23-008 – Update of Guidance on the INF NTSN

[This page should be deleted at the publication stage of the project]

Version:	0.03		
Purpose:	Approval to proceed to consultation		
Authors:	John Thomas – Infrastructure Engineer Bridget Eickhoff – Principal Infrastructure Engineer		
Sponsor:	Tom Lee - Director of Standards		
Lead industry committee:	Infrastructure Standards Committee (INS SC)	**Date:**	11 March 2025
Supporting industry committee:	Rolling Stock Standards Committee (RST SC)	**Date:**	03 April 2025
Supporting industry committee:	Plant Standards Committee (PLT SC)	**Date:**	13 March 2025

Decision

The lead standards committee is asked to **APPROVE** to proceed to consultation. In doing so, the committee has **DECIDED** that the document:

a) Delivers the intentions of the proposal for change.
b) Is in a suitable state for consultation.

The lead standards committee is also asked to:

c) **IDENTIFY** any specific stakeholders to be included in the consultation.
d) **DECIDE** whether the consultation can be carried out within the committee or should be an industry wide consultation.

The supporting standards committee is asked to:

e) **SUPPORT** to proceed with the above consultation.
f) **CONSIDER** whether they need any further involvement in the project beyond this stage.

23-008 – Update of Guidance on the INF NTSN

This business case for change has been developed to support standards committees in taking decisions related to changes to standards, it includes an assessment of the predicted impacts arising from the change.

Proposed revised document

Number	Title	Issue
GIGN7608	Guidance on the Infrastructure National Technical Specification Notice (INF NTSN)	Three

Proposed superseded document

Number	Title	Issue
GIGN7608	Guidance on the Infrastructure Technical Specification for Interoperability	Two

Summary

Background and change

GIGN7608 was published in September 2016 to provide guidance for users on the application of the Infrastructure Technical Specification for Interoperability (INF TSI). The INF Guidance Note predates the publication of the National Technical Specification Notices (NTSNs) on 01 January 2021, having last been revised to reflect the 2014 version of the INF TSI. There have been changes to regulatory aspects between the NTSN and TSI, such as references to UK legislation instead of EU Directives (where appropriate). The technical requirements are largely unchanged between the TSI and the NTSN and therefore GIGN7608 still has useful content.

In February 2024, RSSB submitted an industry recommendation to the Department for Transport (DfT) for the revision of the INF NTSN. As part of this, an industry consultation was held on the then proposed recommendations. The consultation highlighted areas where industry identified potential benefits from revising the accompanying INF TSI/NTSN Guidance Note. There are also instances where the content of the NTSN will change, making the content of the accompanying Guidance Note outdated.

The 60-month review of GIGN7608 found that there was a need to update the document, taking into account the change from TSI to NTSN, but that this should commence after the NTSN review. It also noted that a number of the referenced supporting documents, including National Technical Rules (NTRs), had been up issued and the implications of these changes required consideration.

In parallel with this work, a general NTSN Guidance Note is proposed to be created which covers topics that span multiple NTSNs, and the interoperability framework more generally. This means the guidance within GIGN7608 can be focused on guidance for specific technical requirements in the INF NTSN.

Industry impact due to changes

Impact areas	Scale of impact	Estimated value
A. Legal compliance and assurance	Medium	£91,400
B. Health, safety and security	Neutral	No quantified benefits
C. Reliability and operational performance	N/A	N/A
D. Design and maintenance	Medium	£24,690
E. People, process and systems	Medium	£11,000
F. Environment and sustainability	Low	No quantified benefits
G. Customer experience and industry reputation	Low	No quantified benefits
Total value of industry opportunity over five years =		**£127,090**

The standards change contribution to the total value of industry opportunity				
☐ None or low	☐ Minor but useful	☑ Moderate	☐ Important / essential	☐ Urgent / critical

Detail

1. What are the objectives associated with this change?

Objective 1 – Provide guidance for changes to the INF NTSN since the previous Guidance Note was published

1.1 The Guidance Note GIGN7608 was last updated in September 2016, and it reflects the 2014 TSI as published before the UK's withdrawal from the European Union. It therefore does not refer to the INF NTSN which replaced the INF TSI in Great Britain (GB) on 01 January 2021.

1.2 Further changes to the INF NTSN will also be made shortly to bring this to Issue 2. A formal industry recommendation for a revision to the NTSN was submitted to the Department for Transport (DfT) in February 2024 and the revised NTSN is planned to be published shortly. The changes will be largely based on revisions to the corresponding TSI in 2023.

1.3 However, the NTSN does not contain guidance to support the requirements. This is because the structure of the NTSN is the same as the TSI, which also does not contain guidance. For the recently revised TSI, the European Union Agency for Railways (ERA) has updated its 'Application Guides' which contain supporting guidance, particularly for new and revised requirements. Unless guidance on NTSN changes is also provided, this will leave a gap where there is no equivalent industry agreed guidance in GB for revised NTSN requirements.

Objective 2 – Enhance existing guidance based on industry feedback, 60-month review and TSI guidance

1.4 All existing guidance needs to be assessed for its adequacy and fitness for purpose, based on industry feedback, reviews of the existing guidance and potential gaps in guidance following the UK's departure from the EU.

1.5 The consultation on the INF NTSN recommendation attracted several comments which either directly or indirectly suggested that additional guidance on certain requirements could benefit industry.

1.6 The 60-month review on the Guidance Note undertaken in September 2022 identified the need to review the document and take into account updated supporting documents, but it was not deemed appropriate to update guidance at that time owing to the ongoing NTSN revision process.

1.7 The INF TSI Application Guide, published by the ERA, includes guidance on the TSI requirements. As the current Guidance Note was published when the TSI Application Guide was still applicable in GB, the current Guidance Note uses this as a starting point and only supplements with GB-specific guidance. This means there is a need to identify where similar guidance to that in the TSI Application Guide needs to be provided within the Guidance Note and tailored, where appropriate, to suit GB use.

1.8 Another source of TSI guidance is 'Recommendations For Use' (RFUs) published by NB-Rail. These were commonly used by UK conformity assessment bodies for consistent interpretation

of TSI requirements. Since January 2021, these no longer have any legal basis in GB and the most suitable place for equivalent information in GB is within industry agreed guidance.

2. How does the content in the standard need to change to achieve the objective?

Objective 1 – Provide guidance for changes to the INF NTSN since previous guidance was published

2.1 The content of GIGN7608 needs to be updated to reflect Issue 2 of the INF NTSN. This includes the revision of existing guidance where the content has changed within the NTSN, the replacement of guidance where it is no longer relevant, for example, references to European Directives, and the addition of new guidance as a result of the transition from TSIs to NTSNs.

Objective 2 – Enhance the appropriateness of existing guidance based on industry feedback, 60-month reviews and TSI guidance

2.2 The content of GIGN7608 also needs to be updated based on comments in the consultation on the recommendation for Issue 2 of the INF NTSN which identified where existing requirements would benefit from new or revised guidance.

2.3 This content will also be informed by the findings of the 60-month review which highlighted areas where further or revised guidance may be appropriate. There are also publications referenced within the existing Guidance Note, including some National Technical Rules, which have since been updated, so these references will need to be amended as required.

2.4 To cover topics where the TSI Application Guide previously provided guidance in GB, and where these are deemed still relevant and useful to GB, these topics will need to be integrated into the Guidance Note, with appropriate modification for GB application.

2.5 There are some RFUs in relation to the INF TSI which are also relevant to the NTSN and the GB network. Some of this guidance will be introduced into the Guidance Note, with modification where necessary, where it is relevant and useful within GB.

3. How urgently does the change need to happen to achieve the objectives?

3.1 The nature of the guidance that is required to support the implementation of the INF NTSN, and the benefit that has been indicated of having this, is such that this project is of medium urgency. Publication of a revised Guidance Note should be soon after the publication of issue 2 of the INF NTSN, to support the implementation of the INF NTSN.

4. What are the positive and negative impacts of implementing the change?

Justification of impact, scale and quantification for the seven impact areas

A. Legal compliance and assurance

4.1 The NTSNs are published by the DfT and used in the implementation of and compliance with the requirements set out in the Railways (Interoperability) Regulations (as amended) 2011 (RIR). Under RIR, a project entity (a manufacture or an authorised representative) must

declare on their sole responsibility that the subsystem concerned, which has been subject to the relevant verification procedures by a conformity assessment body, satisfies the requirements of, among other things, any NTSNs. This is before the project entity can obtain an 'authorisation for placing in service' (APIS) for the subsystem from the Office of Rail and Road. An operator of the subsystem must ensure that the subsystem is operated and maintained in conformity with the NTSNs against which the subsystem was assessed for the APIS.

4.2 The publication of revised guidance will support duty holders in understanding and applying the INF NTSN. It will help them to appropriately implement the technical requirements in the INF NTSN, as part of their obligations under RIR.

4.3 A failure to comply with the requirements of RIR is an offence under section 33(1)(c) of the Health and Safety at Work etc. Act 1974. This can lead to imprisonment for a term not exceeding two years or an unlimited fine, or both. The Guidance Note can support duty holders in applying the INF NTSN. Assuming that the Guidance Note provides a 15% contribution to avoiding prosecution, the industry could avoid fines totalling £30,000 over five years[1].

4.4 The revised Guidance Note can also help to:

a) Reduce costs by reducing the need for discussion and agreement about suitable application of the requirements, or the risk of challenges to how requirements have been implemented. Such discussions could be within the project team, or between the project team and conformity assessment bodies or the ORR, or queries raised between technical experts. An estimate of the cost saving as a result of this is £49,500 over five years[2].

b) Reduce costs due to avoidance of rework or needing additional work at a late stage. This might be the case if there is a lack of understanding from the project team about application of the requirements, where the conformity assessment body and ORR takes a different view. An estimate of the cost saving as a result of this is £11,900 over five years[3].

[1] Assuming the average fine is £200,000 for non-compliance with the requirements in RIR and having one prosecution over five years across all duty holders.

[2] Based on the average number of infrastructure projects (11 per year from 2019 to 2023) receiving an APIS in compliance with the INF NTSN and an average time (2.5 hours for 9 people) and cost (£40 per person per hour) saved on discussions and queries on each project.

[3] Based on the assumption that this may apply to only 1.5% of projects (equivalent to 0.17 projects per year) and result in delay of two weeks to the project. The average cost of delay is assumed to be £14,000 based on cost of a project team of nine people. This conservative estimate ignores other costs such as costs of materials, costs of keeping entire project teams running and costs of delay to line/station opening in terms of the passenger/industry impact.

B. Health, safety and security

4.5 No benefit claimed other than those set out under '*A. Legal compliance and assurance*'.

C. Reliability and operation performance

4.6 No impact expected.

D. Design and maintenance

4.7 Guidance on the INF NTSN will assist all those involved in the design and maintenance of new and modified Infrastructure to meet their legal obligations and to follow good practice. This will improve efficiency and shorten project lead times. The revision of the Guidance Note will also allow for the appropriate application of the NTSN, which avoids the risk of rework arising from an incorrect understanding or interpretation of the NTSN.

4.8 Inefficiency could contribute to delays during infrastructure maintenance, renewal, and enhancement. These delays could cause possession overruns. In terms of delay minutes, an assumed conservative estimate is that the revised Guidance Note could contribute to preventing 0.05% of delays caused by possession overruns. Using delay data from 2022-2023, possession overruns caused by incomplete works or communication issues accounted for a total of 128,260 delay minutes. Producing the guidance would be 0.05% of those delay minutes (64.13) per year. At an average cost of £77 per delay minute, this is a benefit of £4,938 per year, or £24,690 over five years.

E. People, process and systems

4.9 Guidance on the INF NTSN will assist all those involved in the design, approval, and maintenance of new and modified Infrastructure to meet their legal obligations and to follow good practice. This will improve efficiency and shorten project lead times.

4.10 A conservative estimate of the cost saving as a result of improved project efficiency is £11,000 over five years[4]. This reflects the support provided to designers through, for example, providing references to other documents they may not be aware of such as BS ENs which can be used to support requirements in the INF NTSN.

F. Environment and sustainability

4.11 Application of the INF NTSN will have a small impact on sustainability through use of good practice solutions in infrastructure design and installation.

4.12 Improved understanding of the NTSN through the use of the revised Guidance note can also reduce waste of resources generated through rework, due to incorrect understanding or interpretation of the NTSN.

[4] Based on the average number of infrastructure projects per year (11 per year from 2019 to 2023) receiving an APIS in compliance with the INF NTSN, and an average time (2.5 hours for 2 designers/engineers) and cost (£40 per person per hour) saved on each project.

G. Customer experience and industry reputation

4.13 Compliance with the INF NTSN contributes to the general quality of infrastructure projects on the GB network and thus to industry reputation. The Guidance Note contributes to compliance with the NTSN and thus to improving industry reputation if the quality of infrastructure projects improves. However, it is difficult to quantify this.

5. What is the contribution of this standards change in realising the value to industry opportunity?

5.1 Updating GIGN7608 to align with the latest version of the INF NTSN and enhancing any existing guidance on the basis of industry feedback, reviews and TSI guidance will assist industry in the application of requirements. This supports efficient and consistent application of NTSNs, with reduced risk of rework or disagreement/challenges during the authorisation process.

6. What is the effort required by RSSB to make the change?

6.1 The responses to consultation on the INF NTSN and the 60-month review on the existing guidance, the TSI Application Guide and RFUs provide a set of inputs for changes to guidance to be considered. These need further review, and proposals for guidance will be a combination of adapting existing guidance from these areas and developing new guidance. Newly developed guidance is likely to be needed particularly in response to consultation.

6.2 The NTSN consultation did not explicitly request the identification of areas for covering in guidance, although many useful suggestions were received. As such, the drafting of the new and revised guidance will need to be undertaken in collaboration with various stakeholders and groups and committees to ensure its adequacy and effectiveness. This will include reviewing the content of the current version of GIGN7608.

7. Can RSSB deliver against industry's expected timescales?

7.1 It is anticipated that Issue 2 of the INF NTSN will be published by the DfT shortly. This is one of the key dependencies of this project, as revised guidance can only be finalised and authorised once changes to NTSN requirements have been determined by the Secretary of State.

7.2 The revision of GIGN7608 is proposed to be a MEDIUM priority as set out in section 3. RSSB has allocated resources and a programme accordingly.

8. How will the industry implement the change?

8.1 There are technical changes being introduced by Issue 2 of the INF NTSN which, in some cases, introduce new topics to the NTSN. The publication of revised guidance will support industry in implementing the changes brought by Issue 2 of the INF NTSN. This guidance will also enable and promote a common understanding on issues whilst recording good practice from which industry can benefit.

8.2 As part of this project, industry stakeholders will be kept abreast of changes being made to the guidance via the relevant Standards Committees, as well as assisting in ensuring that the guidance adequately reflects the needs of industry.

8.3 The Guidance Note will not change any industry practice itself, rather it will support its users in interpreting the INF NTSN and choosing how to approach respective requirements. Therefore, this Guidance Note will not impact industry practices through implementing change.

9. How will RSSB assess whether the change is achieving the objectives?

9.1 Industry will be consulted as part of the standards change process, providing an opportunity for feedback on the usefulness of the proposed new issue of GIGN7608. After publication, RSSB will continue to seek the views of industry through various forums to ensure that the revised publication of GIGN7608 meets the needs of industry and fulfilled these objectives.

9.2 Furthermore, as part of the normal standards process, as per the Standards Code and Manual, 12 and 60-month reviews will be undertaken, where GIGN7608 will be assessed for whether it met these objectives.

Appendix A Disposition Table

A.1.1 Only sections that have been subject to change have been included in the disposition table. Sections not mentioned below remain unchanged.

Table A1: GIGN7608 issue Two to GIGN7608 issue Three

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
PART 1				
1.1 Purpose	G1.1 Purpose	Revised	Editorial changes and updated references	1
1.2 Structure of this document	G1.2 Structure of this document	Revised	Editorial changes and updated references	1
1.3 Approval and Authorisation	G1.3 Approval and Authorisation	Revised	Editorial changes and updated references	1
PART 2				
2.1 INF TSI scope extension		Removed	No longer needed as covered in the NTSN	1
2.1.1 Merging of two TSIs into one		Removed	No longer needed as covered in the NTSN	1
2.2 INF TSI Chapter 2	**G2.1 INF NTSN Chapter 2**			
2.2.1 Interfaces of INF TSI with other TSIs	G2.1.1 Interfaces of INF NTSN with other NTSNs	Revised	Editorial changes, updated references and additional guidance added	2
2.3 INF TSI general topics		Removed	No longer needed as covered in the NTSN	1
2.3.1 Numeric values		Removed	No longer needed as covered in the NTSN	1
PART 3				
3.1 INF TSI Chapter 4.1 Functional and technical specifications	G3.1 INF NTSN Chapter 4.1 Functional and technical specifications	Revised	Editorial changes, updated references and additional guidance added	2

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
3.2 TSI Categories of line	G3.2 NTSN Categories of line	Revised	NTSN contents revised, and guidance updated accordingly	1
	G3.3 Basic parameters characterising the infrastructure subsystem	New	Additional guidance requested by industry	2
	G3.3.1 Requirements for Basic Parameters	New	Additional guidance requested by industry	2
3.3 Line layout	G3.4 Line layout		Title only	
3.3.1 TSI Structure gauge guidance	G3.4.1 NTSN Structure gauge guidance	Revised	Editorial changes and updated references	1
3.3.2 Distance between track centres	G3.4.2 Distance between track centres	Revised	Editorial changes and updated references	1
3.3.3 Maximum gradients	G3.4.3 Maximum gradients	Revised	Editorial changes, updated references and additional guidance added	2
3.3.4 Minimum radius of horizontal curve	G3.4.4 Minimum radius of horizontal curve	Revised	Editorial changes, updated references and additional guidance added	2
3.3.5 Minimum radius of vertical curve	G3.4.5 Minimum radius of vertical curve	Revised	Editorial changes, updated references and some guidance ~~updated~~removed	1
3.4 Track parameters	**G3.5 Track parameters**			
3.4.1 Nominal track gauge	G3.5.1 Nominal track gauge	Revised	Editorial changes and updated references	1
3.4.2 Cant	G3.5.2 Cant	Redrafted	Editorial changes	1
3.4.3 Cant deficiency	G3.5.3 Cant deficiency	Revised	Editorial changes and updated references	1
3.4.4 Abrupt change of cant deficiency	G3.5.4 Abrupt change of cant deficiency	Revised	Editorial changes, updated references and guidance updated	1
3.4.5 Equivalent conicity	G3.5.5 Equivalent conicity	Revised	Editorial changes, updated references and guidance updated	2

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
3.4.6 Railhead profile for plain line	G3.5.6 Railhead profile for plain line	Revised	Editorial changes and updated references	1
3.4.7 Rail inclination – plain line	G3.5.7 Rail inclination – plain line	Redrafted	Editorial changes	1
3.4.8 Rail inclination – switches and crossings	G3.5.8 Rail inclination – switches and crossings	Revised	Editorial changes and updated references	1
3.5 Switches and crossings	G3.6 Switches and crossings		Title only	
3.5.1 Use of swing nose crossing	G3.6.1 Use of swing nose crossing	Redrafted	Editorial changes	1
3.5.2 Maximum unguided length of fixed obtuse crossings	G3.6.2 Maximum unguided length of fixed obtuse crossings	Redrafted	Editorial changes	1
3.6 Track resistance to applied loads	**G3.7 Track resistance to applied loads**			
3.6.1 General	G3.7.1 General	Redrafted	Editorial changes	1
3.6.2 Track resistance to vertical loads	G3.7.2 Track resistance to vertical loads	Revised	Editorial changes and updated references	1
3.6.3 Longitudinal track resistance	G3.7.3 Longitudinal track resistance	Revised	Editorial changes, updated references and guidance updated	1
3.6.4 Compatibility with braking systems	G3.7.4 Compatibility with braking systems	Redrafted	Editorial changes	1
3.6.5 Lateral track resistance	G3.7.5 Lateral track resistance	Revised	Editorial changes, updated references and guidance updated	1
3.7 Structures resistance to traffic loads	G3.8 Structures resistance to traffic loads	Revised	Editorial changes and updated references	1

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
3.7.1 Resistance of new bridges to traffic loads	**G3.8.1 Resistance of new bridges to traffic loads**			
3.7.1.1 Vertical loads	G3.8.1.1 Vertical loads	Revised	Editorial changes and updated references	1
3.7.1.2 Allowance for dynamic effects of vertical loads	G3.8.1.2 Allowance for dynamic effects of vertical loads	Revised	Editorial changes, updated references and additional guidance added	2
3.7.1.3 Centrifugal forces	G3.8.1.3 Centrifugal forces	Redrafted	Editorial changes	1
3.7.1.4 Nosing forces	G3.8.1.4 Nosing forces	Revised	Editorial changes and updated references	1
3.7.1.5 Actions due to traction and braking (longitudinal loads)	G3.8.1.5 Actions due to traction and braking (longitudinal loads)	Revised	Editorial changes and updated references	1
3.7.1.6 Design track twist due to rail traffic actions	G3.8.1.6 Design track twist due to rail traffic actions	Revised	Editorial changes, updated references and additional guidance added	2
3.7.2 Equivalent vertical loading for new earthworks and earth pressure effects	G3.8.2 Equivalent vertical loading for new geotechnical structures, earthworks and earth pressure effects	Redrafted	Editorial changes	1
3.7.3 Resistance of new structures over or adjacent to tracks	G3.8.3 Resistance of new structures over or adjacent to tracks	Revised	Editorial changes, updated references and additional guidance added	2
3.7.4 Resistance of existing bridges and earthworks to traffic loads	G3.8.4 Resistance of existing structures (bridges, geotechnical structures and earthworks) to traffic loads	Redrafted	Editorial changes	1

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
3.8 Immediate action limits on track geometry defects	**G3.9 Immediate action limits on track geometry defects**			
3.8.1 General considerations	G3.9.1 General considerations	Revised	Editorial changes, updated references and guidance updated	1
3.8.2 The immediate action limit for alignment	G3.9.2 The immediate action limit for alignment	Redrafted	Editorial changes	1
3.8.3 The immediate action limit for longitudinal level	G3.9.3 The immediate action limit for longitudinal level	Redrafted	Editorial changes	1
3.8.4 The immediate action limit for track twist	G3.9.4 The immediate action limit for track twist	Revised	Editorial changes and updated references	1
3.8.5 The immediate action limit of track gauge as an isolated defect	G3.9.5 The immediate action limit of track gauge as an isolated defect	Redrafted	Editorial changes	1
3.8.6 The immediate action limit for cant	G3.9.6 The immediate action limit for cant	Redrafted	Editorial changes	1
3.8.7 The immediate action limits for switches and crossings	G3.9.7 The immediate action limits for switches and crossings	Redrafted	Editorial changes	1
3.9 Platforms	**G3.10 Platforms**			
3.9.1 Platforms general	G3.10.1 Platforms general	Redrafted	Editorial changes	1
3.9.2 Platform height	G3.10.2 Platform height	Redrafted	Editorial changes	1
3.9.3 Platform offset	G3.10.3 Platform offset	Redrafted	Editorial changes	1
3.9.4 Track layout alongside platforms	G3.10.4 Track layout alongside platforms	Redrafted	Editorial changes	1

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
3.10 Health, safety and environment	**G3.11 Health, safety and environment**			
3.10.1 Maximum pressure variations in tunnels	G3.11.1 Maximum pressure variations in tunnels and underground structures	Redrafted	Editorial changes	1
3.10.2 Effect of crosswinds	G3.11.2 Effect of crosswinds	Revised	Editorial changes, updated references and additional guidance added	2
3.10.3 Ballast pick-up	G3.11.3 Aerodynamic effect on ballasted track	Revised	NTSN contents revised, and guidance updated accordingly	1
3.11 Provision for operation	**G3.12 Provision for operation**			
3.11.1 Location markers	G3.12.1 Location markers	Redrafted	Editorial changes	1
3.11.2 Equivalent conicity in service	G3.12.2 Equivalent conicity in service	Revised	Editorial changes and additional guidance added	2
3.12 Fixed installations for servicing trains	G3.13 Fixed installations for servicing trains		Title only	
3.12.1 Toilet discharge	G3.13.1 Toilet discharge	Revised	Editorial changes, updated references and guidance updated	1
3.12.2 Water restocking	G3.13.2 Water restocking	Revised	Editorial changes, updated references and guidance updated	1
3.12.3 Refuelling	G3.13.3 Refuelling	Redrafted	Editorial changes	1
3.12.4 Electrical shore supply	G3.13.4 Electrical shore supply	Revised	Editorial changes, updated references and guidance updated	1
	G3.14 INF NTSN Chapter 4.3 Functional and technical specification of the interfaces	New	Additional guidance requested by industry	2
PART 4				

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
4.1 INF TSI Chapter 5.2 List of constituents	G4.1 INF NTSN Chapter 5.2 List of constituents	Revised	Editorial changes, updated references and guidance updated	1
4.2 INF TSI Chapter 5.3 Constituents performances and specifications	G4.2 INF NTSN Chapter 5.3 Constituents performances and specifications	Redrafted	Editorial changes	1
	G4.2.1 The rail	Redrafted	Topic brought down from section to subsection level following redrafting of 4.2	2
	G4.2.2 The rail fastening systems	New	Additional guidance requested by industry	2
PART 5				
5.1 Assessment of structure gauge	G5.1 Assessment of structure gauge	Revised	Editorial changes and updated references	1
5.2 Assessment of nominal track gauge	G5.2 Assessment of nominal track gauge	Redrafted	Editorial changes	1
5.3 Assessment of design values for equivalent conicity	G5.3 Assessment of design values for equivalent conicity	Redrafted	Editorial changes	1
	G5.4 Assessment procedure of existing structures	New	Additional guidance requested by industry	2
5.4 Assessment of platform offset	G5.5 Assessment of platform offset	Redrafted	Editorial changes	1
	G5.6 Assessment of maximum pressure variations in tunnels and underground structures	New	Additional guidance requested by industry	2

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
5.5 Assessment of track resistance for plain line	G5.7 Assessment of track resistance for plain line	Redrafted	Editorial changes	1
PART 6				
6.1 Definition of an upgrade of a line	G6.1 Definition of an upgrade of a line	Revised	NTSN contents revised, and guidance updated accordingly	1
6.2 Existing lines that are not subject to a renewal or upgrading project		Removed	Guidance no longer relevant	2
	G6.2 Resistance of new structures over or adjacent to tracks	New	Additional guidance requested by industry	2
6.3 INF TSI Chapter 7.4 Application of this TSI to existing platforms		Removed	No longer used in the NTSN	1
PART 7				
7.1 INF TSI Appendix B Assessment of the infrastructure subsystem		Removed	Clause permitting the voluntary declaration of conformity has been removed from the NTSN	1
7.1.1 Table 37 Assessment of the infrastructure subsystem for the EC verification of conformity		Removed	Clause permitting the voluntary declaration of conformity has been removed from the NTSN	1

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
7.2 INF TSI Appendix E and Appendix F - Capability requirements for structures according to traffic codes and the UK (GB) specific requirements	G7.1 INF NTSN Appendix E and Appendix F - Capability requirements for structures according to traffic codes and the UK (GB) specific requirements	Revised	NTSN contents revised, and guidance updated accordingly	1
7.3 INF TSI Appendix G Speed conversion to mph	G7.2 INF NTSN Appendix G Speed conversion to mph	Redrafted	Editorial changes	1
7.4 INF TSI Appendix J Safety assurance over fixed obtuse crossings	G7.3 INF NTSN Appendix J Safety assurance over fixed obtuse crossings	Redrafted	Editorial changes	1
7.5 INF TSI Appendix Q National Technical Rules for UK (GB) Specific Cases		Removed	Appendix Q has been removed from the NTSN. The list of relevant national technical rules can be obtained from the DfT.	1
7.6 INF TSI Appendix R List of open points	**G7.4 INF NTSN Appendix R List of open points**			
7.6.1 List of open points	G7.4.1 List of open points	Revised	Editorial changes, updated references and guidance updated	1
7.6.2 Areas where the INF TSI is intentionally silent	G7.4.2 Areas where the INF NTSN is intentionally silent	Revised	Editorial changes, updated references and guidance updated	1
7.6.3 Areas not covered by the TSI	G7.4.3 Areas not covered by the NTSN	Revised	Editorial changes, updated references and guidance updated	1
	G7.5 INF NTSN Appendix T Technical specifications referenced in this NTSN	New	NTSN content added, and guidance added accordingly	2
Definitions	**Definitions**	Revised	Updated in line with rest of document	2

From GIGN7608 Issue Two	To GIGN7608 Issue Three	Way forward	Comments	Objective
References	**References**	Revised	Updated in line with rest of document	2