

Rail Industry Standard
RIS-3440-TOM
Issue: Two
Date: December 2017

Rail Industry Standard for the Operation of Heritage Trains

Synopsis

This document sets out requirements for managing the planning and operation of heritage train services on the GB mainline railway.

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Issue Record

| Issue | Date | Comments |
|--------------|-------------|--|
| One | 03/12/2016 | Original document. |
| Two | 02/12/2017 | Replaces issue one and addresses all the areas of shared system risk applicable to industry stakeholder operations, providing requirements and guidance in areas of specific risk. |

This document will be updated when necessary by distribution of a complete replacement.

Superseded Documents

The following Railway Group documents are superseded, either in whole or in part as indicated:

| Superseded documents | Sections superseded | Date when sections are superseded |
|---|----------------------------|--|
| RIS-3440-TOM issue one Steam Locomotive Operation | All | 02/12/2017 |

Supply

The authoritative version of this document is available at www.rssb.co.uk/railway-group-standards. Enquiries on this document can be forwarded to enquirydesk@rssb.co.uk.

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Part 1 Purpose and Introduction

1.1 Purpose

1.1.1 This document sets out requirements for the planning and operation of heritage train services, including empty coaching stock and light engine movements, on the Great Britain (GB) mainline railway.

1.1.2 The document applies to the movement of all heritage trains when on the GB mainline railway.

1.2 Introduction

1.2.1 Background

1.2.1.1 Heritage train operations differ from normal mainline train operations, and specific attention is needed in the planning of such services.

1.2.1.2 Established train planning processes provide for the planning of heritage train services, although some additional areas may need specific attention, as indicated in this RIS.

1.3 Application of this document

1.3.1 Compliance requirements and dates have not been specified since these will be the subject of internal procedures or contract conditions.

1.3.2 The Standards Manual and the Railway Group Standards (RGS) Code do not currently provide a formal process for deviating from a Rail Industry Standard (RIS). However, a member of RSSB, having adopted a RIS and wishing to deviate from its requirements, may request a Standards Committee to provide opinions and comments on their proposed alternative to the requirement in the RIS. Requests for opinions and comments should be submitted to RSSB by e-mail to proposals.deviation@rssb.co.uk. When formulating a request, consideration should be given to the advice set out in the 'Guidance to applicants and members of Standards Committee on deviation applications', available from RSSB's website.

1.4 Health and safety responsibilities

1.4.1 Users of documents published by RSSB are reminded of the need to consider their own responsibilities to ensure health and safety at work and their own duties under health and safety legislation. RSSB does not warrant that compliance with all or any documents published by RSSB is sufficient in itself to ensure safe systems of work or operation or to satisfy such responsibilities or duties.

1.5 Structure of this document

1.5.1 This document sets out a series of requirements that are sequentially numbered.

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- 1.5.2 This document also sets out the rationale for the requirement. The rationale explains why the requirement is needed and its purpose. Rationale clauses are prefixed by the letter 'G'.
- 1.5.3 Where relevant, guidance supporting the requirement is also set out in this document by a series of sequentially numbered clauses and is identified by the letter 'G'.
- 1.6 Approval and Authorisation**
- 1.6.1 The content of this document was approved by TOM SC on 10 October 2017.
- 1.6.2 This document was authorised by RSSB on dd October 2017.

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Part 2 Responsibilities of Transport Operators - Planning and Operating Heritage Train Movements

2.1 Planning heritage train movements

2.1.1 Train planning processes

2.1.1.1 Train planning processes shall include at least:

- a) Confirmation that the vehicles are cleared to run over the route.
- b) The timings for the train movements.
- c) Stations at which the train is booked to call, taking into account:
 - i) Train lengths.
 - ii) Standages.
 - iii) Platforming arrangements.
 - iv) Arrangements to accommodate the needs of persons of reduced mobility who may be boarding or alighting from the train.
- d) Any need for additional locomotives to be marshalled in the train to provide:
 - i) Assistance.
 - ii) Train heat.
 - iii) Traction power, if the train needs to reverse.
- e) Locations where it is undesirable for the train to be stopped, other than in an emergency.

Rationale

- G 2.1.1.2 Taking the above considerations into account may help to facilitate the safe and reliable operation of heritage train services.
- G 2.1.1.3 The train planning processes, including but not limited to the processes set out above, ensure that the locomotives and rolling stock to be used are compatible with the infrastructure.

Guidance

- G 2.1.1.4 GERT8270 sets out requirements and responsibilities for the assessment of route compatibility of vehicles and infrastructure.
- G 2.1.1.5 GERT8006 sets out requirements relating to the compatibility of vehicles and underline bridges: this is based on the Route Availability (RA) system. Where the RA classifications of vehicles and infrastructure are not compatible, further analysis may be carried out to determine whether compatibility may be achieved, for example by implementing special conditions of passage, such as speed restrictions, at specified locations.
- G 2.1.1.6 GERT8273 sets out specific requirements and responsibilities for the assessment of gauging compatibility and stepping distances between rolling stock and infrastructure.
- G 2.1.1.7 The RA for any given location can be found in table A of the Sectional Appendix. The RA for any vehicle which is registered for use on the main line may be obtained from

- R2. Some steam locomotives might display RA numbers derived using a historical process which is not aligned to modern methodology: for planning purposes, the RA number which is registered in R2 is definitive.
- G 2.1.1.8 Heritage locomotives and stock might not conform to modern gauging standards, having been built to the standards which were in force at the time of their construction.
- G 2.1.1.9 Network Rail produces route clearance information relating to different types of locomotives, units and rolling stock. This provides information as to whether a particular vehicle is compatible with a section of line. Failing this, clarification may be sought from Network Rail.
- G 2.1.1.10 The speeds and timings for heritage trains aim to mitigate the risk of causing delay to other train services. This is to avoid exposing trains to delays and incurring compensation under schedule 8 of the track access agreement.
- G 2.1.1.11 In order to produce timings that are applicable to heritage trains, the train planning process takes into account factors that may include, but are not limited to, the following:
- a) The maximum speed applicable to the slowest vehicle in the train, taking into account any lower maximum speed that may apply to a steam locomotive operating tender-first.
 - b) The acceleration characteristics of the train.
 - c) The effect of gradients on train speed.
 - d) Any other speed restriction which may be imposed for all or part of the journey.
 - e) The need for sufficient recovery time to be built into the schedule.
 - f) The need for any fuelling and watering stops en-route.
- G 2.1.1.12 Maximum permitted speeds for heritage vehicles are defined in RIS-4472-RST. Some owners may require that their locomotives are operated at a speed lower than the maximum permitted, with a view to limiting wear and tear.
- G 2.1.1.13 Network Rail produces timing load tables which contain useful information for train planning purposes.
- G 2.1.1.14 Heritage train services may be better able to maintain their booked path if the train's timings are calculated at a speed lower than the maximum speed for the train, and if recovery time is built into the schedule at appropriate places.
- G 2.1.1.15 Ideally, tender-first running should be limited to run-round movements only as visibility from the locomotive may be reduced and the lower speed may cause pathing difficulties.
- G 2.1.1.16 An additional locomotive may be marshalled in the train to provide a separate supply of steam for steam-heated coaches, or to provide an electric train heat (ETH) supply.
- G 2.1.1.17 Additional locomotives may be provided at the rear of the train to enable it to continue with its journey (for example, if the train will run into a terminal or bay platform without loco release and run-round facilities), or to provide additional traction power. The Rule Book module TW1, section 16 contains the rules regarding locomotives providing traction power at the rear of a train.

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- G 2.1.1.18 Additional locomotives may be provided at the rear of the train to provide assistance, but only when specifically authorised by the infrastructure manager (IM). GERT8000 The Rule Book module TW1, section 15 contains the rules regarding the provision of assistance in the rear of a train.
- G 2.1.1.19 The weight of additional locomotives not providing traction power is taken into account in calculating the load which the train can haul. This may reduce the number of vehicles which can be conveyed.
- G 2.1.1.20 Railway undertakings (RUs) may wish to consider having additional locomotive(s) available at strategic locations to provide assistance to a heritage train service if required.
- G 2.1.1.21 Where possible, trains are platformed with all passenger doors adjacent to a platform. Persons of reduced mobility require additional consideration, for example the use of a ramp when boarding and alighting.
- G 2.1.1.22 On-board stewards' duties can include assisting passengers as necessary.
- G 2.1.1.23 The train planning processes may consider reasonable and foreseeable diversionary routes to cater for short-notice unavailability of infrastructure.
- G 2.1.1.24 The locations where it is possible to divert a train may be limited. The following factors may affect the identification of diversionary routes:
- a) Route clearance of the vehicles.
 - b) Traincrew route knowledge.
 - c) Compatibility of on-board systems and infrastructure.
 - d) Prearranged fuelling and watering locations.
 - e) Changes in mileage run and the effect on the train's onward timings.
 - f) Any effect on the traincrew and other staff, such as increased hours worked.
- G 2.1.1.25 The Special Traffic Notice (STN) could be used to include notes such as 'This train is not to be diverted from its booked route' or, alternatively, 'This train may be diverted to run via location, between location and location, if authorised by Network Rail control'.
-

2.1.2 Undesirable stopping locations

- 2.1.2.1 The train planning process shall identify locations where it is not desirable for the train to stop, such as:
- a) On rising gradients where the train may be unable to restart.
 - b) In stations where fire / smoke detection systems are likely to be activated.
 - c) In the case of steam traction, in tunnels or underneath overhead line equipment (OLE) which is susceptible to damage.
- 2.1.2.2 The RU shall make traincrew aware of these locations.

Rationale

- G 2.1.2.3 Rising gradients, especially when combined with line curvature and / or conditions of decreased rail / wheel adhesion, can make it more difficult for a train to restart.

G 2.1.2.4 Heritage services involving steam traction are liable to activate fire / smoke detection systems, where provided. Diesel traction is prohibited from certain platforms at certain stations equipped with fire / smoke detection systems.

G 2.1.2.5 Smoke and steam when emitted into a confined space have the potential to be injurious to health and to inhibit the sighting of signals, lineside features, personnel on the track etc.

Guidance

G 2.1.2.6 RUs, in liaison with IMs, where appropriate, identify these locations and implement appropriate control measures.

G 2.1.2.7 To mitigate being stopped at a signal from which starting the train will be difficult, a driver might, for example, elect to stop at a preceding signal, even though it is displaying a yellow aspect, and await a green aspect before proceeding.

G 2.1.2.8 Stations which are designated as sub-surface stations have fire / smoke detection systems.

G 2.1.2.9 Network Rail's Sectional Appendix contains local instructions relating to restrictions on certain types of locomotive accessing given locations.

G 2.1.2.10 The Special Traffic Notice (STN) could be used to disseminate advice of locations where it is not desirable for the train to stop.

2.1.3 Train planning: fuel, water and other train servicing requirements

2.1.3.1 The train planning processes shall identify any train servicing requirements, such as the need to take on diesel fuel, coal or water, and the locations where this can be done.

Rationale

G 2.1.3.2 There may be a need for train servicing (for example, refuelling, watering, toilet tank servicing etc) depending upon the distance which the heritage service is to run. These stops may vary in length, subject to what is required, and are accounted for in the train schedule.

Guidance

G 2.1.3.3 Coal and water may be delivered to steam-hauled heritage trains using road vehicles. This process requires a location with suitable safe access for the road vehicle to enable water hoses and / or arrangements for coaling to access the locomotive. The assessment of locations where this can be carried out takes into account whether the location is electrified, and whether it might require one or more lines to be blocked.

G 2.1.3.4 Water may be delivered to steam-hauled heritage trains using a road tanker. This process requires a location with suitable safe access for the road vehicle to enable water hoses to reach the locomotive and might require one or more lines to be blocked.

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Part 3 Responsibilities of Infrastructure Managers - Heritage Train Movements

3.1 Planning heritage train movements - fire risk

3.1.1 The IM shall identify any locations at which the operation of heritage trains presents an increased fire risk.

Rationale

G 3.1.2 There is an increased risk of lineside fires from steam locomotives. Locations which are susceptible to fire may need particular attention to minimise the possibility of fires being started.

Guidance

G 3.1.3 Weather conditions (such as prolonged dry spells) and other forecast conditions may affect part of this identification process. In locations that present an increased fire risk, controls may be required to minimise the possibility of lineside fires.

G 3.1.4 Network Rail's Fire Protocol is a tool which is provided for the purpose of assessing and mitigating fire risk and passing fire risk information to steam operators.

G 3.1.5 RIS-4472-RST contains requirements regarding the construction and maintenance of locomotives which are designed to minimise the possibility of setting lineside fires.

3.2 Special operating instructions for heritage train movements

3.2.1 The IM shall identify the need for any bespoke operating instructions that may be required to cover specific issues in respect of heritage train movements.

Rationale

G 3.2.2 Heritage trains, by their very nature, are different from the usual day-to-day train service. The locomotive(s) and other vehicles which heritage trains use, as well as the fact that some of these movements may operate over rarely used infrastructure, or make unusual moves, may require special operating instructions to be issued to cater for these types of trains and their movements.

G 3.2.3 Smoke and steam when emitted into a confined space have the potential to be injurious to health and to inhibit the sighting of signals, lineside features, personnel on the track etc.

Guidance

G 3.2.4 It is good practice for IMs to minimise the possibility of a steam locomotive being brought to a stand at a signal in a tunnel. Some signals are fitted with 'tunnel control', which is designed to minimise the possibility of a train being brought to a stand by keeping the previous signal at danger unless the tunnel signal can be cleared, or is likely to be able to be cleared imminently. If the train is signalled to pass through a tunnel which has stop signals and the signalling system does not include

tunnel controls, a special instruction to the signaller can provide a suitable alternative control measure.

- G 3.2.5 Where a passenger-carrying heritage train runs over a goods line, special instructions might be needed to authorise this movement and to implement risk-mitigation measures.
- G 3.2.6 The Special Traffic Notice (STN) can be used to reinforce the need for the signaller to be informed as soon as the train has stopped in certain circumstances.
-

3.3 Location of overhead line equipment

- 3.3.1 The IM shall make available to RUs information regarding the location of overhead line equipment (OLE) that could be affected by emissions from the chimney or safety valve of a steam locomotive.

Rationale

- G 3.3.2 Different areas of OLE may have differing abilities to withstand exposure to chimney and / or safety valve emissions.

Guidance

- G 3.3.3 There is no guidance associated with this requirement.
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Part 4 Responsibilities of Railway Undertakings - Heritage Train Movements

4.1 Fitness to run examination and documentation

4.1.1 RUs shall only operate heritage traction units that have been issued with a current Fitness to Run (FTR) certificate.

Rationale

G 4.1.2 The RU needs to be satisfied that locomotives and other vehicles are suitable to be accepted for operation as a heritage train under their Safety Management System.

G 4.1.3 The IM requires that any vehicles which run on its infrastructure are safe to do so.

Guidance

G 4.1.4 RIS-4472-RST details the requirements of a FTR examination and certification process.

G 4.1.5 When an FTR examination has been completed, an FTR certificate is issued. This is issued by a qualified examiner, who may be an employee of the RU. Typical practice is for the FTR certificate to be sent to the control office of the RU as evidence that the locomotives and any other heritage vehicles are in a fit condition to be brought into use.

G 4.1.6 RUs have a process in place to enter any required information regarding heritage vehicles' FTR certification into industry electronic systems such as Total Operations Processing System (TOPS).

G 4.1.7 Vehicles which are certified as being fit to run are registered as operational (Status 'C') on R2.

G 4.1.8 RUs may have a process in place which records the details of any minor deficiencies which are found during the FTR examination, but which are not serious enough to prevent the FTR certificate from being issued. Any such deficiencies are identified to the maintainer as well as to the driver, if deemed necessary. Minor defects which are identified during the FTR examination may require additional monitoring.

G 4.1.9 RIS-3437-TOM and its associated guidance provide requirements relating to the production of contingency plans, which have to be applied when on-train equipment becomes defective.

4.2 Train preparation

4.2.1 RUs' train preparation processes shall include a check that on-board safety systems are operational and, where appropriate, sealed.

Rationale

G 4.2.2 The on-board safety systems are critical to the safe operation of the train and can demand immediate and urgent action by the traincrew.

Guidance

- G 4.2.3 RIS-3437-TOM lists on-board safety systems and contains requirements relating to the production of contingency plans which have to be applied when on-train equipment becomes defective.
 - G 4.2.4 Where GSM-R installations have a variable volume control this needs to be set to a level sufficient to be heard above the ambient noise level in the cab as set out in RIS-3780-TOM.
-

4.3 Fitness for duty - all personnel

- 4.3.1 RUs shall document the medical fitness of all personnel who work on heritage trains on the GB mainline railway. These arrangements shall be applied to at least drivers, firemen, guards, support crew, maintenance personnel and stewards.
- 4.3.2 RUs shall have a process in place that requires all safety-critical staff to sign on for duty either in person by reporting to a competent person at the signing-on point, or at remote locations by telephoning a competent person at the operator's control room.

Rationale

- G 4.3.3 Carrying out safety-critical tasks, such as train driving, requires a defined level of medical fitness. Documenting and retaining records of an organisation's processes to prove the appropriate level of medical suitability of its staff is an inherent part of its safety management system.
- G 4.3.4 Traincrew who are presenting themselves for duty need to be fit for duty, and be made aware of any notices applicable to their duties. A formal signing-on process provides an opportunity for the RU to make a check on the fitness for duty of the traincrew, and on their possession of any relevant information.

Guidance

- G 4.3.5 The Train Driving Licences and Certificates Regulations 2010 (amended 2015) (TDLCR) sets out the legal requirements of the licensing and certification system for train drivers on the GB mainline railway working the services of RU's holding mainline railway Safety Certificates.
- G 4.3.6 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) (ROGS) set the legal requirement for staff undertaking safety-critical roles to be fit for those duties.
- G 4.3.7 Requirements relating to suitability and medical fitness of train drivers may be found in RIS-3451-TOM. Requirements relating to medical fitness of persons whose duties include train dispatch, shunting or travelling as a competent person with a train driver may be found in RIS-3452-TOM.
- G 4.3.8 RUs may wish to impose additional fitness requirements. For example, the duties of footplate staff on a steam locomotive, and especially those of a fireman, are far more physically demanding than those of a driver of a diesel or electric train.

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- G 4.3.9 Guidance regarding fatigue management may be found in RS504 ' Managing Fatigue - A Good Practice Guide' and on the [RSSB website](#).
-

4.4 Crewing arrangements and competence of personnel – all heritage trains

Guidance

- G 4.4.1 The interfaces between the roles and responsibilities of all personnel involved in the working of a heritage train should be clearly defined.
- G 4.4.2 The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) set the legal requirement for staff undertaking safety-critical roles to be competent for those duties.
- G 4.4.3 The Office of Rail and Road's Railway Safety Publication 1 - Developing and maintaining staff competence - provides useful guidance. It is primarily aimed at those who are responsible for managing and assuring the competence of individuals and teams whose work may have an impact on operational safety and on occupational health and safety.
- G 4.4.4 RUs assess the tasks that are required to be carried out during the operation of the heritage train and allocate these to defined personnel.
- G 4.4.5 RUs may wish to designate an individual as being in overall charge of the heritage train operations, with responsibilities for the staff on the train and for liaison with the RU control. It is good practice that relationship between this person and the operational traincrew is clearly defined.
- G 4.4.6 An individual may be designated as being in overall charge of the locomotive support crew, who can be a representative of the locomotive owner, where the locomotive owner is separate from the RU. Some operators term this person the 'Responsible Officer' (RO), with responsibilities for operational requirements associated with the locomotive during operational stops (for example fuelling), as well as the start of day handover and end of day handback.
- G 4.4.7 Some operators permit Technical Riders to accompany heritage diesel and electric traction movements. Technical Riders may be provided to carry out certain aspects of vehicle preparation duties and to advise the driver in fault identification and correction, including the technical aspects of assistance procedures. They may also provide a degree of operational risk mitigation through the early identification of developing defects and consequent rectification. Where more than one Technical Rider is present, it is good practice for one of these to be identified as the Lead Technician in order to provide a focal point for communications with operating staff.
-

4.5 Crewing arrangements - replacement traincrew

- 4.5.1 Where contingency arrangements are in place to provide a replacement driver or other crew member, should this be required due to unforeseen circumstances during the train's journey, RUs shall specify this in train planning.

Rationale

- G 4.5.2 If a driver or other crew member becomes unwell, or is involved in a safety-of-the-line incident, they may need to be relieved of duty. In this case a replacement crew member may be needed to take the train forward as booked, or to clear the running line and stable the train at a suitable location.

Guidance

- G 4.5.3 A replacement crew, or crew member, could be travelling with the train, or be readily available from a nearby location.
-

4.6 Crewing arrangements and competence of personnel - steam locomotives

- 4.6.1 RUs shall crew all steam locomotive movements when under their own power with no fewer than two persons.
- 4.6.2 The crew shall include at least a driver and a fireman.
- 4.6.3 The RU shall provide a second person in the driving cab with an appropriate level of route knowledge to assist the driver in sighting signals, handsignals, indicators and signs. This person might be the fireman or a traction inspector.
- 4.6.4 RUs shall ensure that, in addition to firing duties, the fireman is competent in:
- a) Shutting off power.
 - b) Stopping the train safely in an emergency.
 - c) Securing the train so that it remains stationary and safe.
 - d) Using the GSM-R train radio to contact the signaller in an emergency.
 - e) Carrying out emergency and assistance protection.

Rationale

- G 4.6.5 Modern standards require that trains are fitted with a driver's safety device (DSD) or driver's vigilance device (DVD), both of which are designed to stop the train if the driver becomes incapacitated. Steam locomotives are not fitted with either of these, hence the train will not be stopped automatically in this situation.

Guidance

- G 4.6.6 GERT8000 The Rule Book module TW5 requires that in the event of a failure or isolation of the DSD or driver's vigilance equipment (on a train which is fitted), then the driver shall be accompanied by a competent person. Where there is no DSD or DVD fitted, then the fireman takes a similar role to that of competent person.
-

4.7 Personnel in the driving cab

- 4.7.1 RUs shall use a risk assessment to identify the appropriate number of personnel allowed in the driving cab.
- 4.7.2 RUs shall ensure that any non-traincrew personnel in the driving cab do not interfere with any equipment and driving controls.
-

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Rationale

- G 4.7.3 It is important that the traincrew are not distracted from their duties, and can access all controls and equipment unhindered. This is particularly important in the case of an emergency.

Guidance

- G 4.7.4 It is good practice for RUs to place any non-traincrew personnel in the driving cab under direct supervision to ensure that they do not interfere with any equipment and driving controls.
- G 4.7.5 It is good practice to use a system of cab passes to control footplate access to authorised persons only. The cab pass may include a photograph of the holder and detail their competencies. Such a system of cab passes may include a specific pass which authorises the holder to be accompanied by other persons who are under the holder's direct supervision.
- G 4.7.6 Limiting the numbers of persons present in the driving cab to a minimum reduces unnecessary distractions to the traincrew.
- G 4.7.7 The traincrew are solely responsible for the control of the train.
-

4.8 Speed of heritage train movements

- 4.8.1 The traincrew shall be made aware of all speed restrictions applicable to their train, in writing, prior to the movement being made. This includes:
- The maximum permissible speed for the train locomotive(s), including any lower speed restriction which may apply to tender-first running (if applicable).
 - The maximum speed applicable to the slowest vehicle in the train.
 - The permissible speed for the line (subject to any temporary and emergency speed restrictions).
 - Any lower speed restrictions which might be imposed because of the train's braking characteristics.
 - Any speed restrictions which are imposed on the movement as a result of the physical characteristics of the locomotive(s) and rolling stock and / or the lines to be run over. This may include speed restrictions for visibility of signals and the line ahead as well as any other speed restrictions which it may be necessary to observe, including local instructions as published in the Sectional Appendix
 - Any other maximum speed which may be imposed for all or part of the journey.

Rationale

- G 4.8.2 Providing this information to traincrew enables them to comply with all applicable speed restrictions.

Guidance

- G 4.8.3 Maximum permitted speeds for heritage vehicles are defined in RIS-4472-RST.
- G 4.8.4 The ability of the driver (and other crew if applicable) to achieve the minimum sighting time for signals and other lineside indications can be affected by the

positioning of the driving controls, and whether the locomotive is running boiler-first or tender-first.

- G 4.8.5 Some locomotive and vehicle owners may choose to impose additional speed restrictions to reduce wear.
-

4.9 Station working and train dispatch

- 4.9.1 Transport operators shall risk assess station working and train dispatch arrangements

Rationale

- G 4.9.2 Heritage vehicles can differ from mainline vehicles and present different risk profiles.

Guidance

- G 4.9.3 RIS-3703-TOM provides a standard for the development of passenger train dispatch processes and additional measures to encourage and manage the safe behaviour of passengers and the public on platforms. This includes liaison between train operators and station operators to agree train dispatch arrangements.
- G 4.9.4 The nature of heritage train operations leads to a different risk profile at the platform-train interface when compared to mainline passenger train operations. This arises from, for example, the use of older rolling stock, the passengers' requirements and the bespoke nature of heritage operations.
- G 4.9.5 On-board stewards may provide useful assistance in closing train doors prior to the dispatch process being started.
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4.10 Visibility from the driving cab

- 4.10.1 RUs' route risk assessments shall take into account the visibility from the cab of a heritage vehicle.

Rationale

- G 4.10.2 The physical features of some heritage vehicles, especially steam locomotives, may mean that visibility from the driving cab is reduced compared to a modern traction unit.

Guidance

- G 4.10.3 In such locations the RU can consider providing the driver with assistance in sighting. Such assistance can include the fireman or an additional person on the footplate supporting sighting.
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4.11 Disposal of ashes

- 4.11.1 RUs shall discharge and dispose of ashes from the locomotive ashpan only at agreed locations, except in an emergency.
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Rationale

- G 4.11.2 Discharged ashes are a fire hazard when hot, and will affect the ability of the ballast to drain water away, leading to deterioration in track quality.

Guidance

- G 4.11.3 RUs may wish to determine locations where ashes may be discharged, by agreement with the IM concerned. This activity may be confined to depot and stabling points, away from running lines.
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Appendices

Appendix A Risk Assessment Responsibilities for Operating Heritage Train Movements

A.1 Risk assessment of heritage train movements - introduction

- A.1.1 Before a heritage train can be safely operated, transport operators need to have risk assessment processes in place which identify and quantify the risk associated with each planned (and reasonably foreseen unplanned) heritage train movement. Transport operators, in conjunction with other affected parties, mitigate identified hazards to reduce risk to a level that is as low as reasonably practicable (ALARP).
- A.1.2 Heritage trains, by their very nature, are different from the usual day-to-day train service. This presents a different risk profile, which needs careful consideration to ensure that safety is managed to an acceptable level. Heritage trains often generate high levels of interest among the rail enthusiast community. There are documented examples of high levels of trespass on the railway when heritage services have run.
- A.1.3 Items to be considered in the risk assessment process encompass the usual risks which are associated with railway operations, as well as those issues which are specific to heritage train operations. The risk from trespass when heritage trains operate is considered in Network Rail line Standard NR/L2/OPS/104.

A.2 Risk assessment of heritage train movements - general

- A.2.1 The following are factors that can be considered as part of the risk assessment (not exhaustive):
- a) Lineside trespass, including at level crossings and other access points.
 - b) Crowd control at stations.
 - c) Uncontrolled detraining at intermediate stopping locations (planned and unplanned).
 - d) The physical characteristics of the route to be traversed and the rolling stock to be used.
 - e) The tendency of passengers to lean out of windows and drop-lights. On vehicles with opening windows, and locomotive cabs, it is possible that passengers and staff may be able to lean out and come into contact with lineside structures. In deciding on risk mitigations, heritage train operators should take into account the existence of sub-standard clearances as well as human behaviours.
 - f) The provision of on-board stewards to manage the safety of passengers, when boarding, alighting and during the journey.
 - g) Presence of exposed live electrical equipment (electric traction).
 - h) The age of heritage vehicles and their greater susceptibility to fire, when compared to modern vehicles.

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A.3 Risk assessment of heritage train movements - visibility of signals

- A.3.1 The visibility from the driving cab of a heritage train is unlikely to conform to current standards, as it will have been built to the standards which were in force at the time of its being designed.
- A.3.2 To identify issues with visibility, RUs can assess the proposed route and identify issues such as signals and lineside warning boards that may be difficult to see (especially from a steam locomotive).
- A.3.3 In particular, the following may affect visibility:
- a) The physical construction of the locomotive.
 - b) The emissions of smoke and steam from the locomotive.
 - c) The driving position (for example, driving controls only on the right-hand side of the cab).
 - d) Running tender-first in the case of a steam locomotive.
 - e) Locations for stopping:
 - i) In stations.
 - ii) At signals (including in relation to drivers' 'landing strip' for signal post telephones).
 - iii) At any other places where the train might be required to stop.

A.4 Risk assessment of heritage train movements - safety of personnel - AC electrified lines

- A.4.1 RUs can use risk assessment tools to identify and implement measures to control risks associated with AC electrified lines. The following are typical factors that the RU can consider as part of a risk assessment:
- a) Clearance between footplate crew and OLE.
 - b) Personal safety when required to go on the operational railway (for example, to carry out the rules or to inspect the train).
 - c) Use of tools, such as shovels, slacking pipes, rakes and irons.
 - d) Any need for inspection of, and attendance to, the outside of locomotives and rolling stock.
- A.4.2 The OLE is energised at 25 kV AC and must be regarded as always live, presenting a hazard to life if touched (directly, or by an object) or approached.
- A.4.3 Rules relating to AC electrified lines may be found in the GERT8000 Rule Book AC.
- A.4.4 Health and Safety Executive publication HSR25 is provided to help duty holders meet the requirements of the Electricity at Work Regulations 1989 (as amended).

A.5 Risk assessment of heritage train movements - safety of personnel - DC electrified lines

- A.5.1 RUs can use risk assessment tools to identify and implement measures to control risks associated with DC electrified lines. The following factors can be considered as part of the risk assessment (this list is not exhaustive):

- a) Personal safety when required to go on the operational railway (for example, to carry out the rules or to inspect the train).
- b) Use of tools, such as shovels, slacking pipes, rakes and irons.
- c) Any need for inspection of, and attendance to, the outside of locomotives and rolling stock.

A.5.2 The conductor rail is energised at 750 V DC and must be regarded as always live, presenting a hazard to life if touched (directly, or by an object) or approached.

A.5.3 Rules relating to DC electrified lines may be found in the GERT8000 Rule Book DC.

A.5.4 Health and Safety Executive publication HSR25 is provided to help duty holders meet the requirements of the Electricity at Work Regulations 1989 (as amended).

A.6 Risk assessment of heritage train movements - general for railway undertakings

A.6.1 The following are additional factors that RUs can consider as part of their risk assessment for heritage train movements (not exhaustive):

- a) Carrying out planned refuelling, whether this be diesel fuel or coal, and water at predetermined locations.
- b) Hauling a locomotive which is not applying power (for example, the possibility of 'blow-back' when passing through tunnels).
- c) Carrying out unplanned or emergency procedures, such as fault-finding or train failure and assistance procedures.

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Acronyms and Abbreviations

| | |
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| ALARP | As Low As Reasonably Practicable. |
| DSD | Driver's Safety Device. |
| DVD | Driver's Vigilance Device. |
| ETH | Electric Train Heat. |
| FTR | Fitness to Run. |
| IM | Infrastructure Manager. |
| OLE | Overhead Line Equipment. |
| ORR | Office of Rail and Road. |
| RA number | Route Availability. |
| RIR | Railways (Interoperability) Regulations 2011. |
| RO | Responsible Officer. |
| RU | Railway Undertaking. |
| STN | Special Traffic Notice. |
| TDLCR | Train Driving Licences and Certificates Regulations 2010 (amended 2015). |
| TOPS | Total Operations Processing System. |

Definitions

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| Heritage Rail Vehicle | Vehicle reserved for a historical (heritage) or touristic use. Such vehicles typically are of a type that no longer have a continuous history of regular mainline service but have a proven previous history of safe operation. They are classified as non-mainline vehicles for the purpose of interpretation of RIR and ROGS. |
| Heritage Train | A train formed of one or more heritage vehicles for the predominant purpose of recreating a railway service of a bygone era (typically organised by a rail heritage company). |
| Infrastructure Manager (IM) | Any 'body' or undertaking that is responsible in particular for establishing and maintaining railway infrastructure, or part thereof, as defined in article 3 of Directive 91/440/EEC, which may also include the management of infrastructure control and safety systems. The functions of the infrastructure manager on a network or part of a network may be allocated to different bodies or undertakings. <i>Source: Article 3 (b) of Directive 2004/49/EC.</i> |
| R2 | The national central database of rail vehicle design and operational data, owned and maintained on behalf of the industry by RSSB. It incorporates what was previously known as the Rolling Stock Library (RSL). It integrates with key Industry Systems, including TOPS, Gemini, GENIUS, and National Vehicle Register (NVR). |
| Railway Undertaking (RU) | 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; this also includes undertakings which provide traction only. <i>Source: Article 3 (a) of Directive 2004/49/EC.</i> |
| Slacking pipe | High-pressure hose used to wash away coal dust on the footplate of a steam locomotive and to damp-down the coal in the tender. |
| Total operations processing system (TOPS) | Computer system for managing the locomotives and rolling stock owned by and / or operated on the GB mainline railway. |
| Transport operator | An infrastructure manager or railway undertaking that must implement the requirements in this standard. |
| Transport undertaking | A person or organisation that operates a vehicle in relation to any infrastructure. People or organisations that only carry out work in 'engineering possessions' (meaning sections of track closed to normal traffic for maintenance work) are not included. |

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References

The Catalogue of Railway Group Standards gives the current issue number and status of documents published by RSSB. This information is also available from <http://www.rsb.co.uk/railway-group-standards.co.uk>.

| | |
|---------|------------------------------|
| RGSC 01 | Railway Group Standards Code |
| RGSC 02 | Standards Manual |

Documents referenced in the text

Railway Group Standards

| | |
|--------------|--|
| GERT8000 | The Rule Book |
| GERT8000-AC | AC electrified lines |
| GERT8000-DC | DC electrified lines |
| GERT8000-TW1 | Preparation and movement of trains |
| GERT8000-TW5 | Preparation and movement of trains: Defective or isolated vehicles and on-train equipment |
| GERT8006 | Assessment of Compatibility of Rail Vehicle Weights and Underline Bridges |
| GERT8270 | Assessment of Route Compatibility of Vehicles and Infrastructure |
| GERT8273 | Assessment of Compatibility of Rolling Stock and Infrastructure – Gauging and Stepping Distances |

RSSB Documents

| | |
|--------------|--|
| RIS-2003-RST | Certification Requirements for Heritage Vehicles |
| RIS-3437-TOM | Defective On-Train Equipment |
| RIS-3451-TOM | Train Drivers - Suitability and Medical Fitness Requirements |
| RIS-3452-TOM | Train Movement - Medical Fitness Requirements |
| RIS-3703-TOM | Passenger Train Dispatch and Platform Safety Measures |
| RIS-3780-TOM | Operational Requirements for GSM-R Radio |
| RIS-4472-RST | Engineering Requirements for Heritage Vehicles |

Other References

| | |
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| Directive 2004/49/EC | Railway Safety Directive |
| HSR25 | Guidance on The Electricity at Work Regulations 1989 (HSE publication) |

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| Network Rail Fire Risk Protocol for the operation of Steam Charters | Network Rail Fire Risk Protocol for the operation of Steam Charters |
| Network Rail Sectional Appendix | Network Rail Sectional Appendix |
| NR/GN/ELP/27040 | Overhead Electrified Lines – Passage of High Vehicles or Loads, or Those With Large Overhangs, over Accommodation and Occupation Level Crossings |
| NR/L2/OPS/104 | Planning & Control of Steam Locomotive Operation |
| Office of Rail and Road Railway Safety Publication 1 | Developing and maintaining staff competence |
| ROGS | The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) |
| RS504 | Managing Fatigue - A Good Practice Guide |
| TDLCR | The Train Driving Licences and Certificates Regulations 2010 (amended 2015) |

Other relevant documents

Railway Group Standards

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| GERT8270 | Assessment of Route Compatibility of Vehicles and Infrastructure |
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RSSB Documents

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|--------------|--|
| RIS-0737-CCS | Rail Industry Standard for Signal Sighting Assessment Requirements |
| RIS-3702-TOM | Rail Industry Standard for Management of Route Knowledge for Drivers, Train Managers, Guards and Driver Managers |