving all affected transport operators might identify if there is a likelihood of returning to the permissible speed before it can be added to the WON.

G 3.5.17 Where a TSR is likely to remain in place, it is good practice to:

a) Regularly review the need for the TSR; and
b) Complete a risk assessment in collaboration with the affected transport operators.

G 3.5.18 A TSR on a section of track might become the permissible speed on that section due to reasons relating to:

a) Track geometry problems;
b) The overhead contact system;
c) The overhead line equipment;
d) Signal sighting; and
e) Structure clearance.

Part 4 Overspeed events

4.1 Managing overspeed events

4.1.1 Transport operators shall have processes in place to manage all overspeed events.

4.1.2 Where a trackside system has identified a suspected overspeed event, the infrastructure manager (IM) shall inform the relevant railway undertaking (RU) as soon as possible.

4.1.3 Where an on-train system has identified a suspected overspeed event, the RU shall inform the IM as soon as possible.

Rationale

G 4.1.4 Trains going too fast can result in a range of dangerous events. Derailment, collisions, injury or, in exceptional cases, fatalities to staff and passengers or other members of the public, and damage to assets can all occur when a train exceeds the maximum safe speed for that type of train in a particular location.

G 4.1.5 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS) give transport operators a specific duty to carry out risk assessments and put in place the measures they have identified as necessary to make sure the transport system is operated and managed safely.

G 4.1.6 ROGS place a duty on transport operators to:

a) Carry out risk assessments;
b) Have procedures in their safety management system to ensure that accidents, incidents, near misses and other dangerous occurrences are reported, investigated and analysed; and
c) Ensure necessary preventative measures are taken.

G 4.1.7 Informing relevant people of suspected overspeed events as soon as possible helps ensure that evidence is not lost or compromised.

Guidance for overspeed events

G 4.1.8 Transport operators use their safety management system (SMS) to manage overspeed events.

G 4.1.9 Risk assessments are used to identify route knowledge requirements for driver's route knowledge training and assessment. RIS-3702-TOM sets out requirements and guidance relating to the route knowledge of staff.

G 4.1.10 It is good practice for transport operators to collaborate to identify high-risk locations, such as diverging junctions, and share completed risk assessments.

G 4.1.11 Transport operators collaborate to agree on the most effective way to communicate overspeed events.

G 4.1.12 RIS-8047-TOM sets out requirements for the reporting of safety related information into the Safety Management Intelligence System (SMIS). Speeding events are safety related incidents.

G 4.1.13 RIS-3118-TOM contains requirements and guidance for the development of rail incident response plans and the management of rail incidents.

G 4.1.14 RSSB research report T1251 (2021) identified and evaluated immediate and short-term technological solutions to over-speeding, and quantified the safety and performance benefits of controlling over-speeding risk.

Guidance for detecting and monitoring overspeed events

G 4.1.15 Systems to detect and monitor the speed of trains can be automatic or rely on manual intervention.

G 4.1.16 Examples of systems that can automatically detect and monitor the speed of trains are:

a) European Train Control System (ETCS);
b) Train protection and warning system – continuous supervision (TPWS-CS);
c) Driver advisory systems (DAS);
d) Data loggers for track circuit occupancy;
e) GPS based systems;
f) Speed management systems, such as Tilt Authorisation and Speed Supervision System (TASS);
g) Train control monitoring system (TCMS); and
h) On-train data recorder (OTDR).

G 4.1.17 Examples of systems that rely on manual intervention to detect and monitor the speed of trains are:

a) Radar;
b) OTDR;
c) Reports from workforce of potential overspeeding, for instance, drivers, signallers or trackworkers.

4.2 Response to overspeed events

4.2.1 Transport operators shall have processes in place to assess the risks of identified overspeed events.

4.2.2 Infrastructure managers shall decide:

a) If an overspeed event is to be investigated further; and
b) Who will lead the investigation.

Rationale

G 4.2.3 Trains going too fast can result in a range of dangerous events. Derailment, collisions, injury or, in exceptional cases, fatalities to staff and passengers or other members of the public, and damage to assets can all occur when a train exceeds the maximum safe speed for that type of train in a particular location.

G 4.2.4 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS) place a duty on transport operators to:

a) Carry out risk assessments;
b) Have procedures in their safety management system to ensure that accidents, incidents, near misses and other dangerous occurrences are reported, investigated and analysed; and
c) Ensure necessary preventative measures are taken.

G 4.2.5 The Health and Safety at Work, etc. Act (HASAW) places legal responsibilities on organisations regarding the management of safety. HASAW states 'It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.' Investigating adverse events and reviewing risk control measures form a part of this process. The Health and Safety Executive (HSE) provides further information in the form of guidance documents.

Guidance for assessing the risk of overspeed events

G 4.2.6 Excessive speed is typically defined as any speed on the mainline that exceeds the permissible limit by 4 mph (6 km/h) or more. This applies whether the permissible speed is set by TSR, ESR, BSR, or due to traction limitations. This definition is based on train speed indication equipment, which has a tolerance of plus or minus 2 mph (3 km/h) to account for wear on the wheels. Additionally, an exceedance of up to 5 mph (8 km/h) for 30 seconds, provided the driver has not reduced the speed, can also be considered within normal tolerance.

G 4.2.7 ETCS includes an onboard European Vital Computer (EVC) that supervises the train's position and speed to ensure it stays within the permitted limits. If the train exceeds the permissible speed, typically more than 3 mph (5 km/h) over the limit, or if it will not achieve the necessary braking distance, the EVC intervenes. It activates the braking system to regain control of the train and bring it back within the required braking curve. This automatic intervention follows a warning issued to the driver.

G 4.2.8 RIS-2273-RST sets out requirements and guidance for post incident and post accident examination and testing of rail vehicles, with particular requirements for testing of brakes, speed indicating systems, exterior doors and warning horns and conditions for speed restrictions for damaged train movements.

G 4.2.9 Transport operators can establish speed tolerances at locations based on the potential risk for derailment, collisions, injuries, and, in exceptional cases, fatalities to staff, passengers, or the public, as well as asset damage.

G 4.2.10 The management of a speeding event will depend on when the operator is made aware of an incident. Checking the speed of trains has largely moved from the use of radar speed equipment on the infrastructure to the use of data collected via train management systems, On Train Data Recorders (OTDR) and other data sources increase the level of speed monitoring although the data from these systems are often provided some time after the incident.

G 4.2.11 Not all speeding events will need to be investigated. Transport operators can collaborate to implement a risk-based approach to categorise speeding events, creating a clear framework for a quick and effective response when an incident is identified.

G 4.2.12 The risk assessment can consider:

a) The extent of the overspeed, see *Table 2*;
b) Has the location had previous overspeed events;
c) The location of the event, for example, in a depot, on the mainline, in a possession;
d) Factors such as if the train was travelling over a junction or a curve at the time of the overspeed;
e) Factors relating to the driver, such as previous overspeed events, competence and route knowledge;
f) The likelihood the event could lead to damage to the infrastructure;
g) The likelihood the event could lead to a derailment, collision, injury or fatality;
h) The consequence for the individual, others and the community; and
i) The scale of harm that might result.

G 4.2.13 The following table has been agreed as industry good practice in collaboration with the former Rail Partners organisation and transport operators and can be used when a transport operator is aware of a possible speeding event on the GB mainline. The table can be used as an assessment on the extent of the overspeed and possible actions that can be taken.

Speed exceedance	Speeding duration	Action if operator aware of possible exceedance immediately	Action if operator not aware of possible exceedance immediately
0-3 mph (0-5 km/h)	Not applicable.	No action.	No action.
4-5 mph (6-8 km/h)	More than 6 seconds (otherwise no action).	a) Obtain OTDR data to verify the exceedance. b) The driver is informed of the overspeed as soon as practicable after identification of the event. c) The facts are recorded, and further actions determined by the investigation.	a) Obtain OTDR data to verify the exceedance. b) The driver is informed of the overspeed after identification of the event. c) The facts are recorded, and further actions determined by the investigation.
6-10 mph (9-16 km/h)	More than 4 seconds (noting the time to get to the excessive speed is not included). If less than 4 seconds treat as previous speeding category.	a) The driver is informed of the infringement and relieved at the first suitable stopping point and interviewed to establish the facts of the incident and the driver's fitness to continue duty. b) A written report is obtained from the driver and the OTDR is downloaded, to assess the performance of the driver throughout the journey. c) The facts are recorded, and further actions determined by the investigation	a) The driver is informed of the infringement to establish the facts of the incident at the end of the shift or when next at work. b) A written report is obtained from the driver and the OTDR is downloaded, to assess the performance of the driver throughout the journey. c) The facts are recorded, and further actions determined by the investigation.

Speed exceedance	Speeding duration	Action if operator aware of possible exceedance immediately	Action if operator not aware of possible exceedance immediately
11 mph (17 km/h) or more	Not applicable.	a) Arrangements are made for the train to be stopped at the first available point where the driver can be relieved and informed of the infringement and interviewed. b) A written report is obtained from the driver as soon as practicable after the incident has occurred. c) The OTDR is downloaded to assess the performance of the driver throughout the journey. d) 'For cause' alcohol and drug screening of the driver is considered based on the extent of the possible overspeed and if the event is identified while a driver is on duty. e) The facts are to be recorded and further actions determined by the investigation.	a) The driver is informed of the infringement and interviewed before their next train working which might be on the day or on their next day at work. b) A written report is obtained from the driver as soon as practicable after the incident has occurred. c) The OTDR is downloaded to assess the performance of the driver throughout the journey. d) 'For cause' alcohol and drug screening of the driver is considered based on the extent of the possible overspeed and if the event is identified while a driver is on duty. e) The facts are recorded and further actions determined by the investigation.

Table 2: Speed Exceedance Framework

G 4.2.14 The transport operator's decision on how to respond to a speeding incident might be influenced if the driver has a support plan or equivalent in place.

G 4.2.15 Transport operators may consider the accuracy of the recording system when using the data to determine the extent of the overspeed.

G 4.2.16 Transport operators have processes in place for testing the speedometer of the cab after completing that day's schedule or when the train returns to the maintenance depot. There might be circumstances after a speeding event where it is appropriate to test the speedometer, such as:

a) Following an incident where the level of speed exceedance is considered to be excessive; or
b) Where there is concern the speedometer might be defective.

G 4.2.17 Where speeding infringements have been recorded by handheld radar equipment or by using the speedometer from another cab, transport operators can use OTDR data to check and verify speeds.

G 4.2.18 ETCS intervention due to excessive speed does not require operators to have systems in place as it is a fully supervised system and there is no need for follow up action. If the frequency of ETCS warning and intervention indicates a concern with the driver, then this can be part of the safety management system.

Guidance for investigating overspeed events

G 4.2.19 Applying proportionality to an investigation can inform more effective information and resource management.

G 4.2.20 Evidence collected during investigations of overspeed events can be gathered from:

a) Interviews from people involved, such as drivers, signallers, control room staff and designers;
b) OTDR;
c) On-train CCTV, including external CCTV, such as forward facing cameras and interior CCTV;
d) Signalling data, such as how often trains are routed;
e) Infrastructure design;
f) Maintenance information on any relevant speed signage and equipment;
g) Normal permissible speed information;
h) The speed restriction design, such as was there a design and was signage or equipment in place as indicated in the design;
i) Records of communication to drivers, such as written communication or voice recordings;
j) Training and competence records, in particular route knowledge; and
k) Rosters of the people involved.

G 4.2.21 Data that provides evidence of overspeeding can be collected from systems such as those described in *4.1.15* and *4.1.16*.

G 4.2.22 When an overspeed event has occurred where a speed restriction is in place, in particular BSRs, transport operators can check if other drivers missed the requirement

to apply a speed restriction in the same location. This might identify missing equipment or a failure in the communication process.

G 4.2.23 The outcome of an investigation can be a report that can be shared with others for transport operators to learn from incidents.

G 4.2.24 Overspeed event investigation reports can include:

a) Details of the incident, such as the assets and infrastructure involved in the incident;
b) Evidence collected and analysis;
c) Statements and interview transcripts, where applicable, from the:
    i) Driver;
    ii) Signaller;
    iii) Any witnesses; and
    iv) Drug and alcohol screening results.
d) Results from the review of data from systems such as OTDR;
e) Human factors considerations, such as 10 incident and human performance factors to identify both individual and underlying causal factors;
f) Immediate and underlying causes; and
g) Actions and recommendations.

G 4.2.25 Operators might have to determine if a TPWS trip is due to excessive speed or reflects the conservative braking curve used. Operators can take a risk-based approach to the management of TPWS brake demands, considering the braking characteristics of the train, limitations of the TPWS system and driver's actions on the approach. The OTDR demonstrates if a speeding event occurred despite the TPWS brake demand as part of the investigation.

G 4.2.26 RIS-3119-TOM sets out requirements and guidance for the investigation of adverse events, including applying proportionality.

G 4.2.27 RIS-2273-RST sets out requirements and guidance for post incident and post accident examination and testing of rail vehicles, with particular requirements for testing of brakes, speed indicating systems, exterior doors and warning horns and conditions for speed restrictions for damaged train movements.

4.3 Sharing information from investigations

4.3.1 Transport operators shall:

a) Review overspeed events;
b) Gather intelligence and insights; and
c) Share the intelligence and insights with industry.

Rationale

G 4.3.2 Gathering and sharing information on overspeed events will help identify trends and high-risk areas.

G 4.3.3 The CSM for Monitoring places a duty on transport operators to:

a) Continuously monitor all safety-related processes and activities;
b) Implement a risk management process to identify, evaluate, and mitigate risks associated with their operations; and
c) Maintain detailed records of their safety monitoring activities and risk assessments.

G 4.3.4 ROGS requires transport operators to have a safety management system to keep written records of arrangements for managing safety risks. The safety management system is the basis for making sure the transport system runs safely and in line with ROGS.

G 4.3.5 ROGS place a duty on transport operators to collaborate to make sure the transport system is run safely.

Guidance

G 4.3.6 The aim of transport operators reviewing incidents and sharing insights is to learn from each other and reduce or avoid the repetition of overspeed events.

G 4.3.7 Examples of information that can be gathered and shared are:

a) Overspeed events;
b) Locations where there have been multiple overspeed events;
c) Risk assessments of diverging junctions; and
d) Overspeed investigation reports.

G 4.3.8 Transport operators can collaborate to:

a) Review overspeed events;
b) Gather intelligence and insights; and
c) Identify changes to processes, procedures, or training.

G 4.3.9 Effective collaboration is achieved by identifying and involving relevant parties in the review. These can include:

a) Infrastructure managers (IMs);
b) Railway undertakings (RUs);
c) Rolling stock leasing companies, and
d) Contractors involved in incidents.

G 4.3.10 Collaboration to manage the risk of overspeeding can benefit from individuals with knowledge or understanding of:

a) Information from the analysis of on-train data collection systems;
b) Driver knowledge, such as route knowledge training procedures, techniques and instructions;
c) The infrastucture, such as operational risk advisors and safety experts; and
d) The route or routes involved, such as those involved in signal sighting.

G 4.3.11 It is good practice to maintain an ongoing collaboration to discuss and share knowledge of any initiatives to manage overspeeding, which are continually being developed. This allows all parties to fully understand how the initiatives might affect existing risk assessments.

G 4.3.12 Examples of intelligence and insights that can be gathered include:

a) Locations of multiple overspeed events;
b) Information on high potential incidents; and
c) Details of type of behaviours leading up to overspeed events.

G 4.3.13 It is good practice for the lead transport operator to agree with the relevant parties how details of reviews will be stored and how relevant parties will be able to access them in the future.

G 4.3.14 RIS-3704-TOM sets out requirements and guidance for the management of train accident risk arising from train operations as part of the GB rail industry's agreed strategy for improving health and safety.

G 4.3.15 The RSSB 'Taking Safe Decisions' framework gives guidance for monitoring safety.

G 4.3.16 Office of Rail and Road Risk Management Maturity Model (RM3) is a tool designed to help transport operators manage health and safety risks, identify areas for continuous improvement, and provide a benchmark for year-on-year comparison.

Definitions

as low as reasonably practicable (ALARP)	The concept of the requirement to reduce risk to a level that is 'as low as reasonably practicable' (ALARP), given the time, effort and cost of the control measures required. This is similar to the term SFAIRP, which is the term used in the Health and Safety at Work etc. Act 1974 and which places duties on employers in the UK to ensure safety 'so far as is reasonably practicable' (SFAIRP). Although SFAIRP and ALARP are different in law, they are used interchangeably in the GB rail industry and are regarded as representing the same health and safety legal test.
competence	The state, or quality, of being adequately qualified and skilled to be able to perform a specific act or task. Demonstrated personal attributes and demonstrated ability to apply knowledge and skills.
Competence Management System	A system that ensures that those undertaking work have, and continue to have, the competence required to do it.
defect	Non-fulfilment of specified or intended usage requirements, which can prevent a component or part of a system from accomplishing its design purpose. **Note:** A defect can lead to a fault in a component or system.
degraded mode	The state of part of the railway system when it continues to operate in a restricted manner due to the failure of one or more components.
Driver Advisory System (DAS)	Provides information for a train driver to optimise the train's speed over a given route, with the capability for more efficient energy usage, improved punctuality and increased network capacity.
European Train Control System (ETCS)	The signalling, control and train protection part of the European Rail Traffic Management System designed to provide interoperability and standardisation across European railways.
GB mainline railway	'Mainline railway' has the meaning given to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) and the associated exclusions. 'GB mainline railway' is the mainline railway network excluding any railway in Northern Ireland, the Channel Tunnel, the dedicated high-speed railway between London St Pancras International Station and the Channel Tunnel, and any other exclusions determined by the Secretary of State.
Global System for Mobile Communications – Railway (GSM-R)	The European Standard specific to railway applications for the transmission by radio of voice and data between train and trackside installations.

good practice	A process or method that has been shown to work well; succeeds in achieving its objective(s); is widely accepted; and therefore can be recommended as an approach.
human factors	The factors that support and influence the ability of users to correctly interpret lineside signalling system displays, which include: a) State (fatigue, stress, distraction, workload, etc.) b) Route knowledge c) Railway specific knowledge d) Expectation based on current situational awareness e) Expectation based on previous experience f) Human perception rules.
infrastructure manager (IM)	Has the meaning given to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended), but is limited to those infrastructure managers who hold a safety authorisation issued in respect of the mainline railway. Source: *ROGS*
Office of Rail and Road (ORR)	The independent safety and economic regulator for Britain's railways.
on train data recorder (OTDR)	Equipment provided on a train to record data about the operation of its controls and performance in response to those controls. A TDR may also be referred to as an On Train Monitor Recorder (OTMR), Data Logger or Event Recorder.
railway undertaking (RU)	Has the meaning given to the term 'transport undertaking' in the Railways and Other Guided Transport Systems (Safety) Regulations 2006 as amended, but is limited to any private or public undertaking the principal business of which is to provide rail transport services for goods and/or passengers, with a requirement that the undertaking must ensure traction. Source*: ROGS*
risk	The combination of the likelihood of occurrence of harm and the severity of that harm (specifically defined in CSM REA regulation as: the frequency of occurrence of accidents and incidents resulting in harm (caused by a hazard) and the degree of severity of that harm).
risk assessment	The overall process comprising a risk analysis and a risk evaluation. Source: *CSM REA*
route knowledge	The information required to predict, identify and interpret route-specific cues to complete an operational railway task safely and effectively.
Safety Management Intelligence System (SMIS)	A system for supporting rail industry parties in carrying out their responsibilities for health, safety and environment management.

Safety Management System (SMS)	The organisation and arrangements established by a transport operator to ensure the safe management of its operation. Source*: ROGS*
spate indicator	A trackside indicator or sign, which informs the driver that a temporary speed restriction has been withdrawn earlier than published or has not been applied.
Tilt Authorisation and Speed Supervision System (TASS)	The system that authorises the use of tilt mode by sending messages from on-track beacons to an on-board reader. The onboard system also supervises the speed of the train.
Train Control and Management System (TCMS)	The on-board software that provides some train controls and monitoring functionality.
Train Protection and Warning System (TPWS)	A system mitigating Signals Passed At Danger and non-respect of permissible speeds.
train	An operational formation consisting of one or more units. Source: *LOC&PAS NTSN*
Transport operator	An infrastructure manager or railway undertaking.
Weekly Operating Notice (WON)	The official printed notice which includes advice to drivers of temporary speed restrictions and alterations to permissible speeds.

References

The Standards catalogue gives the current issue number and status of documents published by RSSB: http://www.rssb.co.uk/standards-catalogue.

The governance arrangements for Railway Group Standards, Rail Industry Standards, National Operations Publications, and industry recommendations for revisions to National Technical Specification Notices are set out in the Railway Standards Code. Detailed management arrangements are in the complementary Standards Manual. Both documents are available on the RSSB website.

Rail Safety and Standards Board (2024), Railway Standards Code

Rail Safety and Standards Board (2024), Standards Manual

Documents referenced in the text

Railway Group Standards

GKRT0075	Requirements for Minimum Signalling Braking and Deceleration Distances

RSSB documents

GERT8000-G1	General safety responsibilities and personal track safety for non-trackworkers
GERT8000-M3	Managing incidents, floods and snow
GERT8000-SP	Speeds
GERT8000-TW1	Preparation and movement of trains
RIS-0734-CCS	Signing of Permissible Speeds
RIS-0735-CCS	Signing of Temporary and Emergency Speed Restrictions
RIS-2273-RST	Post Incident and Post Accident Testing of Rail Vehicles
RIS-2711-RST	Lettered Differential Permissible Speeds Classification
RIS-3118-TOM	Incident Response Planning & Management
RIS-3119-TOM	Accident and Incident Investigation
RIS-3215-TOM	Weekly Operating Notice, Periodical Operating Notice and the Sectional Appendix
RIS-3702-TOM	Management of Route Knowledge
RIS-3704-TOM	Managing Train Accident Risk Arising from Train Operations
RIS-7704-INS	Calculation of Enhanced Permissible Speeds for Tilting Trains
RIS-8046-TOM	Spoken Safety Critical Communications
RIS-8047-TOM	Reporting of Safety Related Information
RS521	Signals, Handsignals, Indicators and Signs Handbook

RS522	AWS and TPWS Handbook
RS523	GSM-R Handbook
RSSB	Late Notices to Give Speed Restriction Information to Drivers (2024)
RSSB	Taking Safe Decisions 2019
T1251 (2021)	Review of technological interventions to mitigate train over-speeding risk
T1252 (2021)	Effectiveness of blanket speed restrictions in managing and mitigating risks from trains running into trees or landslips

Other references

	The Health and Safety at Work etc. Act 1974
	The Management of Health and Safety at Work Regulations 1999
	The Railway Safety Regulations 1999
	The Railway Safety (Miscellaneous Provisions) Regulations 1997
Network Code	
Network Rail submission ref.	RMDI/TPWS/REP/648
Operation and Traffic Management (OPE) National Technical Specification Notice	Operation and Traffic Management National Technical Specification Notice (OPE NTSN). Published by the Secretary of State on 1 January 2021 pursuant to regulation 3B of the Railways (Interoperability) Regulations 2011. This NTSN replaces and substantially reproduces the provisions of Commission Decision 2012/757/EU of 14 November 2012 (the OPE TSI), and includes relevant amendments made by Commission Regulation (EU) 2015/995 of 8 June 2015 and Commission Implementing Regulation (EU) 2019/773 which came into force in June 2019.
ROGS	Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended).
The Office of Rail and Road	Road Risk Management Maturity Model (RM3)

Other relevant documents

Health and Safety Executive (HSE)	Investigating accidents and incidents - HSG245