Standards Annual Report
January to December 2019
Throughout the year the Industry Standards Coordination Committee (ISCC) has continued to oversee the standards committees, with each of the chairs reporting progress every six months. ISCC has been focussing on and developing initiatives to improve the understanding of standards. To do so, the first of a series of online learning courses, with a self-assessment test, was launched this year. The standards framework e-learning test is available to anyone. Comprising over 20 questions, the test helps users better understand the role of standards and the relationship between the different types and other requirements. Users are anonymous, but it is possible to analyse patterns of responses so that future material can be improved.

Inevitably, Brexit has been a frequent issue for the ISCC and the standards committees. There has been very close collaboration between the Department for Transport (DfT), the Office of Rail and Road (ORR) and RSSB in developing technical standards for any of the possible Brexit outcomes. RSSB’s website is a key source for official information on which the standards committees have been briefed.

The applicability of standards, and in particular Rail Industry Standards (RIS), has been an industry concern for some time. To address this, the ORR carried out a consultation and has now implemented changes to the licence conditions for infrastructure managers and railway undertakings, generally requiring compliance with RISs. This has been welcomed positively across the industry.

Reflecting changes in industry structure, ISCC has agreed to increase the infrastructure manager category representation from two to three members. Network Rail holds two seats and a third is being offered to other infrastructure managers.

Sharing knowledge and good practice is important and Network Rail is sharing information on the Standards Challenge process, available for Network Rail company standards. Having run successfully for over 18 months, the process provides a means for organisations to challenge Network Rail standards where they believe that requirements are onerous, drive unnecessary cost or both. With regard to RSSB, there has always been an opportunity to challenge standards and the simplest route is through the ‘request for help’ process on RSSB’s website. The respective standards committees welcome challenges on the application of standards and ISCC is always interested in receiving feedback.

While this report is a retrospective view of 2019, ISCC is looking forward to the new standards strategy being launched in the first half of 2020. With the previous strategy now implemented, this new one will set a clear, strategic direction for rail standardisation for the next five years and beyond.

In addition, ISCC has decided to re-organise its meeting structure, on a trial basis, by holding fewer meetings per year. However, it will hold longer meetings with the opportunity to ‘deep dive’ into some specific topics. For example, the challenges that users are experiencing in the application of the variety of different standards will be one of the first themes to be addressed.

Cliff Cork
Independent Chair of the Industry Standards Coordination Committee
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Welcome to the 2019 ISCC annual report. Having received great feedback on the comprehensive and more appealing style we adopted last year, we have again developed this year’s report further. I welcome feedback to continue improving this publication.

**Demonstrating benefits**

Standards foster innovation and help to drive the economy by achieving economies of scale, establishing good practice and avoiding unnecessary work. Technical standards support trade; RSSB standards, and the international standards we contribute to all accord to the World Trade Organisation principles on standardisation.

The value of standards is at the heart of what we do. Section 2 ‘Key achievements in 2019’ illustrates the benefits our work through six projects that demonstrate how RSSB standards are contributing to a better, safer and more efficient railway. Furthermore, from 2020, we’re increasing our efforts by supporting changes with improved economic assessments.

**Supporting users**

We continue to receive industry feedback that show the levels of understanding of the role, purpose and appropriate use of standards is lacking. To improve this, we help members use standards and have developed initiatives to benefit all, including:

- interactive online self-assessment tests. The first test we released aims to aid better understanding of the standards framework. We released a second test at the end of 2019 for vehicle fire standards. We are developing additional tests in other technical areas.
- extensive quarterly briefings to accompany the standards catalogue updates. These are interactive PowerPoint presentations with a voiceover and can be viewed by an individual or customised into other briefings.

Although the online self-assessment tests are anonymous, we collect aggregated data to help target future initiatives. So far, 184 people have taken the standards framework test, mostly individuals that work for suppliers and train operators and the average score was 12 out of 24. The most frequent weaknesses observed were in understanding essential requirements of the technical specifications for interoperability and when authorisation is required to place into service.

**Status of Rail Industry Standards**

The industry has given strong and consistent feedback for Rail Industry Standards (RISs) to have more force, so that they can be better relied upon between different parties when they need to cooperate. We have worked with the ORR to revise the train and infrastructure operator licence conditions to increase the status of RISs. This change should significantly address industry concerns. Companies can still choose to deviate from RISs under certain conditions without approval from the standards committees. Nonetheless, standards committees will continue to consider RIS deviations on request and companies are strongly encouraged to use this service as it facilitates robust decision making and provides valuable intelligence on the suitability of the content of the standard.

**Delivery of new and revised standards**

Proposals for new and revised RSSB standards come from the industry, or as a result of reviews we undertake. Standards committees review and support RSSB in prioritising the proposals.

The number of proposals has declined gradually over the last few years (Figure 5). This is partly due to a transfer of material from national standards to European and international standards, but also by having standards with better requirements. Whilst the number of proposals has declined, the effort in addressing them is broadly comparable over the years.

Delivery of projects has been good during 2019 with only 2 out of 14 delayed – and that was at stakeholder’s request and supported by the respective standards committees.
International standards

Standardisation activities are much broader. RSSB supports the British Standards Institution by facilitating their rail standardisation activities in the UK, Europe and worldwide. This year, we've provided more detail on this work within this report.

Whilst the future relationship with the European Union (EU) continues to be developed, the direction of travel for standards remains similar to that seen in the past decade or so. Simply, standards are largely about efficiency, compatibility and economies of scale. Therefore, if it makes sense to standardise something nationally, it frequently makes sense to standardise across Europe and on a global scale. European and international standardisation is mainly independent of political boundaries, and collaboration is expected to increase further irrespective of the political circumstances. Changes to the regulations that apply standards are possibly more likely.

Challenging standards

We are continually improving standards and are grateful for the feedback we receive. We consult widely on changes and occasionally consult before making them to address actual needs better. We provide formal responses to all consultation comments, assess all changes for impact and ensure each change is traceable to help those applying standards.

We are aware that sometimes standards may not be appropriate. For instance, it could be that one circumstance is unusual, or there might be a wider issue about applicability. In the former, a specific deviation might be appropriate; in the latter, a change to the standard might be required. We encourage anyone seeking more information to get in touch so that we can help.

Status of the standards catalogue

In section 6 ‘Meeting requirements of the code’, we provide a detailed analysis of the health of the standards catalogue; there have been many good achievements this year. Although there are some overdue reviews (Figure 1), there is a plan to address them, and the interim 2020 report should show significant improvements.

Whilst this report focusses on 2019 achievements, standards typically take between 12 and 24 months to produce. Therefore, much of the activities we undertook during 2019 will result in achievements in the 2020 annual report.

Looking ahead

Developing and updating standards is a team effort. We value the contribution of the wider community and committee members in supporting our work and helping the industry to realise the benefits of standards. The 2020 programme of activities look good, and my team and I are looking forward to consolidating the progress made in delivering the previous strategy and supporting ISCC’s continued strategic leadership with the new standards strategy.

Tom Lee
Director of Standards, RSSB
2 Key achievements in 2019

Hauling unbraked fixed formations

In 2010, we developed GMGN2607 issue one *Guidance on the Braking Requirements for Hauling Unbraked Multiple Units in Freight Trains*, to facilitate the movement of multiple units in transit, hauled by a locomotive and using additional barrier wagons to provide the necessary braking force. It supported the white pages and working manual for freight train operations.

Operators wanted to use the same procedure for the transit movements of fixed formation trains (not multiple units) in which the brake systems had not been fully commissioned. Accordingly, two deviations were raised against GORT3056 issue 5 *Working Manual for Rail Staff – Freight Train Operations*, to apply the principles of GMGN2607 issue one for the delivery of new Mk5 rakes of coaches and sleeper vehicles.

In evaluating these deviations, the rolling stock standards committee suggested a revision to GMGN2607 issue one, to make it more generic. As a result, we extended the guidance note to cover fixed-formation trains.

We published GMGN2607 issue two in March 2019, the guidance note will allow the movement of non-multiple unit rolling stock and on-track machines without operative braking systems, without the need to apply for deviations. This facilitates delivery of new rolling stock from point of entry to the UK to a depot and other similar movements. *The Working Manual for Rail Staff – Freight Train Operations* (GORT3056 issue 5.1) was also revised to facilitate these changes.

**GMGN2607 issue two**

Hauling Unbraked Fixed Formations in Freight Trains
Sprinter classification

In September 2019, we published a new standard to define the attributes that a rail vehicle needs to use the SP (Sprinter) speed classification. Previously, new trains procured to replace older Sprinter vehicles were not allowed to run on the tracks at the same speed as the original vehicles.

To develop the standard, we used the outcomes of RSSB research project T996 (2014) *Categorising the relationship between track condition, line speed, and vehicle forces*. The project proposed criteria for vehicles that could make use of SP lettered differential speeds. As a result, industry can be certain on whether a design of vehicle will be allowed to use SP differential speed limits or they need to make changes to the vehicle at the design stage. Operators cascading vehicles that will be operating for the first time on routes with SP differential speed limits will also benefit from the standards.

Ultimately, passengers will benefit as journey times do not need to increase when new rolling stock is introduced.

Incident response

When an incident occurs, the respective railway undertakings and the emergency services have to work collaboratively to respond effectively to the incident.

We undertook a comprehensive review of RIS-3118-TOM issue one *Incident Response Planning & Management*, and GOGN3515 issue one *Guidance on Incident Response Planning and Management*, and merged useful content into a single document. The revised standard considers changes in technology, practices of the emergency services and responsibility arrangements within the industry, such as changes to staffing. The standard contains additional guidance on matters to be considered if emergency plans and associated documents are available electronically.

The key benefit of the standard change is faster and more effective incident response. Additionally, the standard will assist the industry in meeting some requirements of the Civil Contingencies Act 2004, and it will be particularly useful to new entrant railway undertakings and any staff who that carries emergency planning duties for the first time.
Lineside telephony

In June 2019, we published guidance with the latest information and good practice on the provision of lineside telephones following the retirement of legacy systems and the now widespread use of the Global System for Mobile Communications – Railway (GSM-R).

We revised GOGN3677 issue one *Guidance Note on the Provision of Lineside Telephones*, and removed guidance for systems that are no longer in use in the GB mainline, such as cab secure radio and national radio network. The changes reduce the planning and design times for lineside telephony schemes.

The revision highlighted that the Fixed Lineside Telephony Assessment Tool (FLAT tool), developed in 2010 to help with decision making regarding the removal or retention of lineside phones following the introduction of GSM-R, is no longer appropriate. Instead, a risk-based approach based on the Common Safety Method for Risk Evaluation and Assessment is advocated; existing precedents can be used as a reference system when using this approach.

In reviewing the standard, we identified the need to provide information on secondary communications in the absence of GSM-R. A project will commence in early 2020 to deliver further benefits to industry by resolving some long-standing issues in the placement of lineside telephones.

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**GOGN3677 issue two**

*Guidance Note on the Provision of Lineside Telephones*

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Spoken safety communications

Excellent spoken safety critical communications (SSCC) are a crucial factor in helping deliver a safe operational railway. All rail staff who have to communicate verbally during their operational duties have a part to play. In a recent sample of GB rail incidents, safety critical communication (SCC) was identified as a contributory factor in nearly 17% of cases. However, this figure rises to 90% in some operational contexts.

Network Rail proposed incorporating the findings of RSSB research project T1078 *Developing a Safety Critical Communications Training Package* into RIS-8046-TOM issue one *Spoken Safety Critical Communications*. As a result, we updated requirements and incorporated key points from the Communications Manual (T1078) which describes good practice in SCC on the railways. We published RIS-8046-TOM issue two in September 2019, changes include the provision of underlying rational for each requirement and guidance on meeting requirements, revisions to SSCC monitoring that align them with the Communications Manual, as well as a new appendix that contains guiding principles for effective SSCC. The key benefit of the change of the standard will be fewer incidents due to poor verbal communications.

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**RIS-8046-TOM issue two**

*Spoken Safety Critical Communications*

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1 Human Factors SPAD Analysis - Analysis of SPAD investigation reports from 2016/2017 (research project T1128).

Resistance to derailment and roll-over

June 2019, we published GMRT2141 issue four and GMGN2641 issue one, a standard and a guidance note related to track forces for railway vehicles, their resistance to derailment and roll over, and the testing of static vehicles. The two documents are the result of revising various documents, restructuring and merging content. Requirements that did not meet the criteria of national technical rules were removed, which removes restrictions on transport operators in areas where they can exercise a risk-based choice. The guidance supports them in doing this.

The documents aim to mitigate the risk of derailments with assessment and simulation methods to manage susceptibility to cyclic top, and requirements to consider the uneven loading of containers. The assessment and simulation methods enable a consistent approach for designated bodies, simplifying the approvals process.

The standard permits the continued use of the GB peak counting method, which is easier and cheaper to implement than on track test methods set out in European Standards.

Changes to vehicle roll-over limits means that they will be easier to achieve economically while still being safe. This regularises a number of deviations to the former limits and hence reflects current good practice. Requirements for on-track machines are also clarified (to be treated as freight vehicles) which will simplify the acceptance of new on-track machines.

The standard also permits a simulation method for demonstrating that a vehicle meets the track shifting force limit, which will simplify the acceptance process, resulting in lower cost.

**GMRT2141 issue 4**
Permissible Track Forces and Resistance to Derailment and Roll-Over of Railway Vehicles

**GMGN2641 issue 1**
Guidance Note on Vehicle Static Testing
Plant

Activities underway

Currently, we are reviewing RIS-1701-PLT issue four Portable and Transportable Plant Used for Infrastructure Work. The review of this standard will combine relevant requirements from Network Rail and London Underground and its scope will be expanded to cover non-rail borne plant designed or adapted for railway use. Requirements from product acceptance processes have already been transferred to RIS-1710-PLT issue 2.1 Engineering Certification of Railborne Plant and the Assessment of Non-Rail Plant. The title of RIS-1701-PLT issue five will be Non-Railborne Plant Used for Infrastructure Work, which will reflect better the content of the document. The publication of the standard is planned for June 2020.

We have started the revision of RIS-1530-PLT issue six On-Track Plant and their Associated Equipment and Trolleys to address the RAIB recommendation in report 08/2019: Collision between road-rail vehicles at Cholmondeston. The revision includes aligning the standard with the update to the EN 15746 series of European standards regarding road-rail machines and associated equipment, additional topic areas raised by the M&EE Networking Group, aligning the standard with current industry practice and improving the clarity of some requirements.

European and international activities

The committee is maintaining oversight for and coordinating UK input into the CEN working group for track construction and maintenance machines (CEN TC256 SC1 WG5). This includes:

- general revisions to standards for road-rail machines (EN 15746 series) including alignment with the EU Noise Directive;
- revision to the standard for demountable machines, trailers and associated equipment (EN 15955);
- producing a new technical report Explanation of machine type and compliance, including acceptance processes; and
- producing a new work item on ‘Machines without Rail Wheels’, which potentially will include topics from RIS-1701-PLT issue five.

Plant SC is also engaged with the CEN working group on ground-based services (CEN TC256 WG43) delivering a new document on AdBlue refilling equipment. This is being informed by an RSSB project and a new document on hydrogen refuelling equipment.

A proposal for a new series of international standards covering on-track machines (OTM) is under consideration by the International Organization for Standardization (ISO, committee TC269 SC1 AG02). This could be based on the EN 14033 series of standards produced by CEN.

Make-up of the committee

The committee currently has a vacancy for a representative of passenger train operators.

Other items of note

The certification of Entities in Charge of Maintenance (ECMs) has expanded to cover OTMs in running mode, however, on-track plant used in possessions is currently out of scope.

Neil Halliday
Chair of the Plant Standards Committee
Rolling Stock

Activities underway

The ‘Key achievements in 2019’ section of this report highlights some of the rolling stock standards published during the year. In addition, the committee has been working on a large portfolio of new and revised standards for publication in the first half of 2020 which will benefit the industry with improved passenger safety, better security and better performance in winter. The work includes standards on:

- fire and evacuation;
- vehicle structures and interior passive safety;
- vehicle numbering, registration and recording of vehicle data in R2;
- onboard CCTV which will result in a new RIS based on an earlier guidance note;
- standard vehicle gauges;
- cab standards;
- guidance on winter preparedness following sharing of best practice between train operators and Network Rail;
- on train data recorders; and
- bearing monitoring which will also result in a new RIS developed from and earlier guidance note.

European and international activities

The committee is kept informed of European standards in the field of railway engineering which are drafted in two European standards organisations, CEN/TC 256 and CLC/TC9X, and of international standardisation activities, which are drafted by technical committees ISO/TC 269 and IEC TC9X. RSSB contributes to a number of committees and provides convenors for a number of working groups.

Make-up of the committee

A second infrastructure manager representative seat has been filled by High Speed 2; Network Rail has the other seat.

Other items of note

Hugh O’Neill, the Chair for the last four years has stood down due to leaving RSSB, and there will be an election for a new Chair in early 2020.

...the committee has been working on a large portfolio of new and revised standards for publication in the first half of 2020.

Hugh O’Neill
Professional Head of Rolling Stock
**Infrastructure**

Most deviation applications are against platform width, height and offset requirements. A workshop on issues with the persons with reduced mobility technical specification for interoperability (PRM TSI) highlighted that the GB mainline position on platform width, platform edge markings, and station wayfinding requirements needs to be made clearer. RSSB therefore plans to produce a guidance note on the application of the PRM TSI.

Learning from experience gained this year, we will also work with the DfT to change the way the national technical rule on platform width is notified – from dealing with technical compatibility with legacy subsystems to addressing an open point.

**Activities underway**

The station infrastructure standards and guidance will be a focus of the committee’s attention over the coming years. We are working collaboratively with Network Rail to review station infrastructure standards produced by a range of organisations including RSSB, Network Rail, British Standards Institution (BSI), the DfT and the Rail Delivery Group (RDG). The plan is to reduce the number of documents, the end-users of the standards will benefit by being able to navigate through standards more easily and understand the standards framework. In May 2019, this approach was supported by members of the Rail Industry Association (RIA) at the Infrastructure Technical Interest Group (TIG).

**European and international activities**

EN 16432 *Ballastless track systems* Parts 1 and 2 were published in 2017. Both parts have UK national forewords reflecting on some of the concerns from the UK rail industry. The drafting of Part 3 is almost complete. It includes acceptance of design (site-specific configuration and alignment), as well as finished site work and fitness for traffic. These changes will facilitate the wider use of slab track on the GB mainline. Enquiry is expected early in 2020. Part 4 will need a call for experts in early 2021, with drafting to follow Part 3.

**Make-up of the committee**

The committee decided to increase the membership of the infrastructure manager category from two to four. The third seat increases Network Rail’s seats to three, and the fourth is for an infrastructure manager other than Network Rail. The election process for the fourth seat is underway.

**Other items of note**

The committee and RSSB are not seeing applications to deviate from requirements in RISs. Therefore, vital information is not available to enable trends analysis and to assess whether requirements are fit for purpose.

Jessal Murarji  
Chair of the Infrastructure Standards Committee
Control Command and Signalling

Over the last six months, the committee has received a few deviations on the design and application of lineside signage. In response, work continues with two new standards which will clarify the scope of national technical rules and will provide better requirements for the appearance and meaning of signs. The work will also provide a simplified process for the trial of new lineside operational signs and new applications of signs. This should reduce the need for deviation applications and improve the management of lineside operational signs by stakeholders.

Activities underway

We are updating GIRT7033 issue three Lineside Signs, to clarify the national technical rules covering signs read from the driving cab. In addition, we are developing a new RIS for lineside operational signs to strengthen the process for introducing a new design of sign and to clarify the implementation requirements. This will contribute to the reduction in operational incidents by controlling the unnecessary proliferation of different types of signs, reducing visual clutter and simplifying driver training. Those who propose and design lineside operational signs will also benefit from guidance on the design principles for signs and the use of signs as a risk control measure.

We are developing a new RIS on Control Command and Signalling (CCS) system transitions. This will set out the requirements that underpin safe integration of the European Train Control system part of the European Railway Traffic Management System (ERTMS/ETCS) transitions to lineside signalling with the Train Protection & Warning System (TPWS). The work includes addressing driveability risk through signalling transition, reducing the likelihood of driver error and managing workload.

The final stage of a project to revise GERT8075 issue three AWS and TPWS Interface Requirements, aims to inform the design and integration of new trains and infrastructure projects. The revisions will clarify requirements of the GB Class B system Automatic Warning System / Train Protection and Warning System (AWS/TPWS). RIS-0775-CCS issue two AWS and TPWS Application Requirements, is also being updated to support safe integration of AWS/TPWS onboard and trackside subsystems into the GB mainline railway.

We received positive feedback from industry stakeholders on new guidance about the design, positioning and application of platform stop marker signs. This complex area of work involved cross-industry surveys and workshops attended by representatives from human factors, risk and safety intelligence, CCC, and operations. The relevant standards committees have considered and concluded that the content should be transposed into high level requirements and published as a RIS once demonstrated through a targeted case study trial.

The CCS Strategic Plan will continue with its objective to align the content in Railway Group Standards with the scope of national rules. This will remove requirements that do not meet the criteria of national technical rules by transferring the out-of-scope content into a Rail Industry Standard. The progress of this is dependent on a positive business case, agreement of the committee and views of its constituencies, since the two standards concerned have very limited application on the GB mainline railway.

European and international activities

Previous concerns about ERTMS/ETCS operational test scenarios have been addressed to the satisfaction of the CCS TSI mirror group. Network Rail is currently developing operational test scenarios and ETCS system compatibility checks. These are needed to meet requirements of the CCS TSI and must be submitted to the European Union Agency for Rail in January 2020.
A previous matter of concern regarding class B train protection when shunting in ETCS Level national train control (NTC) has been resolved. A change request has been confirmed and is proposed for inclusion in the 2022 version of the CCS TSI that will allow the class B protection status to be configurable so that TPWS/AWS can be active while shunting in Level NTC.

**Make-up of the committee**

There have been three changes of membership involving representatives of rolling stock operating companies, suppliers, and infrastructure contractors. Two vacancies from the supplier class exist, with proposals for filling them underway.

**Other items of note**

RISs define the industry agreed and endorsed methods of controlling risk, yet because there is no obligation for duty holders to seek opinion from committees, there is no feel for the level of compliance or indeed how well the RISs are working. The committee is concerned that there is no overall industry visibility of the extent of compliance or non-compliance with requirements published in RISs.

The committee is considering ways to best to encourage duty holders to provide feedback on the extent of non-conformity with RISs.

"We received positive feedback from industry stakeholders on new guidance about the design, positioning and application of platform stop marker signs."
With widescale electrification projects now underway, the committee is gaining feedback on the application of the energy technical specification for interoperability (ENE TSI) and the associated national technical rules.

Activities underway
The committee previously indicated a desire to update GLRT1210 AC Energy Subsystem and Interfaces to Rolling Stock Subsystem. This is being done with an update of the complementary GMRT2111 Rolling Stock Subsystem and Interfaces to AC Energy Subsystem. In conjunction with the rolling stock standards committee this work is progressing in two stages to maximise the benefit to the industry. For the first stage, a limited revision of the standards to address route compatibility of pantographs with overhead line equipment was agreed and published in December 2019.

RSSB is now preparing a case for change to fully scope the second stage. This will be a wider revision of both standards supported by relevant research, and the removal of all duplication with the ENE TSI.

The committee have also supported work in collaboration with Network Rail, their consultants and RSSB technical experts, on the assessment of electrical risk and compliance with Electricity at Work Regulations. This will lead to a new guidance document, revisions to the relevant Rule Book modules, and may feed into the second stage revision of GLRT1210 and GMRT2111, described above.

European and international activities
The committee continues to monitor and inform UK’s input for drafting CENELEC European standards related to electrification. In some cases, reaching a European consensus on technical requirements is taking considerable time. The committee also monitors the activities of the European Union Agency for Railways in relation to the ENE TSI. Although in this case, further development is currently paused pending a change to the processes for revision. The future process for updating TSIs is still under discussion between the Commission, the Agency and the European representative bodies, and as yet, no conclusion has been reached. The Commission proposes that the next TSI update package is due in 2022 and will focus on the policy pillars of ‘digital rail’ and ‘green freight’. Section 4 of this report provides more information on the possible impact of Brexit.

Make-up of the committee
For the last year, the committee have been operating with full representation for each member category, except non-passenger operators and infrastructure maintenance contractors. An election is now in progress for infrastructure maintenance contractor representation. The committee has also agreed to extend the membership to include other infrastructure managers, with a representative of High Speed 2 regularly attending the committee. ORR is now sending an observer on a regular basis.

Other items of note
In collaboration with Network Rail the committee has supported deviations that reduce the cost of electrification while remaining safe, in the best interests of the GB mainline railway. For example, a deviation to manage the extent of the necessary electrical bonding. Particularly notable is another deviation permitting the use of an approach which allows the contact wire height to be reduced significantly underneath a bridge near Cardiff station. This approach is new to the UK and is being used where there are no other, reasonable, economic solutions for electrification.

David Knights
Chair of the Energy Standards Committee
Traffic and Operation Management

The introduction of new rolling stock continues to create issues across the network. As evidenced through the volume of deviations concerning car stop markers, and alternative measures to manage onboard failures.

Activities underway

Currently, we are critically reviewing freight national operating publications (NOPs): GORT3053 Working Manual for Rail Staff Handling and Carriage of Dangerous Goods, and GORT3056 Working Manual for Rail Staff – Freight Train Operations. These documents will be replaced by a new Rule Book module (TW4) setting out the user instructions and a new Rail Industry Standard (RIS) that will define the organisational requirements, available from September 2020. The content of TW4 will then also be available in the Rule Book app, making this information more readily accessible to the freight community.

We reviewed RIS-3702-TOM issue two Management of Route Knowledge for Drivers, Train Managers, Guards and Driver Managers. This involved incorporating the good practice and guidance emerging from RSSB research projects T1108 Achieving a step change in route knowledge management and T1155 PERFORM: Reviewing the risks and benefits of detonator usage. Publication will be in March 2020.

We also reviewed RIS-3702-TOM Passenger Train Dispatch and Platform Safety Measures, to incorporate good practice on platform markings emerging from research projects T1118 Optimising the design and position of platform markings designed to keep people away from the platform edge, and T1098 Identifying mitigations for the risk of unplanned movement of wheelchairs and pushchairs on station platforms. Publication will be in March 2020.

European and international activities

The operations and traffic management technical specification for interoperability (OPE TSI) requires the rear of a freight train to be fitted with two reflective plates or two steady red lights. The EU Agency for Railways aims to harmonise the current position by January 2026 to ensure reflective plates are accepted across the whole of the EU. If relevant to the UK, such a move will impact the current practice of a single flashing tail lamp meeting the national technical rules set out in GMRT2131 Audibility and Visibility of Trains. To understand the impact of such a change, the OPE TSI Mirror Group has commissioned a standards project. The project outputs will be shared, as appropriate, with the EU Agency for Railways before September 2020. Even if not directly relevant in an EU context, as a result of Brexit, the learning is expected to have wider benefit for the management of train rear end marking in GB.

Make-up of the committee

For the last year, the committee has been operating with full representation for each member category.

Other items of note

RSSB research project T1155 Reviewing the risks and benefits of detonators, is likely to result in proposals to amend modules within the Rule Book, and moreover changes to current working practices. However, the findings of this research place a high level of reliance on the availability of an operational train radio system (GSM-R). Therefore, a project developing a new RIS for secondary communications in the absence of GSM-R will evaluate the implications of such a change.

Gary Portsmouth
Chair of the Traffic & Operation Management Standards Committee
4 Brexit

At the time of writing, it is unclear what the future will look like in terms of the nature of the UK’s post-Brexit trade deal with the EU. The UK is currently in an eleven month post-Brexit transition period, ending on 31 December 2020, during which the UK will remain in both the EU customs union and single market, therefore EU regulations and rules continue to apply. There are three broad scenarios that are possible after the end of the transition:

a) The UK agrees a trade deal with the EU and this trade deal requires continued application of EU regulations relating to railways; or

b) The UK agrees a trade deal with the EU and this trade deal does not require continued application of EU regulations relating to railways; or

c) The UK does not agree a trade deal with the EU, therefore there is no continued application of EU regulations relating to railways.

In scenario a), the current regime continues as is, therefore does not represent a change. In the cases b) and c), a new domestic railway technical standards regime is required to replace the EU’s technical specifications for interoperability (TSIs).

RSSB has been working very closely with the DfT to ensure that if scenarios b) or c) occurs then the UK will have a legally robust position in terms of railway related law and associated standards. Interoperability regulations have been made and laid in Parliament and will come into effect in the event scenario c); similar arrangements could apply in scenario b). This means that the Secretary of State will be required to publish a new system of UK National Technical Specification Notices (NTSNs) to replace TSIs but preserve their technical content.

The approach for converting TSIs into NTSNs has been to preserve, where appropriate, the same rights and obligations at the point the UK leaves the EU. The technical requirements in force at that time also remain the same. There is no legal basis to do otherwise currently. However, given that NTSNs will only apply to the UK, it will be necessary to amend the content. This is because some provisions would be deficient as the UK would no longer be a member of the EU, also known as ‘inoperabilities’.
A draft DfT guidance document sets out the general approach taken to resolve the inoperabilities. An additional guidance document sets out how NTSNs have been updated to reflect the June 2019 TSI changes.

NTSNs will indicate if they diverge from TSIs by reference to UK/GB specific cases. However, there will be no divergence between NTSNs and TSIs on day one. The same UK specific cases included in the TSIs at the point of exit will be incorporated into the NTSNs. In total, 13 NTSNs will be published for the exit date. These will replace 11 TSIs and 2 additional NTSNs which set out the modules for conformity assessment and procedures for assessment of interoperability constituents. All the draft NTSNs and related documents are available on RSSB’s website.

Any future divergence from the TSIs is expected to be managed by the DfT granting ‘specific cases’ as alternatives to the NTSN/TSI requirements. The ‘specific case’ in the NTSN will then either be written into the NTSN or will refer to national technical rules contained in RGSs. RSSB and the industry’s standards committees are likely to play a formal role in recommending future alignment or divergence from the TSIs in the NTSNs. Both will continue their role in developing RGSs which will codify the national technical rules associated with any divergence. To expand on this the DfT has published a draft change management process which sets out the principles of how NTSNs will be changed post EU exit.

Therefore, with the preparation already undertaken, GB rail is in a strong position to shape the future and respond to any of the three post-Brexit scenarios.

Useful links

The Railways (Interoperability) (Amendment) (EU Exit) Regulations 2019

DfT’s General approach for the production of National Technical Specification Notices (NTSNs)
https://www.rssb.co.uk/-/media/Project/RSSB/Platform/Documents/Public/Public-content/Using- Standards/generalapproachfortheproductionofntsns-694467122.pdf?la=en

NTSN updates to reflect June 2019 TSI changes

Draft NTSNs and related documents

Proposed NTSN Change Management Process
https://www.rssb.co.uk/-/media/Project/RSSB/Platform/Documents/Public/Public-content/Using- Standards/proposed-ntsn-change-management-process.pdf?la=en
5 Standards strategy

The Industry Strategy for Standards for 2015 – 2019 provided a common direction of travel for the development of railway standards for control period five (CP5) and beyond. We developed the strategy when the regulatory environment was fairly stable and there was a need to align the prevailing standards with the regulatory regime. The strategy has delivered this alignment for most national standards. This means that, as part of the Europe-wide ‘clean-up of national rules’, Railway Group Standards (RGSs) now only contain requirements that meet the European definition of ‘national technical rules’. As a result, most other requirements have migrated into RISs. Section 6 of this report tracks our progress on this clean-up and identifies the few RGSs which contain requirements that don’t meet the criteria of national technical rules.

A new approach for the strategy in CP6

A lot has changed in the technical, political and regulatory landscape since the last strategy. Therefore, there is a need to develop a new strategy for CP6. This will reflect these changes and provide a focus for standards-related activities to address the broader industry challenges and opportunities.

We have taken a three-step approach to develop the structure of the strategy:

- **Part A** examines the wider landscape in the context of standards.
- **Part B** explores the industry’s challenges and opportunities resulting from Part A.
- **Part C** determines the standards-specific activities needed in response to Parts A and B.

This approach will clearly map the environment and the response to specific standards activities and actions. It will result in a strategy that is connected and aligned to industry-wide objectives and needs, to provide standards that meet genuine needs.

We will use the strategy to communicate the direction of travel for the wider industry to those who may not have a good understanding of the standards landscape – especially those not involved with RSSB committees.

This year, we have engaged with ISCC members to develop and validate the initial ideas of parts A and B. We are planning to receive ISCC’s endorsements of the strategy by early spring 2020 and RSSB’s board approval thereafter.
6 Meeting requirements of the code

Overview

This section provides a summary of the overall status of the standards catalogue, to demonstrate adherence to the requirements of the Railway Group Standards Code and Standards Manual, and as an indicator of good stewardship.

Railway Group Standards Code

The ‘Code’ is set by the Office of Rail and Road. It defines the procedures by which RGSs are created, revised or withdrawn, authorised and published. It also defines the procedures by which the effectiveness of RGSs is monitored and reviewed, and how to manage deviations. The Code is supported by a Standards Manual which describes how the requirements of the Code are to be delivered. This report meets a requirement of the Code.

Age profile of standards

We have regularly reviewed all of the standards we produced in the last six years. However, 12 standards from 2013 and earlier are overdue for review. Nearly all are within the scope of live projects, most of which are being published in March or June 2020. The overall number is slightly up on the position this time last year (which was 11), but during the year many other standards have also come due for review. We completed the new reviews, but determined that it would not have been an effective use of time to formally review documents already at an advanced stage of revision.

Figure 1: Number of published standards and years since their last review.

Each year contains the number of standards that RSSB published. The colour indicates the number of years since the standards were last reviewed. For example, there are nine standards that were published in 2011 that are still live and four of these are overdue review, since they have not been reviewed for over six years.
Deviations

Standards with 10 deviations or more

The number of deviations against a standard can be an indicator of its fitness for purpose. However, some standards encourage deviations to support trials and temporary works, so the measure is not always effective.

This is a list of live standards that have ten deviations or more, explaining why they have so many deviations and what we are doing to mitigate any issues.

**GIRT7033 issue three**  
*CCS*  
*Lineside Signs*  
20 live applications

Two new standards will clarify the scope of national technical rules and provide better requirements for the appearance and meaning of signs. The standards will also provide a simplified process for the trial of new lineside operational signs and new applications of signs. This should reduce the need for deviation applications and improve the management of lineside operational signs by stakeholders. Publication is planned for December 2021.

**GLRT1210 issue one**  
*ENE*  
*AC Energy Subsystem and Interfaces to Rolling Stock Subsystem*  
15 live applications

We have completed a limited revision of this standard and it has been published in December 2019. Work is underway for a full revision of the document to reflect experience to date, remove duplication of the TSI, and to ensure that all requirements meet the criteria of national technical rules. This revision will be done alongside a similar revision to GMRT2111 *Rolling Stock Subsystem and Interface to AC Energy Subsystem*. Publication is planned for December 2021.

**GMRT2130 issue four**  
*RST*  
*Vehicle Fire, Safety and Evacuation*  
11 live applications

A full revision of the fire and evacuation standard and associated guidance notes is underway. GMRT2130 issue five will only contain requirements that meet the criteria of national technical rules, other requirements deemed useful to the industry will be transferred to a new standard RIS-2730-RST issue one. Publication is planned for June 2020.

**GMRT2100 Issue five**  
*RST*  
*Requirements for Rail Vehicle Structures*  
12 live applications

A full revision of the vehicle structural integrity and interior passive safety standard, associated code of practice and guidance notes is underway. GMRT2100 issue six will only contain requirements that meet the criteria of national technical rules, other requirements deemed useful to the industry will be transferred to a new RIS RIS-2780-RST issue one. Publication is planned for March 2020.
This standard is being revised as part of a project to update all the standards relating to driving cabs. The rolling stock standards committee approved a revised standard for industry consultation in December 2019. When the project is delivered in June 2020, GMRT2185 issue two will be withdrawn.

This standard is being revised as part of a project to update all the standards relating to driving cabs. The rolling stock standards committee approved a revised standard for industry consultation in December 2019. When the project is delivered in June 2020, GMRT2176 issue one will be withdrawn.

This standard is being revised as part of a project to update all the standards relating to driving cabs. The rolling stock standards committee approved a revision of GMRT2161 for industry consultation in December 2019. Publication is planned for June 2020.

Applications

Figure 2 shows the number of applications RSSB receives each year and number of applications that the standards committees approve. Some applications are either waiting for information from the applicant, or the committees have not taken a decision yet on the application. In any given year, the committees may also approve deviations received in previous years (as happens frequently at the beginning of a year). The difference between the quantity received and the quantity approved is mostly due to applicants withdrawing applications (see Figure 4). In the last five years only two permanent deviations and three time-limited applications have not been approved. No applications in the last two years have been rejected.

Figure 2: Applications received and approved

Figure 3 shows the number of applications, at the end of each year, that are on hold because the respective standards committee has not been able to make a decision. This is usually because the applicant has not yet been able to supply all the relevant information to support their application.
Figure 3: Deviation applications on hold

The number of applications that were withdrawn or that expired in each year are in Figure 4.

Figure 4: Deviation applications withdrawn or expired.

Standards Change

A revision to a standard is prompted by a proposal, which if supported by RSSB and the standards committees is progressed to a project to change the standard.

Figure 5: Number of proposals received.
The bottom striped area shows the number of proposals that are withdrawn.

Figure 6: Closed and live proposals per year.
Note that only in 2016 one proposal was not approved.
**The standards catalogue**

At the end of 2019 the standards catalogue had 315 RSSB live documents. Figure 7 shows the range of types of document.

![Figure 7: Documents in the standards catalogue.](image)

Railway Group Standards make up 13% of all live documents in 2019, compared to 30% in 2015. In 2015, the proportion of RISs was 7%, their proportion is currently 30%. The change is a result of the implementation of the Standards Strategy since 2015.

![Figure 8: Document types in the standards catalogue by year.](image)
Request for help

RSSB receives a ‘request for help’ form when there is a proposal to create, revise or withdraw a standard. This opportunity is available to anybody. We review each request in detail to assess and decide if a change is needed. If no change is needed, we help the applicant understand the standard and how to apply it. In other cases, the applicant might need a deviation to the standard, or sometimes it might be more appropriate to publish an amendment to the standard.

Submitting a ‘request for help’ enables standards users to explain their challenges and the benefits they are seeking. This allows RSSB to assess whether their needs are best addressed by a proposal for change, a deviation, amendment or by providing advice, without the user needing to have a comprehensive understanding of the standards framework.

RSSB received 35 requests in 2019, these and their outcomes are summarised below. The action taken is still being resolved in some cases, particularly for requests received close to the end of the year.
Table 1: Rolling stock – 10 requests to change existing standards.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMRT2100 – Issue five</td>
<td>Information provided to requestor.</td>
</tr>
<tr>
<td>Requirements for Rail Vehicle Structures</td>
<td></td>
</tr>
<tr>
<td>Advice about replacement seats of an existing design.</td>
<td></td>
</tr>
<tr>
<td>GMRT2130 – Issue four</td>
<td>Ongoing discussion with requestor.</td>
</tr>
<tr>
<td>Vehicle Fire, Safety and Evacuation</td>
<td></td>
</tr>
<tr>
<td>Maintenance requirements for fire extinguishing systems.</td>
<td></td>
</tr>
<tr>
<td>GMRT2131 – Issue one</td>
<td>Standard to be reviewed for rear reflective plates.</td>
</tr>
<tr>
<td>Audibility and Visibility of Trains</td>
<td></td>
</tr>
<tr>
<td>Consider harmonisation with European rules for rear reflective plates and provide guidance on risk assessments for non-yellow front ends (two requests).</td>
<td></td>
</tr>
<tr>
<td>RIS-2453-RST – Issue one</td>
<td>Standard to be revised to include alpha code information, appendix E to be reviewed.</td>
</tr>
<tr>
<td>Vehicle Registration, Marking and Numbering</td>
<td></td>
</tr>
<tr>
<td>Publish alpha code information and include mandatory data in Appendix E (two requests).</td>
<td></td>
</tr>
<tr>
<td>GMRT2461 – Issue three</td>
<td>Standard to be revised.</td>
</tr>
<tr>
<td>Sanding Equipment</td>
<td></td>
</tr>
<tr>
<td>Determine the level of maximum moisture content for sand.</td>
<td></td>
</tr>
<tr>
<td>RIS-2747-RST – Issue one</td>
<td>Research idea being evaluated.</td>
</tr>
<tr>
<td>Functioning and Control of Exterior Doors on Passenger Vehicles</td>
<td></td>
</tr>
<tr>
<td>Improve obstacle detection.</td>
<td></td>
</tr>
<tr>
<td>RIS-2795-RST – Issue two</td>
<td>Standard to be revised.</td>
</tr>
<tr>
<td>Track to Train RFID Compatibility</td>
<td></td>
</tr>
<tr>
<td>New application of RFID, new codes to be allocated.</td>
<td></td>
</tr>
<tr>
<td>RIS-8250-RST – Issue one</td>
<td>Incorporated within the scope of a wider project to review NIR-Online and associated systems.</td>
</tr>
<tr>
<td>Reporting High Risk Defects</td>
<td></td>
</tr>
<tr>
<td>Improve defect reporting information.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2: Rolling stock – 2 requests for new standards.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard layout for train control management systems.</td>
<td>Scope being considered as part of existing project to revise cab standards.</td>
</tr>
<tr>
<td>Incorporate the findings of research into train seat comfort (RSSB project T1140)</td>
<td>New standard to be developed.</td>
</tr>
<tr>
<td>within a standard.</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: control command and signalling – 8 requests to change existing standards.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
</table>
| GKRT0057 – Issue one  
*Lineside Signal and Indicator Product Design and Assessment Requirements*  
Reflective signage to replace buffer stop lamps. | Change not being progressed.                                                     |
| RIS-0703-CCS – Issue 1.1  
*Signalling Layout and Signal Aspect Sequence Requirements*  
Review to improve standard and cease perpetuation of outdate practices. | Standard to be revised.                                                           |
| RIS-0737-CCS – Issue one  
*Rail Industry Standard for Signal Sighting Assessment Requirements*  
Provide requirements for viewing time of car stop markers. | Research is being progressed to determine requirements.                           |
| RIS-0792-CCS – Issue one  
*Level Crossing Operational Interfaces with Trains*  
Fundamental review of level crossing system requirements through development of system model. | Standard to be revised.                                                           |
| GIRT7033 – Issue three  
*Lineside Signs*  
GIGN7633 – Issue one  
*Guidance on Lineside Signs* | Standard being reviewed; the coasting signs has been incorporated into an existing planned revision. |
GIGN7634 – Issue one
Index for Lineside Signs
Comprehensive and updated requirements and guidance on lineside signs and incorporation of new signs to support high speed coasting (two requests).

GERT8402 – Issue two
ERTMS/ETCS DMI National Rules
Revise to incorporate implications of changes to ETCS specifications in relation to numeric display of speed limits.

Sign BA05 – Issue one
No refuges sign
Correction of error in labelling of sign.

Table 4: Energy – 3 requests to change an existing standard.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLRT1210 – Issue one</td>
<td>Changes for reinforced insulation and return conductor rating being incorporated into existing project to revise the standard (for issue three) and information provided to requestor on application requirements.</td>
</tr>
</tbody>
</table>

Table 5: Infrastructure – 1 request to change an existing standard.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIRT7073 – Issue two</td>
<td>Under consideration between RSSB and requestor.</td>
</tr>
</tbody>
</table>
Table 6: Traffic & Operation Management – 8 requests to change existing standards.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GERT8000 (various modules)</strong>&lt;br&gt;Incorporate Network Rail’s Safe and Efficient Access requirements for high output activity into the Rule Book.</td>
<td>Being progressed as a standards revision.</td>
</tr>
<tr>
<td><strong>GERT8000 G1 – issue six</strong>&lt;br&gt;General safety responsibilities and personal track safety for non-track workers</td>
<td>Being progressed as a standards revision.</td>
</tr>
<tr>
<td><strong>GERT8000 TS1 – issue thirteen</strong>&lt;br&gt;General Signalling regulations</td>
<td></td>
</tr>
<tr>
<td><strong>GERT8000 TW1 – issue thirteen</strong>&lt;br&gt;Preparation and movement of trains&lt;br&gt;Updated rules for drivers to report trespass incidents.</td>
<td></td>
</tr>
<tr>
<td><strong>GERT8000 HB6 – issue five</strong>&lt;br&gt;General duties of IWA</td>
<td>Deviation granted pending a Rule Book change effective from December 2020.</td>
</tr>
<tr>
<td><strong>GERT8000 HB7 – issue five</strong>&lt;br&gt;General duties of a COSS</td>
<td></td>
</tr>
<tr>
<td><strong>GERT8000 HB20 – issue two</strong>&lt;br&gt;General duties of a SWL working outside a possession</td>
<td></td>
</tr>
<tr>
<td><strong>GERT8000 TS1 – issue thirteen</strong>&lt;br&gt;General signalling regulations&lt;br&gt;Changing arrangements for line blockages to make them faster to implement.</td>
<td></td>
</tr>
<tr>
<td><strong>GERT8000 HB11 – issue six</strong>&lt;br&gt;Duties of the PICOP&lt;br&gt;Review from first principles of possession protection with the aim of reducing risk exposure for trackworkers.</td>
<td>Under consideration between RSSB and requestor.</td>
</tr>
<tr>
<td><strong>GERT8000 OTM – issue eight</strong>&lt;br&gt;Working of on-track machines (OTM)&lt;br&gt;Update to rules to permit OTMs working outside a possession.</td>
<td>Deviation granted.</td>
</tr>
</tbody>
</table>
Table 7: Traffic & Operation Management – 8 requests for new standards.

<table>
<thead>
<tr>
<th>Standard and request</th>
<th>Action being taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard or guidance for cleaning biohazards.</td>
<td>Requestor informed that their request is not being progressed as there are suitable, non-rail, standards available.</td>
</tr>
<tr>
<td>Guidance on carcinogens and mutagens for a railway context</td>
<td>Requestor informed that their request is not being progressed as there are suitable, non-rail, standards available.</td>
</tr>
<tr>
<td>Standard on approach to suicide prevention</td>
<td>Under consideration between RSSB and requestor.</td>
</tr>
</tbody>
</table>
Railway Group Standards containing non NTRs

Railway Group Standards (RGS) can only contain requirements that meet the criteria of national technical rules (NTR) or national safety rules (NSR). Historically, the criteria for requirements in RGSs was different, and so some older standards contain requirements that are not NTRs. Currently, there are no NSRs, as safety requirements are cover by the current European and British legislation.

RGSs can be divided into three categories:

**Category A:** RGSs where all requirements are notified

**Category B:** RGSs where some of the requirements are notified

**Category C:** RGSs where none of the requirements are notified.

All new RGSs should only be in category A, but there are older RGSs that are in categories B and C. Those in categories B and C need attention, to migrate the content so that they move into category A or are withdrawn. Category A standards are listed for completeness, the action being taken with all of the category B and C standards, as agreed by the relevant standards committees, is summarised below.

This section contains all the RGSs that are live in the standards catalogue.

**Category A – RGSs where all requirements are notified**

**BR1654 Issue 2 - Radio Electronic Token Block System**  
December 1986  
Lead SC: CCS

**GERT8073 Issue 3 - Requirements for the Application of Standard Vehicle Gauges**  
December 2015  
Lead SC: RST

**GERT8075 Issue 3 – AWS and TPWS Interface Requirements**  
March 2018  
Lead SC: CCS

**GERT8402 Issue 2 – ERTMS/ETCS DMI National Requirements**  
June 2016  
Lead SC: CCS

**GIRT7020 Issue 1.1 - GB Requirements for Platform Height, Platform Offset and Platform Width**  
June 2019  
Lead SC: INS

**GIRT7073 Issue 2 - Requirements for the Position of Infrastructure and for Defining and Maintaining Clearances**  
June 2018  
Lead SC: INS

**GKRT0028 Issue 3 – Infrastructure Based Train Detection Interface Requirements**  
September 2016  
Lead SC: CCS

**GKRT0055 Issue 1 - Block System Interface Requirements**  
September 2013  
Lead SC: CCS

**GKRT0057 Issue 1 - Lineside Signal and Indicator Product Design and Assessment Requirements**  
December 2014  
Lead SC: CCS
GKRT0075 Issue 5 – Requirements for Minimum Signalling Braking and Deceleration Distances
December 2018
Lead SC: CCS

GLRT1210 Issue 2 - AC Energy Subsystem and Interfaces to Rolling Stock Subsystem
December 2019
Lead SC: ENE

GLRT1212 Issue 1 - DC Conductor Rail Energy Subsystem and Interfaces to Rolling Stock Subsystem
September 2015
Lead SC: ENE

GMRT2045 Issue 4 - Compatibility Requirements for Braking Systems of Rail Vehicles
March 2016
Lead SC: RST

GMRT2111 Issue 2 - Rolling Stock Subsystem and Interfaces to AC Energy Subsystem
December 2019
Lead SC: RST

GMRT2113 Issue 1 - Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem
September 2015
Lead SC: RST

GMRT2141 Issue 4.1 – Permissible Track Forces and Resistance to Derailment and Roll-Over of Railway Vehicles
December 2019
Lead SC: RST

GMRT2142 Issue 4.1 - Resistance of Railway Vehicles to Roll-Over in Gales
June 2019
Lead SC: RST

GMRT2160 Issue 4 - Environment Inside Railway Vehicles (Audibility of detonators)
December 2010
Lead SC: RST

GMRT2400 Issue 6 - Engineering Design of On-Track Machines in Running Mode
September 2018
Lead SC: RST

GMRT2466 Issue 4.1 – Railway Wheelsets
December 2019
Lead SC: RST

GMRT2472 Issue 2 – Requirements for Data Recorders on Trains
June 2014
Lead SC: RST

GMRT2477 Issue 3 - Compatibility Requirements for Track Circuit Assistors (TCAs) on Rail Vehicles
June 2018
Lead SC: RST

GMRT2491 Issue 2 - Design Requirements for a Driver’s Reminder Appliance (DRA)
October 2009
Lead SC: RST
Category B RGSs where some of the requirements are notified

**GCRT5021 Issue 5 - Track System Requirements**  
December 2011  
Lead SC: INS

In the first quarter of 2020 a project will be initiated to align the standard with the INS TSI and the regulatory framework, withdrawing or transferring to a RIS those requirements that do not meet the criteria of national technical rules. Findings from RSSB research T1073 (2018) *Loading requirements for track systems* will be incorporated into revisions to this standard and track quality and curving requirements will be updated.

**GERT8006 Issue 2 - Assessment of Compatibility of Rail Vehicle Weights and Underline Bridges**  
September 2010  
Lead SC: INS

A project is underway to revise the standard and incorporate the relevant findings from RSSB research projects: T1066 (2016) *Bridge Compatibility Assessment for GB Passenger Rail Vehicles*; T988 (2012) *Railway Bridge Design Requirements for GB Traffic – WP01 Current and Future Aspirations for Passenger Vehicles*; and T996 (2014) *Categorising the Relationship Between Track Condition, Line Speed and Vehicle Forces*. As part of the project we will align the standard with the regulatory framework, withdrawing or transferring to a RIS those requirements that do not meet the criteria of national technical rules. Publication is planned for September 2020.

**GERT8014 Issue 2 - Axlebox Condition Monitoring - Hot Axlebox Detection**  
June 2011  
Lead SC: RST

An analysis concluded that the standard contains no requirements that meet the criteria of NTRs, despite the presence of LOC & PAS TSI specific case 7.3.2.3 (axle box condition monitoring) for which rules have previously been notified in error. A proposal to convert the standard into a RIS will be made to the committee in the second quarter of 2020.

**GERT8018 Issue 2 - Mechanical Trainstop System Interface**  
September 2012  
Lead SC: CCS

The next steps for the standard will be determined by the outcome of the industry consultation following the five-year review which is currently underway. CCS SC will consider the outcome of the consultation in February 2020.

**GIRT7033 Issue 3 - Lineside Operational Safety Signs**  
June 2015  
Lead SC: CCS

A project to review and update both the standard and associated documents is underway. As part of the project we will align the standard with the regulatory framework, withdrawing or transferring to a RIS those requirements that do not meet the criteria of NTRs. Publication is planned for December 2020.

**GMRT2100 Issue 5 - Requirements for Rail Vehicle Structures**  
June 2012  
Lead SC: RST

A project is underway to revise the standard and transfer requirements that do not meet the criteria to be an NTR into a RIS. Consultation is expected to conclude early in 2020, with publication in June 2020.

**GMRT2130 Issue 4 - Vehicle Fire, Safety and Evacuation**  
December 2013  
Lead SC: RST

A project is underway to revise the standard and to determine whether requirements meet the criteria of NTRs, or whether they need to be withdrawn, or transferred to a RIS. Publication is planned for June 2020.
GMRT2131 Issue 1- Audibility and Visibility of Trains
December 2015        Lead SC: RST
A five-year review to determine whether the requirements in the standard meet the criteria of NTRs is due in March 2021.

GMRT2132 Issue 1 - On-board Energy Metering for Billing Purposes
September 2010        Lead SC: RST
An amendment was published in June 2019 to address European Commission Implementing Regulation (EU) 2018/868 of 13 June 2018 which closed the open point on energy metering. The relevant TSIs are LOC & PAS and ENE. A five-year review is in progress, it will determine which requirements meet the criteria of NTRs.

GMRT2161 Issue 1- Requirements for Driving Cabs of Railway Vehicles
August 1995        Lead SC: RST
A project is underway to revise the standard and to determine whether requirements meet the criteria of NTRs, or whether they need to be withdrawn, or transferred to a RIS. Publication is planned for June 2020.

GMRT2173 Issue 3 – Size of Vehicles and Position of Equipment
December 2019        Lead SC: RST
The standard has been revised to include requirements for vehicle step position and the swept envelope of the pantograph. A second phase of this project will start in the first quarter of 2020 to consider more complex technical changes, in line with a gauging plan being developed, and to provide rationale and guidance for each.

GMRT2185 Issue 2 – Train Safety Systems
December 2001        Lead SC: RST
The standard is proposed for withdrawal in September 2020, after GMRT2161 issue two and RIS-2761-RST issue one are published in June 2020.

GMRT2461 Issue 3 – Sanding Equipment
December 2018        Lead SC: RST
A twelve-month review is due in March 2020. We will identify if there are any issues and propose to align the standard with the regulatory framework.

GOOTS303 - Issue 1 Secondary Door Locking – Operational Requirements
January 1993        Lead SC: RST
The RST SC, at its March 2019 meeting, decided that this standard is to be reclassified as a RIS. This project is on hold as a low priority pending resource allocation.
Category C RGSs where none of the requirements are notified

**GERT8273 Issue 1 - Assessment of Compatibility of Rolling Stock and Infrastructure**
- Gauging and Stepping Distances
  December 2015  Lead SC: RST

The standard was last reviewed in March 2018 when the recommendation was that updates are considered in phase 2 of the Gauging Delivery Plan in 2020. The gauging plan is being developed for agreement with industry in the second quarter of 2020.

**GMRT2162 Issue 3 - Traincrew Access to and Egress from Railway Vehicles**
  June 2011  Lead SC: RST

The standard is proposed for withdrawal in September 2020 after GMRT2161 issue two and RIS-2761-RST issue one are published in June 2020.

**GMRT2176 Issue 1 - Air Quality and Lighting Environment for Traincrew Inside Railway Vehicles**
  December 1995  Lead SC: RST

The standard is proposed for withdrawal in September 2020, after GMRT2161 issue two and RIS-2761-RST issue one are published in June 2020.

### Progress of standards against plans

On entering 2019, 34 standards change projects were already underway. Throughout 2019 a total of 59 standards change projects were active. Six of these projects were placed on hold, either because the technical resource was not available or because the projects were awaiting input from the industry. As of December 2019, there are 39 projects underway, of those 22 will be delivered during 2020.

Standards project delivery is measured based on the publication date, in line with a baselined schedule. A total of 14 projects were delivered in 2019, involving 81 documents. Of those projects, 12 were delivered on time or early; and 2 projects were delayed to meet stakeholder requirements and improve the output, quality and presentation of the work. All of these were supported by RSSB’s stakeholders through the respective standards committees.
The ISCC is the senior stakeholder group dealing with matters related to standards for the GB mainline railway. It oversees the work of the standards committees and provides direction, advice and guidance on:

- the management and effectiveness of standards;
- European standards relevant to the GB mainline railway; and
- strategic and legal matters associated with standards.

Additionally, ISCC provides advice to the DfT and the ORR regarding the role of requirements as national rules, and their implications for the management of the GB mainline railway. ISCC reports to the RSSB board through the Director of Standards.

The RGSs Code and the Standards Manual (see Section 6) govern ISSC’s activities. Six standards committees decide the content of standards and deviations under the direction of ISCC, as shown in Figure 9.

Membership of standards committees and ISCC is by election, under arrangements set out in the Code and Manual. Details of current members of all the committees are available on RSSB’s website.

https://www.rssb.co.uk/Learn-and-Connect/Groups-and-committees

Figure 9: Relationship of Standards Committees and subcommittees.

- **SC**: Standards Committee
- **TSI**: Technical specification for interoperability
- **GB**: Great Britain
- **LOC&PAS**: Locomotives and passenger rolling stock
- **WAG**: Freight wagons
RSSB manages Railway Group Standards, RISs, Rail Industry Guidance Notes and the Rule Book, as well as associated documents and tools on behalf of the GB mainline railway. RSSB, in conjunction with the British Standards Institute (BSI), facilitates and coordinates rail-specific input to European and international standards. Principally this covers work by the European Committee for Standardization (CEN), European Committee for Electrotechnical Standardization (CENELEC), International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

Details of our standards activities are available on our website. Please get in touch if you would like to know more. To contact RSSB Reception or a specific member of staff, please call our switchboard on 020 3142 5300 or follow the ‘Other ways to contact us’ link at the bottom of our homepage.

If you have a problem with a standard or have suggestions for improvement, we recommend using our request for help process. By completing our form and providing some simple information, you will enable us to work with you effectively. We can help you to determine the most suitable course of action, which might range from getting advice to submitting an application for a deviation or a change to a standard.

If you know that you need a deviation, you can apply for one directly. On our website, we explain the process for considering your application and provide guidance on what your application needs to be successful.

Membership of RSSB provides companies with access to a broader range of products, services and support. Please visit our website for more information.

Homepage
www.rssb.co.uk

Contact us
https://www.rssb.co.uk/Contact-us

Using standards
https://www.rssb.co.uk/Standards-and-Safety/Using-Standards

Changing and responding to standards

Standards self-assessment test

Deviating from standards

Becoming a member of RSSB
https://www.rssb.co.uk/Membership

https://www.rssb.co.uk/rgs/casdocs/RGSC03%20Iss%2001.pdf
Developing and updating standards is a team effort. We value the contribution of the wider community and committee members in supporting our work and helping the industry to realise the benefits of standards.

Tom Lee
Director of Standards, RSSB