NetworkRail

Network Rail Infrastructure Limited
Network Statement 2018

Working for you

Version Control 1

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Version Control

Version	Date	Description of Change
1.0	31.08.2016	Consultation Document
	31.10.2016	Publication Document
1.1	05.07.2017	Updated to amend links to the new Network Rail and RNE websites.

Section 1 - General Information

1.1 Introduction

Network Rail Infrastructure Limited (Network Rail) owns, operates, maintains and develops the main rail network in Great Britain (GB). This includes the railway tracks, signalling and electrification systems, bridges, tunnels, level crossings and viaducts. We also manage 18 of the largest stations:

- Birmingham New Street
- Bristol Temple Meads
- Edinburgh Waverley
- Glasgow Central
- Leeds
- Liverpool Lime Street
- London Bridge
- London Cannon Street
- London Charing Cross
- London Euston
- London King's Cross
- London Liverpool Street
- London Paddington
- London St. Pancras International (Midland Road)
- London Victoria
- London Waterloo (excluding Waterloo East and Waterloo International, Platforms 23 and 24)
- Manchester Piccadilly
- Reading.

The remaining stations (of which there are approximately 2,500), whilst mostly owned by Network Rail, are operated by railway undertakings.

Routes

The day-to-day running of GB's railway infrastructure is carried out by Network Rail's eight operating routes and a 'virtual' route that is responsible for freight and passenger operators who operate over multiple routes.

Each Route operates as a separate business unit, headed by a Route Managing Director and management team, which is responsible for operations, maintenance, customer services and local asset management. Each Route also has its own accounting records to enable greater benchmarking of financial performance and efficiency between Routes and to share best practice.

The Routes are:

- Anglia
- London North East (LNE) & East Midlands
- London North Western (LNW)
- London South East
- Scotland
- Wales
- Wessex
- Western
- Freight & National Passenger Operators, a 'virtual' route

A map illustrating the routes is available in Annex E.

We have an established devolution programme, moving power from the centre to the increasingly autonomous Routes. This programme established the new operating model that we adopted in 2016. Devolved

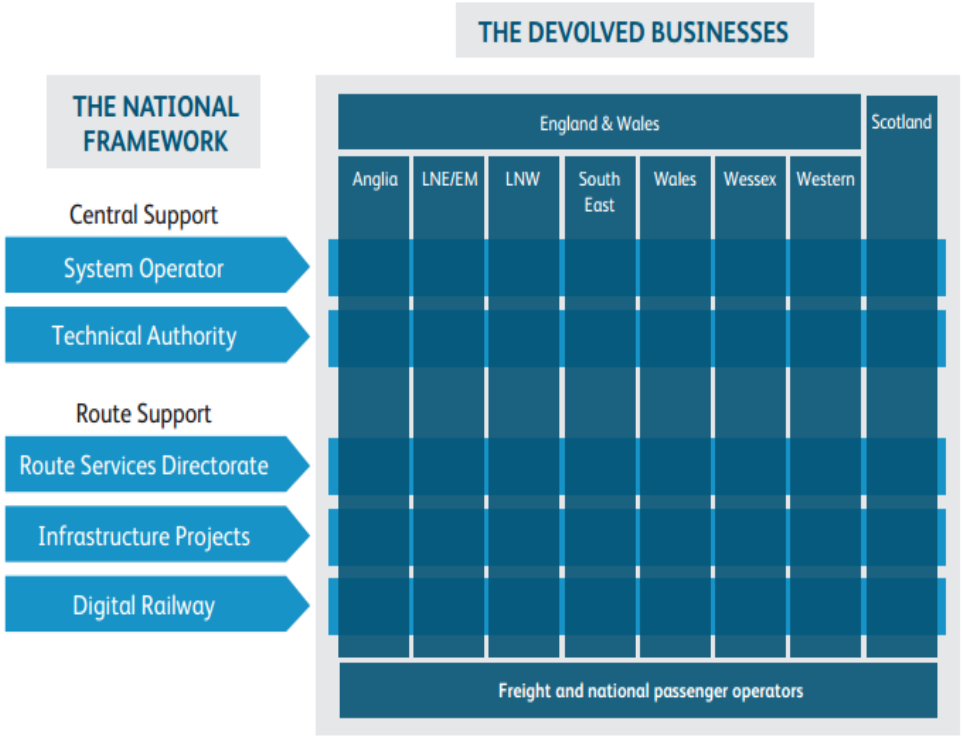
and customer-focused businesses are the fundamental building blocks, operating in a national framework.

Two key elements of the national framework are:

- a Technical Authority to set standards across the network as a whole
- a System Operator to plan and allocate capacity across the network as a whole.

The Routes are also supported by

- the Route Services Directorate
- Infrastructure Projects
- Digital Railway



Reclassification

Network Rail was reclassified as a public sector body on 1 September 2014 following a statistical change by the Office for National Statistics announced in December 2013. Network Rail's working relationship with the Department for Transport (DfT), particularly with regards to governance and financial arrangements, was documented in a framework agreement, published on 1 September 2014. The framework agreement preserves the present wider industry and regulatory structure and is designed not to impact the day-to-day operation of the railway.

On 25 June 2015 the Secretary of State announced a change to the membership model of the company. From midnight on 1 July 2015, the public members, who, until that date comprised 46 individuals providing a secondary governance role to hold the board of directors to account for its strategic leadership and management of Network Rail, ceased their membership leaving the special member, the Secretary of State, the sole member of Network Rail.

The Office of Rail and Road

Network Rail is accountable to the Office of Rail and Road ('ORR') for compliance with the obligations under its Network Licence and Station Licence. These authorise Network Rail to operate the main rail network and major stations (as listed in the station licence schedule).

ORR acts as the railway industry's economic and safety regulator and is independent of government, but accountable to parliament. Any railway undertaking wanting to operate trains on the network must, among other things, have a track access contract with Network Rail which has been approved by ORR. Railway undertakings may apply directly to ORR for access to the network in circumstances where Network Rail and the railway undertaking are unable, for whatever reason, to reach agreement as regards the terms of access. Railway undertakings may also be required to enter into station and depot access agreements. The access arrangements are explained in more detail in Section 2.

Network Rail works closely with other industry stakeholders that include the passenger and freight railway undertakings, as defined in Section 1.11 of this Network Statement, using the network, the Department for Transport (DfT), Transport for London (TFL) and Transport Scotland ('TS'), all of whom specify and fund various rail services, and the Rail Delivery Group (RDG).

1.2 Objective of the Network Statement

The Network Statement's objective is to inform applicants, the authorities and other interested parties about Network Rail's infrastructure, and the terms and conditions for allocation of capacity and use.

The Network Statement presents the services that Network Rail offers, with information regarding where they are accessible, how the allocation of services functions, which charges apply, and the conditions that apply for gaining access to the services.

The Network Statement is produced in accordance with directive 2012/34/EU and The Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016.

By publishing this information in the form of a Network Statement we aim to make it available to all current and potential railway undertakings in a fair and non-discriminatory manner.

In order for the Network Statement to be a manageable document, it facilitates access to further information by means of web-links or contact details, in addition to the information set out within it. The Network Statement is therefore only published in an electronic format. The Network Statement is also published in French, alongside the English version, on our website.

Whilst primarily concerned with information relating to Network Rail's main rail network, the objective of the Network Statement also extends to the provision of further information regarding railway facilities that link to our network. The extent of this information is subject to the level of detail supplied to us by the relevant facility owners and operators when requested. Therefore, Network Rail is not able to accept accountability for the accuracy of this information.

Network Rail is a member of RailNetEurope ('RNE'), which encourages its members to adopt a common document structure for their respective Network Statements so as to provide standards of user-friendliness and customer orientation, and to assist those who need to consult more than one statement for their intended operations. Where appropriate to do so, Network Rail has followed the document structure suggested by RNE in preparing this Network Statement.

RNE is explained in more detail in Section 1.10.

1.3 Legal Framework

The legal framework of the GB rail industry is primarily governed by the Railways Acts 1993 and 2005, the Railways and Transport Safety Act 2003, and a range of secondary legislation.

Directive 2012/34/EU of 21 November 2012 establishing a single European railway area (known as the recast of the First Railway Package) is implemented in Great Britain through The Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016 ("Access, Management and Licensing Regulations") that revoked and re-enacted The Railways Infrastructure (Access and Management) Regulations 2005 ('Access and Management Regulations') as amended in 2009 by The Railways Infrastructure (Access and Management) (Amendment) Regulations 2009; and amended The Railways (Licensing of Railway Undertakings) Regulations 2005 ("Licensing of Railway Undertakings Regulations").

Directive 2012/34/EU reviewed the Network Statement requisites in its Article 27:

1. The infrastructure manager shall, after consultation with the interested parties, develop and publish a Network SStatement which shall be obtainable against payment of a fee which shall not exceed the cost of publication of that statement. The network statement shall be published in at least two official languages of the Union (European Union). The content of the Network Statement shall be made available free of charge in electronic format on the web portal of the Infrastructure Manager and accessible through a common web portal. That web portal shall be set up by the Infrastructure Managers in the framework of their co-operation in accordance with Articles 37 and 40.
2. The Network Statement shall set out the nature of the infrastructure which is available to railway undertakings, and contain information setting out the conditions for access to the relevant railway infrastructure. The Network SStatement shall also contain information setting out the conditions for access to service facilities connected to the network of the infrastructure manager and for supply of services in these facilities or indicate a website where such information is made available free of charge in electronic format. The content of the network statement is laid down in Annex IV of the Directive.
3. The Network Statement shall be kept up to date and amended as necessary.
4. The Network Statement shall be published no less than four months in advance of the deadline for requests for infrastructure capacity.

More detailed requirements relating specifically to the production and content of the Network Statement are provided in Article 13 of the Access, Management and Licensing Regulations.

In respect of (1) above a French language version of the Network Statement can be found on our website. Network Rail participates in RNE and its Network Statement Working Group to co-ordinate the development of Network Statement specifications. The RNE common web-portal can be found here: http://www.rne.eu/organisation/network-statements/

In respect of (2) above, conditions for access to service facilities can be found in Section 5.3 of this Network Statement.

The Second Railway Package was adopted by the European Commission in 2004, and updated by the technical pillar of the Fourth Railway package (through amendments to the Directives and repeal and replacement of Regulation (EC) No 881/2004). Its aim is to create a legally and technically integrated European railway area. The Second Railway Package was implemented in the UK in 2006 by The Railways and Other Guided Transport Systems (Safety) Regulations 2006 ('ROGS').

ORR has published guidance on ROGS on its website which provides an overview of the regulatory requirements for managing safety on the railways, tramways and other guided transport systems.

The regulations require the infrastructure manager and most railway undertakings to maintain a Safety Management System ('SMS') and hold a safety certificate or authorisation indicating the SMS has been accepted by ORR. The regulations also put in place a duty of co-operation across all railway undertakings (RUs) and infrastructure managers ('IMs'); Network Rail has arrangements in place to co-operate with other transport operators in the shared management of system safety. This includes both advising railway undertakings and other IMs of proposed infrastructure changes which might affect the safety of their operation and responding to consultation requests from third parties concerning their proposed changes.

ROGS has been amended by The Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations 2013. The amendments are mainly concerned with:

- assigning an 'entity in charge of maintenance' ('ECM') to a railway vehicle and making sure that the entity in charge of maintenance is registered on the national vehicle register ('NVR')

- introducing a formal maintenance system for an entity in charge of maintenance.

Each ECM has to ascertain that, through a system of maintenance, a vehicle for which is it responsible is safe to run on the mainline railway. The system of maintenance is the maintenance of a vehicle in accordance with:

- the maintenance file for that vehicle
- applicable maintenance rules
- applicable Technical Specifications for Interoperability ('TSI').

The main effect of these amendments was to replace the safety verification regime with the application of Commission Regulation (EC) No 352/2009 on the adoption of a common safety method on risk evaluation and assessment (CSM RA). On 2 September 2013 the Commission adopted the Regulation 402/2013 on the CSM for risk assessment that repeals Regulation 352/2009.

As an IM, Network Rail maintains and develops the infrastructure and has arrangements in place to verify the safety of new or changed infrastructure before it is placed in service where such projects are deemed significant under the CSM RA. The determination of significance is carried out by Network Rail Acceptance Panel ('NRAP'). The CSM RA is applied by project teams and its application is independently assessed by Assessment Bodies.

Other regulations transposing the Second Railway Package include:

The Railways (Interoperability) Regulations 2006; (since superseded); and The Railways (Access to Training Services) Regulations 2006.

The Third Railway Package of measures, adopted in September 2007, opened up international passenger services within the EU to competition. Furthermore, it required the certification of drivers operating locomotives and trains on the railway system in the community and regulated passengers' rights and obligations. The Train Drivers' Directive was implemented in March 2010 by The Train Driving Licences and Certificates Regulations 2010. The Regulation on Passengers' Rights and Obligations Regulations entered into force on 3 December 2009, and was implemented through SI 2009/2970.

The Fourth Railway Package was issued by the European Commission for initial consultation in January 2013 with aims of delivering a more integrated approach, creating conditions for growth of overall rail traffic and increasing its market share.

The technical pillar of the Fourth Railway Package was published in May 2016 and is designed to reduce the technical obstacles that differing national standards and procedures create for rail operators and rolling stock manufacturers, including reforms of the safety certification and the vehicle authorisation process. Recent legislation comprises Directives (EU) 2016/797 on interoperability, 2016/798 on railway safety, and Regulation 2016/796 establishing the EU Agency for Railways.

The 'market pillar' of the Fourth Railway Package was provisionally agreed by the European Council and Parliament on 19 April 2016 and aims to introduce the following changes:

- ensure impartiality of railway infrastructure managers to guarantee non-discriminatory access to tracks for new railway companies and ensure better use of rail infrastructure and improve financial transparency in order to remove the risk of cross-subsidisation between infrastructure managers and transport operators
- open domestic rail passenger markets from 2020, so that railway undertakings can provide services across the EU. More competitive pressures should lead to better quality services, better in tune with customers' needs and more frequent trains, and
- more competition and performance targets for public service contracts so as to improve cost-efficiency and get better value for money for taxpayers. Competitive bidding would become the norm for awarding public service contracts from 2023 to provide

passenger rail services, which currently make up a large share of all rail services. Any contract awarded directly would need to meet performance targets (punctuality, quality of service, etc.)

Interoperability Legislation

The Interoperability Directive (2008/57/EC) as amended sets out a number of essential requirements to be met for interoperability, which include safety, reliability and availability, health, environmental protection and technical compatibility, along with others specific to certain sub-systems.

The Interoperability Directive 2008/57/EC entered into force in June 2008, and the UK transposed these requirements through the Railways (Interoperability) Regulations 2011, which came into force on 16 January 2012. This replaces provisions in the Railways (Interoperability) Regulations 2006. The Interoperability Directive also mandates the common specification of a Register of Infrastructure (Decision 2011/633/EU) and adoption of a common specification of a National Vehicle Register (Decision 2007/756/EU, amended by 2011/107/EU).

Directive 2011/18/EU of 1 March 2011 amends Annexes II, V and VI to Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the rail system within the Community.

Directive 2013/9/EU of 11 March 2013 amends Annex III to Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the rail system within the Community.

Directive 2014/38/EU of 11 March 2014 amends Annex III to Directive 2008/57/EC of the European Parliament and of the Council as far as noise pollution is concerned.

Directive 2014/106/EU of 5 December 2014 amends Annexes V and VI to Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the rail system within the Community.

Detailed information on the 2008/57/EC directive amendments can be found at the European Union Agency for Railways' website.

Further information on this transposition is available from the Department for Transport website and ORR website.

Technical Specifications for Interoperability ('TSIs')

The Interoperability Directive (2008/57/EC) also requires the production of mandatory TSIs, which define the technical specifications required to underpin those essential requirements and harmonise the technical and operational characteristics of the rail network.

Commission Directive 2009/131/EC amends Annex VII (parameters to be checked for cross-acceptance) of the Interoperability Directive. The revision of the TSIs is the responsibility of the EU Agency for Railways, based on mandates from the European Commission.

The TSIs apply to various structural and functional sub-systems, some of which are referred to as 'transversal', covering more than one sub-system. The TSIs are drafted by ERA and published by the European Commission. The current versions of the TSIs can be found on their website.

Network Rail's adoption of the TSIs is a key element of compliance with the Railways (Interoperability) Regulations 2011. In order to underpin this importance, Network Rail has put in place a number of initiatives so that the Interoperability Regulations and TSIs are applied in a consistent way to relevant projects. The Governance for Railway Investment Projects ('GRIP') now contains specific references to key aspects of the Interoperability Regulations as an aid to their timely application.

In addition, Network Rail is also developing a Register of Infrastructure as specified in the European Commission implementing decision, and which will be used for assessing routes prior to the start of operation. See Section 2.7 for more information.

All of the initiatives mentioned above are relatively tactical improvements, but the initiative which stands apart from this is the Long Term Planning Process ('LTPP') which is designed to facilitate the strategic planning of the rail network in a way which is flexible enough to take into account the

view of the rail industry, funders, specifiers and customers on the requirements to develop the network to meet future demand through market studies, cross-boundary analysis and route studies.

A summary of the TSIs:

Control, Command and Signalling (CCS) TSI relates to the train control and train protection systems. The target technology of this TSI is European Rail Traffic Management System ('ERTMS') but there is also an implication for the existing 'Class B' systems. Section 3.3.3.1 outlines the ERTMS and Class B systems currently in use on the network.

Energy (ENE) TSI relates to the power supply and contact systems for providing energy to trains. The target technology for this TSI is 25kV AC OLE systems but the TSI makes provision for the 750v DC third rail contact system adopted in parts of the UK. Section 3.3.2.6 provides an overview of the electrification systems currently in use on the network.

Infrastructure (INF) TSI defines the characteristics relating to gauge clearance, including the clearance between trains and platforms in stations, and of the distances provided between adjacent tracks and technical requirements for track components.

Safety in Railway Tunnels (SRT) and Persons with Reduced Mobility (PRM) TSIs relate to the safety characteristics of tunnels and the provision of facilities at stations and on trains to enable accessibility for mobility-impaired persons respectively.

Three TSIs relating to Rolling Stock: Rolling Stock Noise (NOI) TSI, Rolling Stock Freight Wagons (WAG) TSI and Rolling Stock Locomotives and Passenger Carriages (LOC & PAS) TSI have less significance to the infrastructure and railways systems work undertaken by Network Rail, but there are some aspects of interfaces, particularly under the LOC & PAS TSI, of which Network Rail must be mindful.

The **Operations and Traffic Management (OPE) TSI** is being taken into account in the development of the Network Rail Traffic Management system.

Telematics Applications for Freight (TAF) TSI arises from EU Regulation 62/2006, amended by Regulation 280/2013. The amendment introduced a Steering Committee co-chaired by the European Commission. Network Rail is represented on this steering committee by the EIM (European Infrastructure Managers' organisation).

The deployment plan for TAF TSI originally set an implementation date of 2014, but the Steering Committee has approved a revised plan for implementation of TAF TSI by 2018. Network Rail intends to comply with this 2018 date.

In making our plan submission, we worked with GB freight railway undertakings and the Private Wagon Federation. The Network Rail plan has been endorsed by those railway undertakings that did not submit their own plans, thereby relieving them of the obligation to submit their own plans.

The purpose of TAF TSI is to keep track of consignments and to determine when deliveries to customers will be made. This is achieved through messages passed between IMs and railway undertakings that convey the status of trains at all stages from path request through to actual train running.

The first part of the delivery of TAF TSI commenced in 2008 with the formation of the Common Components Group ('CCG') to build the common messaging interface and the common reference data system. These were delivered in January 2012.

The detailed message structures and reference data specifications have been defined by working groups of clusters of European IMs and railway undertakings, and Network Rail has played an active and leading role in the IM cluster working groups.

Telematics Applications for Passenger (TAP) TSI is mandated under EU Regulation 454/2011, now superseded by Regulation 665/2012.

The aim is to facilitate free passenger movement through the exchange of timetable and ticketing information between EU rail companies and ticket vendors. The provision of customer information during journeys is also a part of TAP TSI.

The TAP TSI regulation specifies that the TAF TSI common components should be reused in TAP TSI as far as possible. The detailed message structures and reference data specifications for TAP TSI were defined by Expert Groups drawn from European IMs and railway undertakings. As work progressed, the TAF working groups and TAP expert groups were merged.

Phase 1 of the TAP TSI project commenced in July 2011 and delivered an initial project plan in May 2012. This showed that implementation of TAP TSI is possible in the same timescale as TAF TSI, and that the two projects can take advantage of combined development of common elements.

The European Commission has now instructed rail companies to prepare and submit their plans for TAP TSI implementation. This will lead to a confirmed implementation plan. Network Rail has made its submission on the basis that delivery of both TAF TSI and TAP TSI can be undertaken as a single project.

There are two major functional domains in TAP TSI: the railway undertaking/IM communications, which will build on TAF TSI; and the retail domain, which is being led by ticket vendors. The plan states that the railway undertaking/IM functions will be delivered in the same timescale as TAF TSI, and so are expected to be available by the end of 2018. This will be incorporated in a revision to the Regulation. Network Rail intends to comply with the 2018 end date.

As with TAF TSI, the TAP TSI project is governed by a Steering Committee that is co-chaired by the European Commission, and comprised of rail sector representative organisations plus International Union of Railways ('UIC') and RNE. Network Rail is represented in this steering committee by the EIM.

Network Rail will deliver TAF TSI and TAP TSI by amendments to legacy systems such as Total Operations Processing System ('TOPS') and Train Running System ('TRUST') (explained in more detail in Section 3.3.3.2) to meet the European implementation Master Plan by 2018. This will require collaboration with railway undertakings and subsequent changes to be managed under the Railway Systems Code of Practice. TAF TSI and TAP TSI are also included in the functional requirements of the Network Traffic Management ('TM') system.

1.4 Legal status

1.4.1 General remarks

The provision of a Network Statement fulfils a legal requirement and is intended as a source of information for Network Rail's current and potential customers. It has no contractual force. However, where a railway undertaking enters into a track access contract with Network Rail, the track access contract will give contractual force to documents such as the Network Code, Engineering Access Statement and Timetable Planning Rules which are mentioned within this Network Statement.

1.4.2 Liability

Network Rail has prepared the Network Statement for the benefit of existing and potential customers, and so as to comply with the requirements of the Access and Management Regulations. It is intended to be informative, but customers (both existing and potential) should not place reliance on any item of information contained in it without first verifying with Network Rail the extent to which it is appropriate to do so.

We cannot accept responsibility for the content of any external websites referred to within or for any discrepancies in the translation of this Network Statement.

1.4.3 Appeals procedures

The Network Statement refers to various documents which carry their own appeal procedures. The Network Code is a set of rules codifying rail industry procedures in relation to operation of the main rail network. It is incorporated in, and so forms part of, the track access contracts by which Network Rail grants permission for railway undertakings to use the network (access rights). Railway undertakings have a right to challenge decisions made by Network Rail in relation to its functions under Part D of the Network Code as to timetabling, the Engineering Access Statement and the Timetable Planning Rules. Such challenges are heard by the relevant panel established under the Access Dispute Resolution Rules, which are appended to the Network Code; with a subsequent right of appeal to ORR should this be necessary. Further information can be found at Section 2.3.3.

The Access and Management Regulations also provide applicants with rights of appeal. These appeal rights can apply if the applicant considers that it has been unfairly treated, discriminated against, or is in any other way aggrieved. They can apply to a decision by the IM, a terminal or port owner, a service provider or a railway undertaking.

The right of appeal is to ORR, which has published guidance on its approach in considering such appeals. Where the subject matter of an appeal is such that it could have been dealt with through directions by ORR under the Railways Act 1993, then that will be deemed the appropriate procedure. In other cases, ORR would generally expect to adopt a similar approach as in relation to the Railways Act procedure.

If an applicant for allocation of infrastructure capacity is aggrieved regarding Network Rail's decisions concerning the Network Statement, including the information that has been (or in an applicant's view should be) included in it, there is a right of appeal to ORR. We invite anyone who has concerns regarding this Network Statement to raise them with us in the first instance, in order that we may consider how those concerns may be accommodated. Please contact networkstatement@networkrail.co.uk to do this.

1.5 Structure of Network Statement

This Network Statement has been developed in accordance with the "Network Statement Common Structure", adopted by European infrastructure managers belonging to RailNetEurope (see 1.10), on the basis of the applicable legal framework. The document is revised annually and the most recent version is available on the RNE website. The version of the common structure dated 23 March 2016 has been considered for the purposes of the current updating of this Network Statement. Suggestions for changes to the common structure may be communicated to us or to any other IM, so as to enable consideration to be given by RNE members.

The common structure is divided into six parts and we have followed the main headings specified within each of those parts to the extent that it is appropriate to do so. Section 6 of this Network Statement, Charges, diverts from the RNE common structure in some parts to specifically reflect the charging arrangements that are in place in GB.

The goal of this Common Structure is that all applicants and interested parties can find the same information at the same place in the NS of other countries.

The Network Statement is thus structured in 6 chapters constituting the main document and appendixes giving further details:

- Chapter 1 gives general information about the Network Statement and contacts
- Chapter 2 defines the legal requirements and access proceedings to the railway network

- Chapter 3 describes the main technical and functional characteristics of the railway network
- Chapter 4 sets out the procedure for the allocation of the train paths
- Chapter 5 lists the services provided by and other service facilities managers
- Chapter 6 refers to the charging of the provided services as well as incentive schemes.

1.6 Validity and updating process

1.6.1 Validity period

The Access and Management Regulations require Network Rail as an IM to publish a Network Statement four months before the deadline for applications for infrastructure capacity (the Priority Date for the relevant timetable). Consequently, in the context of the GB allocation process, the 2018 Network Statement is for use for capacity requests for the 2018 timetable year (10 December 2017 to 8 December 2018).

Network Rail will publish a 2019 Network Statement, valid for capacity requests for the December 2018 timetable, in October 2017.

1.6.2 Updating process

Network Rail will update the current Network Statement on its website as may be necessary to include any additional information or reflect significant changes throughout the year. Network Rail will also, where reasonable, update the connected facilities details (see Section 5.2.3) which were developed alongside the Network Statement, as information is supplied to us from the relevant facility service providers. We will consult on an updated version of the Network Statement once a year, usually between July and October. It should be noted that once the Network Statement has been downloaded (see Section 1.7), it will fall outside any change control process offered by Network Rail.

Many of the documents referenced by the Network Statement (such as the Network Code, Engineering Access Statement and Timetable Planning Rules) are subject to existing change control processes. The updated versions of these documents will be available through the web-links we have provided within this document.

1.7 Publishing

The Network Statement is written in English and published in both French and English on our website where it is available free of charge in electronic format. It will be kept up to date with any changes, and it will be made clear where updating has taken place (by way of version control).

Network Rail has taken care to make sure that both the English and French versions of the Network Statement are aligned, however, in the event of inconsistencies or interpretation difficulties between versions, the English version prevails.

For future versions of the Network Statement, we would be pleased to receive views on structure, content and presentation. To contact us for this purpose, please refer to Section 1.8.2.

1.8 Contacts

1.8.1 Network Rail general

The main points of contact for Network Rail's existing customers for regular business issues should continue to be the relevant Customer Relationship Executive in line with current arrangements.

For franchise replacement and extension in England & Wales please contact, either:

Graham Botham
Strategy and Planning Director (North)
Network Rail
Square One
4 Travis Street
Manchester
M1 2NY
Tel: +44 (0) 7860 624 537
Email: graham.botham@networkrail.co.uk

Paul Harwood
Strategy and Planning Director (South)
Network Rail
Cottons Centre
Cottons Lane
London
SE1 1QG
Tel: +44 (0) 7799 864 430
Email: paul.harwood@networkrail.co.uk

For franchise replacement and extension in Scotland please contact:

Jonathan Pugh
Head of Strategy and Planning (Scotland)
Network Rail
151 St. Vincent Street
Glasgow
G2 5NW
Tel: +44 (0) 141 555 4022
Email: Jonathan.Pugh@networkrail.co.uk

For passenger track access for prospective non franchised passenger railway undertakings please contact:

Rachel Gilliland
Head of Commercial Freight
Network Rail
1 Eversholt Street
London
NW1 2DN
Tel: +44 (0) 77 6764 4397
Email: rachel.gilliland@networkrail.co.uk

For new freight customers, please contact:

Guy Bates
Head of Freight Market & Capacity Development
Network Rail
1 Eversholt Street
London
NW1 2DN
Tel: +44 (0)7825 37 66 99
Email: guy.bates@networkrail.co.uk

Please note that operators of track-mounted plant machines (known colloquially as ‘yellow plant’), who wish to gain access to the network in order to gain access to another party’s adjoining network (for example, to transit from Network Rail to London Underground Limited) in order to undertake engineering work that is not conducted on Network Rail’s behalf, need to follow the same procedures indicated in this Network Statement as would a freight customer in order to conduct such operations.

For queries about the Operational Planning Production Schedule (timetabling), please contact:

Matthew Allen
Head of Capacity Planning Controls
Network Rail
The Quadrant:MK
Milton Keynes
MK9 1EN
Tel: +44 (0) 7734 282514
Email: Matthew.ALLEN@networkrail.co.uk

For queries about the New Working Timetable and the Applicable Working Timetable please contact:

Network Operations
PSS Team
Network Rail
The Quadrant: MK
Milton Keynes
MK9 1EN
Email: PSS-Team@networkrail.co.uk

We have created a 'Stakeholder Relations Code of Practice' which seeks to clarify what you can expect in your dealings with us. It can be found at the below link:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/stakeholder-code-practice/

For Network Rail's 'One Stop Shop' contact, see Section 1.10.1.

1.8.2 Network Rail – Network Statement

For comments relating to the Network Statement, please email networkstatement@networkrail.co.uk.

1.8.3 Other GB railway organisations

Access Disputes Committee
Floor 8
1 Eversholt Street
London
NW1 2DN
http://www.accessdisputesrail.org/

Department for Transport
Great Minster House
33 Horseferry Road
London
SW1P 4DR
http://www.dft.gov.uk/

Office of Rail and Road
One Kemble Street
London
WC2B 4AN
http://ORR.gov.uk/

Rail Delivery Group
200 Aldersgate Street
London
EC1A 4HD
http://www.raildeliverygroup.com/

Rail Safety and Standards Board
The Helicon
One South Place
London
EC2M 2RB
http://www.rssb.co.uk/

Transport for London,
Windsor House,
42-50 Victoria Street,
London,
SW1H 0TL.
https://tfl.gov.uk

Transport Scotland
Buchanan House
58 Port Dundas Road
Glasgow
G4 0HF
http://www.transportscotland.gov.uk/

Rail Freight Group
7 Bury Place
London
WC1A 2LA
http://www.rfg.org.uk/

HS1 Limited
One Euston Square
40 Melton Street
London
NW1 2FD
http://www.highspeed1.com/

HS2 Limited
One Canada Square
London
E14 5AB
http://www.hs2.org.uk/

1.9 Rail Freight Corridors

Regulation 913/2010, concerning a European rail network for competitive freight, established a number of international corridors with a key aim of strengthening co-operation on aspects such as path allocation. In October 2014 the UK Government joined the North Sea–Mediterranean rail freight corridor so that this corridor will include Network Rail infrastructure between London Wembley and Dollands Moor.

The corridor was established in 2013. It offers capacity in the form of pre-arranged paths (PAPs). Applicants may request international freight capacity directly from the corridor, which operates a one-stop shop for capacity allocation within the PAPs. However, operators will still have to conclude access contracts with each infrastructure manager in the usual way for the portion of their operation on each network.

North Sea-Mediterranean Corridor One-Stop Shop
RFC:2-OSS
Fonsnylann 13
B-1060
Brussels
Belgium
http://www.rfc-northsea-med.eu/en/pages/one-stop-shop
Email: oss@rfc2.eu

Network Rail is obliged to reserve capacity for the use of international freight trains using the Channel Tunnel under the terms of the 1987 Channel Tunnel Usage Contract and subsequent related contracts. Within this reserved capacity, some will be set aside for allocation by the North Sea–Mediterranean Corridor's one-stop shop ('C-OSS'). Arrangements for the co-ordination of non-Corridor capacity for international services remain unchanged: see Section 1.10.1 for details of the one-stop shop operated by Network Rail as a member of RNE.

If you are interested in using Corridor capacity please read the information on the Corridor's own website at:

http://www.rfc-northsea-med.eu/en/pages/corridor-information-document

1.10 RNE - international co-operation between IMs

RailNetEurope RNE was created in January 2004 on the initiative of a number of European railway Infrastructure Managers (IMs) and Allocation Bodies (ABs) who wished to establish a common, Europe-wide organisation to facilitate their international business.

RNE's aims

RNE is committed to facilitating international traffic on the European rail infrastructure. It provides support to Railway Undertakings (RUs) in their international activities (both for freight and passengers) and strives to increase the efficiency of the IMs'/ABs' processes. As a trans-European association, RNE plays a pivotal role in encouraging the industry to follow harmonised, transparent and non-discriminatory rules in the international railway business. Together, the Members of RailNetEurope are making international rail transport conditions more uniform and introducing a corporate approach to promote the European railway business for the benefit of the entire rail industry across Europe.

A coordination platform for the Rail Freight Corridors (RFCs)

In November 2013 the first six Rail Freight Corridors (RFCs) became operational and a network of Corridor One-Stop Shops (C-OSSs) was established. In November 2015 three additional RFCs were officially launched. RNE has provided support to the IMs concerned from the beginning and is now the coordination platform of the RFCs as regards operational business. RNE's tasks include ensuring that harmonised processes and tools are applied on various corridors to the benefit of Applicants, and of IMs and ABs that are part of several RFCs. As a consequence the RFCs have become Associate Members of RNE.

An umbrella organisation

In its day-to-day work, RNE's task is to simplify, harmonise and optimise international rail processes such as Europe-wide timetabling, sales (including Network Statements), traffic management and after-sales services (e.g. reporting). These tasks are carried out by four standing working groups and by ad-hoc project groups co-ordinated by the RNE Joint Office, which is based in Vienna, Austria. RNE international working groups and boards are striving to make seamless cross-border rail services across Europe a reality – whether this is by creating common standards for data exchange, easing interpersonal communication between traffic control centres or agreeing timetabling procedures for new train path products. RNE also provides support to its Members as regards compliance with the European legal framework. Last, but not least, dedicated IT tools are also being streamlined and harmonised wherever necessary, and RNE's own IT systems are gradually being rolled out across Europe.

1.10.1 One Stop Shop (OSS)

ONE Europe - ONE Service

RNE has established one OSS contact point in every member country. Each customer can choose its favoured OSS contact point for all its needs regarding international rail services.

From the initial questions related to network access to international path requests and performance review after a train run – all these issues and more are handled by one contact point for the whole international train journey at the customers' convenience. Customers of RNE Members who run international rail services can therefore make use of the RNE One Stop Shop's bundle of services:

- A network of contact points guiding customers through the whole range of procedures: gaining network access, planning of efficient international rail transport, international train path management (ITPM) and performance review after train operation. Response times have been standardised at a customer-friendly level – the attainment of these service levels is currently being tested.
- OSS experts drawn from sales and timetabling merge their expertise in these fields to serve customers together with the OSS contact points.
- IT tools further assist applicants by giving price estimates for rail infrastructure use, by coordinating international train path ordering and supply processes, and by tracking & tracing international trains in real time.

The list of OSS contact persons and further information is available at: http://www.rne.eu/organisation/oss-c-oss/

Network Rail's OSS contact is:

Steve Rhymes
Head of Freight Network Management
Network Rail
Birmingham The Mailbox
100 Wharfside Street
Birmingham
B1 1RT
Tel: +44 (0) 7767 672 488
Email: Steve.Rhymes@networkrail.co.uk

1.10.2 RNE Tools

Path Coordination System ('PCS', formerly Pathfinder)

PCS is a web application provided by RNE to IMs, ABs, RFCs, RUs and non-RU Applicants, which handles the communication and co-ordination processes for international path requests and path offers. PCS also assists RUs and non-RU Applicants in their pre-co-ordination tasks related to train path studies and international train path requests. Network Rail's domestic system is connected to the RNE Path Coordination System.

RNE provides a PCS Integration Platform (PCS IP), a direct communication channel between PCS and the domestic systems of RUs and IMs/ABs allowing two-way data interchange. With this module, one of the major obstacles to the use of PCS in the freight business has been eliminated: RUs and IMs/ABs no longer have to provide the same information about an international train path request twice (once in the national system and once in PCS) – it is now possible to automatically synchronize the international train path request data between national systems and PCS.

In November 2013 PCS was ready to be the tool for handling (publish, request, allocate) Pre-arranged Paths (PaPs) according to the RFC Regulation 913/2010. In the meantime, the system is continuously being improved based on the experiences of RUs, IMs and RFCs, in order to make PaP process for freight trains faster and more flexible. For more information, please visit the website or write to the helpdesk.

Charging Information System ('CIS' formerly EICIS)

CIS is an infrastructure charging information system for Applicants provided by IMs and ABs. The web application provides fast information on charges related to the use of European rail infrastructure and estimates the price for the use of international train paths within minutes. It is an umbrella application for the various national rail infrastructure charging systems. Future developments of the CIS aim to implement a RFC route-based estimate of infrastructure charges according to the RFCs' requirements.

For more information, please visit the website or write to the helpdesk.

However, CIS as configured currently is not compatible with the structure of Network Rail's charges, which are not included in the system.

Train Information System ('TIS' formerly EUROPTIRAILS)

TIS is an easy-to-use, web-based application which visualises international trains from origin to destination. It supports international train management by delivering data concerning international passenger and freight trains along RNE Corridors and RFCs. Following the request of some internationally active RUs TIS is now processing a defined amount of national trains as well in order to simplify data exchange and optimise the information process. Additionally, a specific function has been developed for Terminals along the corridors so that they can take advantage of the TIS information exchange as well.

TIS delivers real-time train data directly to the users via the internet, and generates reports based on historical data. The two TIS products are based on the same raw data. The real-time train information overview gathers, centralises and publishes information on train running on most of the Rail Freight Corridors.

Data portfolio:

- current and past train location
- agreed daily timetable information
- delay information and reasons for delay

The reporting function enables the monitoring and analysis of train and delay information.

Data portfolio:

- punctuality and delay analysis
- data quality analysis
- system performance analysis

In the meantime, TIS has been optimised and is now able to process both inbound and outbound TAF TSI messages from/to the IMs, and outbound TAF TSI messages to the RUs directly.

Data interfaces:

- raw data exchange with RUs and IMs based on TAF/TAP TSI messages

Currently, TIS applicants are IMs[1], RUs and Terminal Operators.

TIS may be accessed via: http://tis.rne.eu/

The helpdesk may be contacted by email: support.cis@rne.eu

RNE Glossary

RNE has created an easy-to-use, English-language Glossary of Terms related to Network Statements. The definitions in this Glossary are written in a clear language using as little technical or legal jargon as possible. They provide practical guidance both to IMs/ABs and their customers. Please note the Legal Disclaimer, which stresses that the available material is for information purposes only and that definitions are not legally-binding. By using this Glossary, you agree to the terms of the Legal Disclaimer.

1.11 Glossary of terms used in this Network Statement

Abbreviations

AB	Allocation Bodies
CAS-T	Certification Scheme for Telecommunications

[1] Current participants: ÖBB (Austria), Infrabel (Belgium), NRIC (Bulgaria), HŽ (Croatia), SŽDC (Czech Republic), Banedanmark (Denmark), SNCF Réseau (France), DB Netz (Germany), GYSEV (Austria, Hungary), MÁV (Hungary), RFI (Italy), CFL (Luxembourg), Jernbaneverket (Norway)*, PKP PLK (Poland), IP (Portugal), CFR (Romania)*, ŽSR (Slovakia), SŽ (Slovenia), ADIF (Spain), Trafikverket (Sweden), SBB (Switzerland), BLS (Switzerland), Prorail (The Netherlands), HS1* (Great Britain). (*Contract signed, implementation in progress.)

CCG	Common Components Group – responsible for delivery of the common messaging interface and the common reference data system required for TAF TSI, which should also be used for TAP TSI
CoE	Calendar of Events
C-OSS	One Stop Shop operated by the North Sea Mediterranean Rail Freight Corridor
COTS	Commercial Off The Shelf
CRE	Customer Relationship Executive
CSM RA	Common Safety Method Risk evaluation and Assessment
DfT	Department for Transport
DMU	Diesel Multiple Unit
ECM	Entities in Charge of Maintenance
EIM	European Rail Infrastructure Managers
ELMTREE	Exceptional Load Management Tool and Routing Enquiry Engine
EMU	Electric Multiple Unit
EPS	Enhanced Permissable Speed
ERA	European Union Agency for Railways
ESG	Event Steering Group
FOC	Freight train operating company
FTLB	Freight Train Load Book
GB	Great Britain
GSM-R	Global System for Mobile Communications – Railway
HST	High Speed Train
ICC	Infrastructure Control Centre
IM	Infrastructure Manager
LMD	Light Maintenance Depot
LTPP	Long Term Planning Process
MU	Multiple Unit
NESA	National Electronic Sectional Appendix
NVR	National Vehicle Register
OLE	Overhead Line Equipment
ORR	Office of Rail and Road
OSS	One Stop Shop
PAP	Pre-arranged path for international freight in the European rail network created by a European rail freight corridor and allocated by them
RDG	Rail Delivery Group
RFC	Rail Freight Corridor
RGS	Railway Group Standards
RINF	Register of Infrastructure
ROC	Railway Operational Code
ROGS	The Railways and Other Guided Transport Systems (Safety) Regulations 2006 and The Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations 2013
RNE	RailNetEurope
RSSB	Rail Safety and Standards Board Limited
RU	Railway Undertaking

RUS	Route Utilisation Strategy
SCADA	Supervisory Control And Data Acquisition
SNRP	Statement of National Regulatory Provisions
SP	Sprinter Diesel Multiple Units
TAC	Track Access Contract
TAF TSI	Telematics Applications Freight – Technical Specifications for Interoperability
TAP TSI	Telematics Applications Passenger – Technical Specifications for Interoperability
TCAG	Timetable Change Assurance Group
TCRAG	Timetable Change Risk Assessment Group
TfL	Transport for London
TM	Traffic Management
TOC	Train (usually, passenger train) Operating Company
TOPS	Total Operations Processing System
TPH	Trains per hour
TRUST	Train Running System on TOPS
TS	Transport Scotland
TSI	Technical Specification for Interoperability
UIC	International Union of Railways

Terms explained:

Access and Management Regulations

The Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016 ("Access, Management and Licensing Regulations") which implement Directive 2012/34/ EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (the Recast).

Access Dispute Resolution Rules

Rules appended to the Network Code, which govern the handling of disputes arising from matters covered by the Code.

Business Critical Rules

Network Rail has established the Business Critical Rules programme to rationalise and simplify the Network Rail standards regime. The programme will roll out across Network Rail during the period from April 2014 to March 2019 with an initial focus on safety critical activity and assets. Effective risk assessment and means of control are key enablers for this programme, which will ultimately impact all areas of Network Rail.

Concession Agreement

An agreement between the government or other authority and a party which offers to provide specified railway passenger services for a period, the terms of which may provide for the government to pay a subsidy or receive a premium for those services. For the purpose of this document the terms concession agreement and franchise agreement have the same meaning.

Connected Facility

A facility connected to the main railway network, such as a terminal, port or light maintenance depot.

Connected Facilities Details

Details of where further information may be obtained about the nature of access to, and supply of services in, terminals, ports and service facilities to which access may be obtained under Regulations 6 and 7 of the Access and Management Regulations.

DfT

Department for Transport, a government department providing leadership across transport sectors to achieve its objectives, working with regional, local and private sector partners to deliver many of the services running within, and from, England and Wales.

Depot access contract

A contract for rights of access to a light maintenance depot, including provision of services. Also referred to as a depot access agreement.

Engineering Access Statement

Rules regulating the arrangements for access to the various parts of the main rail network when affected by inspection, maintenance, renewal and other works. Please see further at Section 4.5.1. The current Engineering Access Statement is available Network Rail's our website.

Facility owner

The owner of an interest in a network, station or light maintenance depot, such that their permission is needed if anyone else is to enjoy access to that facility in order to use it for, or in connection with, the operation of trains.

Firm rights

Rights of access to the main rail network granted by track access contracts which are not contingent, other than in relation to the applicable Engineering Access Statement or Timetable Planning Rules. The expression is also used to refer to Network Rail's own rights to carry out maintenance, renewal and enhancements to the main rail network under the Engineering Access Statement or Timetable Planning Rules.

Framework Agreement

This expression is used in EU Directives as referring to a general agreement setting out rights and obligations in relation to infrastructure capacity to be allocated and the related charges for a period longer than one working timetable period. In the GB context, this refers to a track access contract between an IM and access beneficiary.

Franchise agreement

An agreement between a government and a party which offers to provide specified railway passenger services for a period, the terms of which may provide for the government to pay a subsidy or receive a premium for those services. For the purpose of this document franchise agreement and concession agreement are the same.

Franchised passenger railway undertaking

A railway undertaking which operates passenger services in support of a franchise agreement.

Infrastructure Manager

The Infrastructure Manager is the body that is responsible for operating, maintaining, renewing and developing railway infrastructure.

Interoperability

As defined under the Interoperability Directive 2008/57/EC. Interoperability means the ability of a rail system to allow the safe and uninterrupted movement of trains which accomplish the required levels of performance for these lines. This ability depends on all the regulatory, technical and operational conditions which must be met in order to satisfy the essential requirements.

The EC Directive has been transposed into UK law by The Railways (Interoperability) Regulations 2011, as amended.

Licensing Regulations

The Railway (Licensing of Railway Undertakings) Regulations 2005, is currently the statutory instrument implementing various EU Directives requiring most people who want to operate passenger trains or freight trains in GB to hold an appropriate European passenger licence or European freight licence, and associated Statement of National Regulatory Provisions (SNRP) available at:

http://ORR.gov.uk/what-and-how-we-regulate/licensing/licensing-railway-operators/model-licences-and-statements-of-national-regulatory-provisions-snrps

Light maintenance depot

A place at which services are provided where locomotives or other rolling stock are refuelled, cleaned externally or receive regular servicing as defined in the Railways Act 1993.

Main rail network

The rail network in Great Britain (including the Isle of Wight), of which Network Rail is the IM and/or owner (as defined by the Access and Management Regulations). Ownership may in this context include a lease or other property right. Where Network Rail owns network (e.g. in a freight depot), but has leased it to another party (e.g. a FOC) that manages that network, then the other party will be the operator and the facility is no longer part of the main rail network (for the purpose of this Network Statement).

Minimum access package

Access to facilities and a set of services for international or domestic traffic for which Directive 2012/34/EU confers rights and which include the handling of requests for infrastructure capacity and the right to use such capacity as is granted. These are further described in Section 5.1 and Section 5.2.

Notified National Technical Rules

The standards, technical specifications and technical rules in use in the United Kingdom which have been notified by the Secretary of State to the Commission pursuant to article 17(3) of the Directive or Article 16(3) of the High-Speed Directive or Article 16(3) of the Conventional Directive, including any variations from time to time notified.

National Vehicle Register

The National Vehicle Register is a database of vehicles authorised to operate in Great Britain under the Railways (Interoperability) Regulations 2006 and superseded by the Railways (Interoperability) Regulations 2011. The Secretary of State has appointed Network Rail Infrastructure Limited as the Registration Entity, which is responsible for maintaining the NVR. This duty is discharged through the Rolling Stock Library (RSL).

Network Code

A common set of rules that applies to all parties that have a track access contract with Network Rail. The Network Code is incorporated into, and therefore forms part of, each such bilateral contract. Please see further at Section 2.3.3. T

Network Rail (Company) Standards

'Network Rail Standards' is the generic term for the documents that specify requirements and provide guidance directed towards securing the safe and efficient operation of the rail infrastructure. They support the overall company assurance system by specifying how Network Rail controls its principal health and safety risks, and how the organisation complies with Technical Specifications for Interoperability (TSIs), domestic legislation, and Railway Group Standards.

Further information on Network Rail standards is available at:

http://uk.ihs.com/products/standards/network-rail-company-standards.html

Possession (or restriction of use including temporary speed restrictions)

Non-availability of the network for full use by trains for a period when reserved for the carrying out of works.

Passengers' Charter

A commitment by a franchised passenger railway undertaking to its passengers as regards what passengers may expect, including as to standards of service, compensation and contact arrangements.

Principal Timetable

The working timetable that is established for the year beginning on the Sunday immediately after the second Saturday in December.

Railway Group Standards

Published by RSSB, Railway Group Standards are technical and operational documents whose objective is to provide a framework for the safe management of risk in areas of interface / co-operation between different duty holders. Compliance is mandatory by RSSB and the members of RSSB subject to any approved non-compliance arrangements that are in place. RSSB has integrated the management of RGS with the work that it does to support the industry on interoperability standards.

Railway undertaking

Any public or private undertaking, licensed according to Directive 2012/34/EU, the principal business of which is to provide services for the transport of goods and/or passengers by rail, often described as an RU.

Railway Safety and Standards Board

The Rail Safety and Standards Board was established in April 2003 with its primary objective to facilitate the railway industry's work to achieve continuous improvement in the health and safety performance of the railways in Great Britain, and thus to facilitate the reduction of risk to passengers, employees and the affected public.

Register of Infrastructure

The Register of Infrastructure will be used for planning purposes in designing new trains and developing routes before the start of operation. It will hold specific information on the railway infrastructure within a Member State. Each IM is responsible for maintaining their information and submitting it to the National Registration Entity. The Member State RINF information will be uploaded, no less frequently than every three months, into the European central RINF, such that any authorised user may view infrastructure information in any Member State. The RINF is being delivered in phases until 2019. The UK RINF is managed by the National Registration Entity and it has been agreed with the DfT that Network Rail will undertake this role.

Sectional Appendix

A listing, according to line of route, of various physical and operational attributes of the main rail network, including information as to permanent speed restrictions, position of signal boxes and stations, and with other information relevant to the operation of trains. Please see further at Section 3.3.1.

Service provider

A party that will supply and charge for, where appropriate, services used by a railway undertaking in the operation of trains. The service provider is generally, but not always, the facility owner (for example, of a station or depot).

Station

A place where trains stop, or where loading and unloading occurs, and where assistance may be available.

Station access contract

A contract for rights of access to a station on a rail network. Also referred to as a station access agreement.

Subsidiary Timetable

The adjustment of the Principal Timetable that is established at midnight on the third Saturday in May during the currency of the Principal Timetable.

Timetable Change Assurance Group

A national group composed of competent individuals who carry out assurance checks on the outputs from TCRAGs.

Timetable Change Risk Assessment Group

A Route based group composed of competent individuals to assess the effects of proposed significant timetable changes and determine any mitigation measures to be applied.

Timetable Planning Rules

Rules regulating the standard timings and other matters enabling trains to be scheduled into the working timetable on the main rail network. Please see section 2.4 for more information.

Total Operations Processing System

TOPS is a database that contains details of vehicles and schedules (for loco hauled vehicles only). Non-loco hauled schedules are located in TRUST (e.g EMU, DMU and DEMU).

Track access contract

A contract for access to the track, including an option to have such rights of access. Also referred to as a track access agreement.

Traffic Management

This is a system under development that will allow larger areas of Network Rail's network to be controlled from fewer locations and help increase capacity and improve reliability.

Train path

This expression is used in EU Directives to refer to the infrastructure capacity needed to run a train between two places over a given time period; and in the context of this Network Statement is treated as the provision of the capacity in the timetable to enable train movement on the rail network.

Train slot

A right contained in a track access contract to a train movement between two places, together with certain other characteristics, which may include times at those places, routing, calling pattern, traction type, and exceptional characteristics by specific agreement. These characteristics must be reflected when processed by Network Rail in the production of the working timetable (using the rules set out in the Network Code).

Transport Scotland

A government department providing leadership across the transport sector to achieve its objectives, working with regional, local and private sector partners to deliver many of the services in Scotland.

TRUST

A computer system, part of the TOPS suite of systems, which records details of train running as compared with schedule, together with causes of delays.

Working timetable

The timetable used for working purposes, as further described in Section 4.3.1.

Section 2 - Access Conditions

2.1 Introduction

Access to the main rail network is principally governed by the Railways Act 1993 (as amended), and by the Access and Management Regulations. This regime also covers networks outside the main rail network, to the extent that they have not been exempted.

Under the Railways Act 1993, anyone seeking access to the rail network in order to operate trains requires a track access contract with the relevant 'facility owner', granting permission to use that facility. Network Rail is the facility owner of the main rail network in Great Britain.

Stations and light maintenance depots are treated as separate facilities. If a railway undertaking requires access to a station or light maintenance depot, it will need to enter into an access contract with the facility owner. Although it owns most of the stations and light maintenance depots in Great Britain, Network Rail is not the facility owner, except for 18 major stations (as listed in Section 1.1), where it acts as operator.

Most stations and light maintenance depots are leased to and operated by one or other of the passenger train operating companies, who act as the facility owner, although some are owned and operated by non-train operators (such as at Southend Airport station), specialist train maintenance companies or FOCs.

Under the Railways Act 1993, railway undertakings and others may only enter into a contract with a facility owner (e.g. Network Rail or another facility owner) for permission to use that owner's railway facility if ORR so directs. If these contracts (and amendments to them) are not approved by ORR where that is required by law, they are invalid.

Where the parties have not been able to agree on the terms of a contract, or a subsequent amendment where the applicant is seeking increased access to the network, ORR may be asked to issue directions requiring the facility owner to enter into or amend the contract as determined by ORR.

Network Rail will guide railway undertakings seeking access to the main rail network through the track access application process (and station access process, where access is sought to one of its stations).

Please contact:

stakeholderrelations@networkrail.co.uk

The access regime under the Railways Act 1993 does not apply to all access contracts. Some railway facilities, including many of those not operated by Network Rail as part of its main rail network, have been exempted by ORR or the DfT[2]. However, the Access and Management Regulations provide railway undertakings with the right to access railway infrastructure for the purpose of the operation of any type of rail freight service or international passenger service. They also create a presumption of access and provide the right for a railway applicant to apply for access to a range of services and facilities to operate these services. The Regulations accordingly open up access on a non-discriminatory basis to a range of previously exempted facilities, such as terminals and ports, marshalling yards and storage sidings, unless a viable alternative under market conditions exists.

The Access and Management Regulations also provide applicants with rights of appeal (as described in Section 1.4.3).

The access regime under the Railways Act 1993, together with the Access and Management Regulations where these apply, accordingly provide a regime that covers both international and domestic traffic.

2 For example, many freight terminals and depots, as well as non-Network Rail networks, were exempted by The Railways (Class and Miscellaneous Exemptions) Order 1994.

Network Rail's Stakeholder Relations Code of Practice includes a guide for new and potential train operators (including aspirant open access operators), which outlines how Network Rail will work with potential customers to develop a track access contract.

ORR has also developed a guide to help prospective operators entitled 'Starting Main Line Train operations: A guide to the regulatory framework' for potential train operators.

2.2 General access requirements

In order to be able to secure access to and operate on the main rail network, whether for domestic or international traffic, it is necessary for an applicant to fulfil the requirements set out below.

2.2.1 Conditions for applying for capacity

The timetabling process (governed by Part D of the Network Code) is open to anyone who is a party to the Network Code by virtue of having a track access contract with Network Rail or anyone who proposes in good faith to enter into such a track access contract and has agreed to be bound by Part D. Such a person does not need otherwise to satisfy the requirements referred to in Section 2.2.2 below to participate in the timetabling process, though those requirements will need to be satisfied before actual use of the train paths takes place. Following an approach from a current or potential railway undertaking Network Rail will advise on the likelihood of train paths being available on the relevant part of the network for the railway undertaking to operate a service. This will be based on the active timetable in operation at the time. If such train paths are available or are likely to become available, Network Rail will guide the railway undertaking through the timetabling process.

Railway undertakings normally participate directly in the timetabling process. However, a railway undertaking (or potential railway undertaking or other holder of access rights) may engage a third party (such as another railway undertaking or an independent consultancy) to make its requests for train paths. Where an operator of international services makes use of the 'One Stop Shop' arrangements offered by another European IM or RNE (see Section 1.10.1) then that IM acts as the Timetable Participant within the GB timetabling process.

Under the Access and Management Regulations an applicant who has been granted capacity by the IM, either through a framework agreement specifying the characteristics of the infrastructure granted or specific infrastructure capacity in the form of a train path, cannot trade that capacity with another applicant or transfer it to another undertaking or service.

Any person who trades in capacity contrary to the provisions stated above shall not be entitled to apply for capacity for the period of the working timetable to which the allocation of capacity transferred relates.

2.2.2 Conditions for access to the railway infrastructure

Anyone wishing to operate trains on the main rail network must satisfy the relevant legal requirements. The principal requirements include:

- holding a railway undertaking's licence or licence exemption – see Section 2.2.3
- having an appropriate documented description of the operator's safety management system and holding a current Part A and Part B safety certificate as detailed in the Railway Safety Directive 2004/49/EC, the Part B certificate being issued by ORR – see Section 2.2.4
- having appropriate insurance – see Section 2.2.5
- being party to a track access contract with Network Rail.

Compatibility consultation also needs to be completed for all rolling stock operating on the network. The rolling stock compatibility guidelines are discussed at Section 2.7.

2.2.3 Licences

The Railways Act 1993 (the Act) makes it an offence to act as the operator of a train in GB without holding a licence or a licence exemption granted under the Act. However, where a person seeking to act as the operator of a passenger train or freight train falls within the scope of the Licensing of Railway Undertakings Regulations as amended by the Access, Management and Licensing Regulations , then he may do so with the benefit of a European licence. A European licence may be granted by ORR, or by another Member State that has implemented the EU Directives relevant to the licensing of railway undertakings. To operate and provide train services in GB, European licence holders must also hold an SNRP. Applications for licences, exemptions or SNRPs should be made to ORR's Licensing Team (for ORR's full contact details, please see Section 1.8.3).

Both passenger and freight licences (or, in relation to European licences, the associated SNRP) may be expected to include among others obligations for:

- membership of RSSB
- membership of RDG
- joining in the rail industry arrangements for allocation of liabilities and claims handling
- having an environmental policy with related operational objectives and management arrangements
- ticketing (passenger licences only)
- insurance (see Section 2.2.5).

2.2.4 Safety certificate

Anyone seeking to operate a train in GB will be required to establish and maintain an appropriate safety management system and should hold a safety certificate meeting the requirements of the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS).

Subject to compatibility, Part A of the EU safety certificate is recognised for such purposes whilst Part B is required to operate in GB and is granted by ORR. Applications for a safety certificate under the ROGS should be made to ORR and copied to affected parties including Network Rail. Please visit ORR's website for more details:

http://ORR.gov.uk/what-and-how-we-regulate/health-and-safety/regulation-and-certification

http://ORR.gov.uk/what-and-how-we-regulate/health-and-safety/regulation-and-certification/rogs/safety-certificates-and-authorisation

Rolling stock and staff competence are dealt with in Section 2.7 and Section 2.8, respectively.

Further information, including guidance documentation and details on how to make an application can be found on ORR's website at:

http://ORR.gov.uk/what-and-how-we-regulate/health-and-safety/regulation-and-certification

2.2.5 Cover of liabilities (insurance)

A railway undertaking's licence (or SNRP) will contain requirements for insurance (including optional self-insurance) against third party liabilities. The required levels of insurance will normally be such as are set by ORR. In respect of third party liabilities, the current default minimum of indemnity insurance is set at £155 million cover per incident as required by the general approval (see below); however, lower limits may be agreed where appropriate on application to ORR.

ORR has replaced the individual approval of operator third party liability insurance arrangements with a general approval by way of obtaining a broker's certificate.

The general approval can be downloaded from ORR's website:

2.2.6 Industrial locomotive operation

Simplified arrangements apply to facilitate the operation of industrial locomotives to undertake shunting movements over a limited extent of network sidings or freight only lines. Further information can be obtained from:

ben.lee@networkrail.co.uk

2.3 General Business / Commercial Conditions

There are a range of documents setting out general commercial conditions and rules in respect of access to the network. Key documents are described below.

2.3.1 Framework Agreements

A Framework Agreement for the purposes of the Access Management and Licensing Regulations specifies the characteristics of the infrastructure capacity allocated to an applicant over a period of time exceeding the duration of a single working timetable period. It does not specify train paths in detail but provides an assurance that suitable capacity will be available to meet the commercial needs of the applicant.

Train paths and train slots are explained in more detail within the Glossary.

In Great Britain, the function of Framework Agreements is fulfilled by track access contracts between RUs and Network Rail for access to the main rail network, as described in Section 2.3.2.

Network Rail is permitted to enter into bi-lateral agreements with railway undertakings and others to develop infrastructure enhancements, although if such an agreement were to include rights to use a railway facility (such as the main rail network) then it would need to be approved by ORR, as a track access contract. The Railways Act 1993 provides for the possibility of such rights to take the form of either the normal grant of rights or of an access option (see Section 4.4.4). The basis for ORR approval is set out in the track access guidance that is published on their website.

Further information on track access and how to apply for this access can be found on ORR's website at:

http://ORR.gov.uk/what-and-how-we-regulate/track-access

Links to model track access contracts and station and light maintenance depot access contracts are provided in Section 2.3.2 and Section 2.3.3 for RUs and non-RU applicants respectively.

2.3.1.1 Network Code

The Network Code is a common set of rules that is incorporated by reference into each track access contract. The track access contract governs the legal relationship between Network Rail and each train operator that uses Network Rail-managed infrastructure. The Network Code does not create any contractual relationship between train operators but it should be noted that, in the event that there is a conflict of interpretation between the Network Code and the track access contract, the Network Code prevails. Any undertaking that is party to a track access contract is subject to meeting all the obligations within the Network Code.

The purpose of the Network Code is to provide mechanisms by which Network Rail and train operators can make regulated changes to:

- the working timetable
- the rolling stock that a train operator wishes to operate
- the infrastructure
- the Network Code itself.

It also provides mechanisms to:

- establish procedures relating to environmental damage
- establish a performance monitoring system
- establish procedures in the event of operational disruption

- establish procedures to change Access Rights.

The Network Code is published by Network Rail and can be found, together with other related information, on our website.

2.3.1.1.1 Performance Data Accuracy Code

The Performance Data Accuracy Code (PDAC) is incorporated into the Network Code (Part B) and encompasses defined standards of accuracy of performance data. It is used in connection with the performance monitoring system, which assesses the respective responsibilities of Network Rail and railway undertakings for delays to and cancellations of trains. The system feeds into contractual arrangements and processes which encourage performance improvement and the minimisation of disruption.

The PDAC can be found on the Delay Attribution Board website at:

http://www.delayattributionboard.co.uk/pdac.htm

2.3.1.1.2 Delay Attribution Guide

The Delay Attribution Guide is incorporated into the Network Code (Part B) and provides guidance for the consistency of application and approach by all parties involved in the process of delay attribution. This enables accurate records to be kept of the causes of delay to and cancellation of train services resulting from incidents occurring across the main rail network. The guide supports the need for management information as well as the requirement for parties to be compensated accordingly for delays experienced.

The Delay Attribution Guide can be found on the Delay Attribution Board website at:

http://www.delayattributionboard.co.uk/delayattributionguides.htm

2.3.1.1.3 Access Dispute Resolution Rules

The Access Dispute Resolution Rules are annexed to the Network Code and set out how disputes under track, station and light maintenance depot access contracts are resolved.

Further information can be found in Section 4.4.2.2.

2.3.1.1.4 Railway Operational Code

The purpose of the Railway Operational Code (ROC) is to sustain the operation of train services on the network and restore operation of the network following disruption.

2.3.1.2 Access Rights Policy

Network Rail has established an Access Rights Policy which has been developed in consultation with rail industry partners through its work with RDG. It sets out how Network Rail will deal with requests for the sale of access rights from those who seek to use the network, and in particular how those rights will be specified. The document sets out the background to the policy, the principles which are reflected in it and outlines other existing regulatory obligations and mechanisms which are applicable to Network Rail in considering requests for access to the network. The Network Rail Access Rights Policy:

- seeks an access rights framework that is simple, clear and understandable with an alignment of objectives that gives confidence to the industry, users and taxpayers;
- provides train operators with the certainty and assurances they require to run their businesses and meet their contractual commitments through consistency in decision making;
- enables changes to train services and timetables that make the most effective and efficient use of capacity in the overall interests of users and service providers;

- prevents sub-optimal use of network capacity that could also introduce avoidable performance risks and potentially lead to claims of undue discrimination; and
- provides greater flexibility to optimise use of the network, particularly as it gets busier and infrastructure projects come to fruition.

2.3.2 Contracts with RUs

Railway undertakings and authorised applicants seeking access to the network must enter into a track access contract with Network Rail to cover the full scope of the intended operations, before those operations may begin. This is required to deliver the minimum access package as set out in EU Directive 2012/34/EU, in relation to the main rail network. Railway undertakings seeking access to stations or light maintenance depots that they do not operate themselves will need to enter into separate access contracts with the relevant station or depot facility owner (unless those facilities are exempt from the access provisions of the Railways Act 1993 by virtue of The Railways (Class and Miscellaneous) Exemptions Order 1994).

2.3.2.1 Access Contracts

All such access contracts are subject to approval by ORR; if not approved, the contracts will be legally invalid. ORR has published a range of model access contracts, as well as guidance on the approval process. The model contracts have been published on the basis that ORR encourages, and expects, their use. Where the contracting parties wish to depart from a model contract, they must explain the reasons for this.

Sections 17, 18, 22 and 22A of the Railways Act 1993 relate to access contracts:

Section 17: http://www.legislation.gov.uk/ukpga/1993/43/section/17

Section 18: http://www.legislation.gov.uk/ukpga/1993/43/section/18

Section 22: http://www.legislation.gov.uk/ukpga/1993/43/section/22

Section 22A: http://www.legislation.gov.uk/ukpga/1993/43/section/22A

Model track access contracts for the below can be found on ORR's website:

- Passenger Services model contract
  Freight services model contract
  Charter passenger services model contract

Potential applicants need transparency concerning the allocated framework capacity and the remaining indicative capacity on a line. Therefore, and in accordance with Regulation (EU) 2016/545, Network Rail will publish by December 2016 a framework capacity statement which indicates the cumulative effect of capacity allocated through track access contracts on various parts of the network.

Model station access contracts for the below can be found on ORR's website:

- For stations operated by Network Rail
  - Station access contract for passenger services

  Station access contract for freight services
  Station access contract for charter passenger services
  - Station access contract for the pruposes of diversionary access

  For stations operated by other passenger train operators
  - Station access contact for passenger services (single station)

  Station access contract for passenger services (multiple stations)
  Station access contract for freight services
  Station access contract for charter passenger services
  Station access contract for the purposes of diversionary access

The below light maintenance Depot access contracts can be found on ORR's website:

- Light maintenance Depot access contract for access to a passenger service operator's depot
  Depot access contract for access to a passenger service operator's depot by a non-train operating beneficiary using the services of a third party train operator:

General Approvals

ORR has also issued a number of General Approvals in relation to certain types of access contract (and subsequent amendments to them). General Approvals prospectively permit parties to enter into certain types of access contracts without the need for specific approval from ORR. The following General Approvals have been published on ORR's website.

- Passenger Access (Model Charter Track Access Contract) General Approval
  Connection Contracts General Approval
- Freight Access (Track Access Contracts) General Approval
  Freight Facility (Ports and Terminals) General Approval
  General Approval (Stations)
  General Approval (Depots)

Further information about General Approvals can be found on ORR's website.

Track access guidance

ORR has published guidance that sets our their approach to regulating track access. This includes:

- criteria and procedures for the approval of track access contracts
  criteria and procedures for the approval of station access agreements
- criteria and procedures for the approval of depot access agreements
- policy on the approval of track access options, under which future access to a railway facility may be secured

ORR has published its conclusions on proposed changes to the contractual regime at stations. The changes relate to the standard rules that govern the relationship between all contracting parties at a station – the station access conditions. The revisions became effective from 11 November 2013.

Railway undertakings seeking access to and use of other facilities connected to the main rail network should refer to Section 5, in particular as regards details of additional and ancillary services.

2.3.3 Contracts with non-RU applicants

All such access contracts are subject to approval by ORR; if not approved, the contracts will be legally invalid. ORR has published a range of model access contracts, as well as guidance on the approval process. The model contracts have been published on the basis that ORR encourages, and expects, their use. Where the contracting parties wish to depart from a model contract, they must explain the reasons for this.

Sections 17, 18, 22 and 22A of the Railways Act 1993 relate to access contracts:

Section 17: http://www.legislation.gov.uk/ukpga/1993/43/section/17

Section 18: http://www.legislation.gov.uk/ukpga/1993/43/section/18

Section 22: http://www.legislation.gov.uk/ukpga/1993/43/section/22

Section 22A: http://www.legislation.gov.uk/ukpga/1993/43/section/22A

Model track access contracts for the below can be found on ORR's website:

- Model connection contract (for connecting facilities to Network Rail's network – see also the Connection Contracts General Approval 2014)
- Model freight customer contract (for use by freight customers, e.g. logistics companies, seeking to secure track access rights but not necessarily operate a train themselves)

Potential applicants need transparency concerning the allocated framework capacity and the remaining indicative capacity on a line. Therefore, and in accordance with Regulation (EU) 2016/545, Network Rail will publish by December 2016 a framework capacity statement which indicates the cumulative effect of capacity allocated through track access contracts on various parts of the network.

2.4 Operational rules

2.4.1 Railway Group Standards and the Rule Book

Railway Group Standards are technical standards and operating procedures contributing to safe railway system operation and interworking, compliance with which is mandatory. These documents are issued by RSSB and can be accessed on their website, some standards are supported by Guidance Notes, also issued by RSSB.

In addition, Network Rail has its own standards that are applicable to Network Rail, its contractors and its suppliers.

2.4.1.1 National Technical Rules

Railway Group Standards are, for the purposes of Interoperability, notified to the European Commission as National Technical Rules (NTRs). RSSB is responsible, on behalf of the industry, for proposing to the DfT those industry standards that should be notified against each of the TSIs for use on the GB mainline railway. The DfT may need to notify additional requirements to ensure the notified NTRs address all of the essential requirements.

The DfT publishes the NTRs and project-specific technical rules that it has notified to the European Commission for use in Great Britain. The lists of NTRs and related documents will be subject to periodic review in response to changes in the status of the TSIs, the closing out of open points in the TSIs and as GB standards are developed or withdrawn. The currently notified NTRs can be found on the gov.uk website.

2.4.1.2 National Safety Rules

The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (as amended) requires the safety management systems of infrastructure managers and railway undertakings on the mainline railway to be "established to ensure that the mainline railway system ... is in conformity with relevant national safety rules and relevant safety requirements laid down in TSIs". Copies of all RGSs can be found in the Standards Catalogue published on RSSB's website.

Additional information about the NSRs can be found on ORR's website.

2.4.2 Freight Train Loads (and Lengths)

The permitted maximum load (by weight) and length of a freight train are key parameters for a railway undertaking's business.

These dimensions vary according to the geography of the network (i.e. gradients, curvature, signalling, track layout and other features). The Freight Train Loads Books (FTLBs) contain maximum weight and length data for all lines of the GB network. The FTLBs were re-issued in an up to date format , however some of the data is commercially sensitive and cannot be made readily available. Please contact our Access Coordinator if you have specific queries (see Section 2.5 for more information and on how to access ELMTREE).

The loads and lengths are published by Network Rail geographical route[3] as follows

Book of 'Specially Authorised Loads'

3 Network Rail's operations are managed regionally in 'Route' organisations with the configuration as shown in the table.

- National issue - a national compendium of specific permissible freight train loads which exceed those shown in the Route Books – showing any special conditions or restrictions that apply.

Books of ‘standard’ loads

Books of ‘standard’ loads	
Book title	Network Rail Route coverage
Anglia	Anglia
Great Western	Wales, Western
London and North Eastern	LNE
London North Western	East Midlands, LNW
Scotland	Scotland
Southern	Kent, Sussex, Wessex

2.4.3 Other

The Railway Operational Code is detailed further in Section 2.3.1.1.4.

2.5 Exceptional transport

Special conditions of travel need to be applied to certain vehicles or loads because of their size, weight or other unusual features. These conditions may include speed restrictions, train marshalling restrictions and/or special instructions for passing trains on adjoining lines, and are determined individually by comparing the consignment with the characteristics of the route over which it is to travel.

In GB, the operational rules for special transport are set out in Railway Group Standard GO/RT3056/K (‘Working Manual for Rail Staff – Freight Train Operators - Vehicles Requiring Special Conditions of Travel’), which is accessible through RSSB’s website at: http://www.rssb.co.uk.

This requires Network Rail in conjunction with the railway undertaking to (a) determine a route which enables the traffic to pass, (b) determine what conditions of travel have to be applied, (c) organise production of a Special Train Notice for the movement, and (d) engage the services of a competent loads inspector if appropriate.

The Working Manual sets out how the special conditions are determined and managed.

The documentation required to permit an exceptional load to travel on the network is an ‘Exceptional Load Form’ (reference: RT3973). These are described in the Working Manual. The RT3973 form is needed not only to permit exceptional loads to travel. It is also necessary for the regular transit of most vehicles with their loads in the following categories (which encompass the majority of loaded freight trains):

- heavy axle weights (over the weight specified by the RA of the route)
- containers and swap bodies
- nuclear flask trains (loaded or discharged).

Network Rail has a user-friendly system for the production and distribution of RT3973 forms in the above categories known as ELMTREE. This system allows any operator with internet access to download current data in a bespoke, streamlined format. ELMTREE is accessed in a similar manner to the National Electronic Sectional Appendix (see Section 3.3.1).

For further information railway undertakings should email:

elmtreesupport@networkrail.co.uk.

Please see also Section 3.3.2.1 regarding loading gauge, section 4 regarding capacity allocation process and Section 5 for details of other services provided by the IM.

RNE has a process for international railway undertakings to supply the OSS (see Section 1.10.1) with technical data to establish with IMs the special conditions to be applied, and to agree either to accept the consignment into a compatible train path or to provide a specially-designed train path.

2.6 Dangerous goods

These are goods which are capable of posing a risk to health, safety, property and the environment during carriage by rail and are classified according to the Regulations concerning the International Carriage of Dangerous Goods by Rail ('RID'). Amended and supplemented requirements are set out in Annex II to EU Directive 2008/68/EC and to the Convention concerning International Carriage by Rail.

The national regulations are The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2012 (see http://www.hse.gov.uk/cdg/regs.htm), and the Carriage of Dangerous Goods: Approved Derogations and Transitional Provisions which refer to RID for much of the detailed requirements. Both sets of regulations apply to participants in the transport chain including IMs and railway undertakings.

Various Railway Group Standards and documents deal with dangerous goods and complement these regulations.This includes the Working Manual For Rail Staff – Handling & Carriage of Dangerous Goods In addition, Part E of the Network Code requires notification to Network Rail where a railway undertaking proposes to transport materials on the main rail network that are likely to cause environmental damage in the event of escape.

Dangerous goods are transported by those railway undertakings whose general safety management system arrangements have been approved by ORR through the safety regime ('ROGS'). See Section 2.2.4 for more information on ROGS.

The movement of dangerous goods traffic by rail is undertaken in both train load formations and mixed freight load formations, both subject to certain controls derived from the regulations and standards mentioned above.

Network Rail co-operates with railway undertakings by taking all reasonable actions for the safe and secure movement of dangerous goods traffic.

Please also see Section 5.4.3 for details of the person to contact regarding applications to move dangerous goods, Section 4.4 regarding capacity allocation processes and Section 5 for details of other services provided by the IM.

2.7 Rolling Stock Acceptance Process Guidelines

Any party wishing to introduce a new vehicle onto the main rail network or make a change to the operation or engineering of an existing vehicle must consider the effect of this on all other railway undertakings and on the IM. To aid railway undertakings in the discharge of this duty, Network Rail engages in compatibility consultation processes which provide a structured mechanism for assessing and agreeing any capacity, safety, regulatory and commercial issues that exist between the railway undertaking, the IM, and other railway undertakings. Consultation is required for:

(a) introduction of new rail vehicles
(b) extension of route(s) for existing vehicles
(c) substantial alterations to vehicles
(d) addition of vehicles with route clearance to vehicles permitted under a track access contract.

There are two processes involved:

- A demonstration of compatibility between a vehicle and the routes over which a railway undertaking wishes to operate it, as per Railway Group Standard GE/RT8270 Issue Two, resulting in a Summary of Compatibility

- Vehicle Change (Part F of the Network Code) which deals with the commercial issues associated with the introduction of new vehicles, or new routes for existing vehicles.

Network Rail is obliged to consult and publish Network Change proposals that have an effect on the operation of the network or on the trains that operate on the network. Further information about Network Change can be found in Section 3.3.2.8.

In all the cases (a - d) outlined above, the Vehicle Change process must be completed. The demonstration of compatibility process is required only where the introduction of a new train, change to a train with potential to affect compatibility with infrastructure or other railway undertakings, or the extension of route(s) for existing types of trains is planned.

In addition to this, railway undertakings must arrange for new vehicles to be assessed to prove that they are compliant with all relevant Railway Group Standards and/or Technical Specifications for Interoperability as part of their authorisation (by ORR); provision of this evidence facilitates an efficient compatibility assessment.

Further information on the authorisation process can be found on ORR's website:

Full details on rolling stock compatibility and change processes (including the timetable for completion of the process) can be found on our website, as part of Network Rail's 'Stakeholder Relations Code of Practice - Introducing new vehicles or changes to vehicles' document:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/stakeholder-code-practice/

An important consideration for the introduction of new rolling stock is its dynamic fit within the loading gauge of the network – that is, the physical space provided above rail level by structures such as tunnels, bridges and platforms.

Information regarding loading gauge is available in engineering standards and the Sectional Appendix. However, owing to the complexity of the subject, any party considering introducing new or modified vehicles is advised not to rely solely on written sources to guide their design. It is essential that they make early contact to discuss their plans and seek guidance from Network Rail's Gauging Team, by contacting:

GaugingData@networkrail.co.uk

When new or modified freight locomotives and wagons are being brought onto the network it is important not to make assumptions regarding the extent to which Standard Gauges may be relied upon. For further information regarding Standard Gauges and gauging process in general can be found on our website.

Further information regarding interoperability, ORR's role as the National Safety Authority and the authorisations it grants can be found on ORR's website and the DfT's website regarding Interoperability and standards.

Network Rail has its own test track and innovation centre with facilities that can assist with many aspects of new vehicle testing and introduction – see:

https://www.networkrail.co.uk/industry-commercial-partners/research-development-technology/ridc/

Register of Infrastructure (RINF)

A Register of Infrastructure has been developed as specified in the European Commission Implementing Decision (RINF Decision) and will be used for assessing routes prior to the start of operation.

The most recent RINF Decision (Decision 2014/880/EU from 26 November 2014) repeals the previous Decision 2011/633/EU and introduces a computerised common user interface ('CUI') which simplifies queries of infrastructure data.

The Register provides a consideration for the design processes for rolling stock sub systems, enabling technical compatibility assessment for fixed installations, monitoring interoperability status of the UK railway network and assessing route compatibility for planned trains. It is intended to provide an overview of general compatibility, though the railway undertaking, Vehicle Manufacturer or other authorised users will need to undertake more detailed assessments prior to a vehicle being cleared to operate on a new route.

For more information about the RINF, please contact:

National Registration Entity
Network Rail
The Quadrant:MK
Elder Gate
Milton Keynes
MK9 1EN
Tel: +44 (0) 1908 781 000
Email: RINF.NRE@networkrail.co.uk

National Vehicle Register (NVR)

The National Vehicle Register is a database of vehicles authorised to operate in Great Britain under the Railways (Interoperability) Regulations 2011. The Secretary of State has appointed Network Rail Infrastructure Limited as the Registration Entity, who is responsible for maintaining the Register. When a vehicle is placed into service for the first time, the Registration Holder is responsible for notifying details of the ECM to the Registration Entity.

The ROGS 2013 introduced a requirement that no person may place in service or use a vehicle on the mainline railway unless that vehicle has an ECM assigned to it, and that ECM is registered as such in the NVR. If you are not sure whether a vehicle has an ECM assigned to it, please contact the Registration Entity.

NVR Registration Entity
Network Rail
The Quadrant:MK
Elder Gate
Milton Keynes
MK9 1EN
Tel: +44 (0) 1908 781 346
Email: NVR@networkrail.co.uk

2.8 Staff Acceptance Process

RUs and IMs are responsible for ensuring that staff that are involved with or affect the movement of trains are competent to perform their duties. The competence requirements that are described and mandated in Railway Group Standards, which are supported by Approved Codes of Practice and Guidance Notes, are devised and published by the Rail Safety and Standards Board (for contact details, please see Section 1.8) and are available on their website at http://www.rssb.co.uk.

ORR has published guidance on Developing and maintaining staff competence.

Train Driving Licences

European Commission Directive 2007/59/EC (on the certification of train drivers) (the Directive) was transposed into domestic legislation by the Train Driving Licences and Certificates Regulations 2010 (TDLCR) which entered into force in March 2010.

The requirement to hold licences and certificates issued in accordance with TDLCR has come into effect for new cross-border and domestic drivers, existing drivers (both cross-border and domestic) are required to hold their licence and certificate by 29 October 2018.

The application and authorisation process is managed by ORR, further details can be found on their website.

Section 3 – Infrastructure

3.1 Introduction

Under the terms of its network licence, Network Rail is only funded to undertake activities designated as 'Permitted Business'. Permitted business is defined within the Network Licence as 'Network Business' and 'Permitted Non-Network Business'. Permitted Non-Network Business is defined as any business other than the network business and the exploitation of land (which includes the disposal of land within the meaning of Condition 7), of the type transferred to the licence holder pursuant to the Railtrack Transfer Scheme. Network Business is further defined as the business of providing and operating the licence holder's network, including the maintenance, renewal, replacement, improvement, enhancement and development of the network; and any ancillary service related to the business.

In order to undertake network business Network Rail follows a periodic review process which determines the requirements that need to be delivered in a five year period. The current Control Period (CP5) runs from 1 April 2014 to 31 March 2019.

Network Rail is responsible for maintaining and improving the railway infrastructure on the main line network, including:

- bridges
- drainage
- earthworks
- electrification systems (overhead line and conductor rail)
- level crossings
- signalling systems
- track
- tunnels
- viaducts.

The successful delivery of Network Rail's asset management responsibilities must be consistent with the reasonable requirements of stakeholders. Further information on asset management, including our asset management policy and strategy, can be accessed at:

https://www.networkrail.co.uk/running-the-railway/looking-after-the-railway/asset-management/

Asset Information

Network Rail's Asset Information Services organisation has been designed to serve Network Rail and the GB rail industry as the trusted source of asset-related data, information and insight from which informed business decisions can be made that optimally and sustainably balance investment, safety risk and performance across the railway as a system. Its services portfolio is being developed to transform the way data and information products are delivered across the rail industry, providing clarity and consistency to the specification, collection, evaluation and collation of data and the structured analysis and communication of asset information through visualisation tools and decision support modelling.

3.2 Extent of network

3.2.1 Limits

The Network Statement covers the entire railway infrastructure owned and operated by Network Rail and defined as the main rail network in Section 1.1. It also includes some information on connecting infrastructure such as freight sidings, depots and rail-connected ports. Broadly, Network Rail owns and operates the main line railway network in England, Scotland and Wales. The network is divided into eight operating routes and one 'virtual' route, as described in Section 1.1. The majority of this network is usually

available for normal traffic operations, except during periods of maintenance and renewal (which are both covered by the Engineering Access Statement described further in Section 4.5.1) and subject to the allocation of capacity for these purposes (as described in Section 4.5), though some minor lines may be deemed to be 'out of use' (including temporary situations) and may only be accessed by special arrangements. Some lines of the network are closed overnight due to the overnight closure of their signal boxes, a compendium of signal box opening hours and the Timetable Planning Rules (which contain information on Route Opening Hours in Section 2.2) are published on our website.

Network Rail is also the owner of rail infrastructure and assets on the Isle of Wight, but it has leased to Stagecoach South Western Trains Limited (although the Island Line brand has been retained) the entire railway land, infrastructure and assets on the island for a period of 25 years, commencing 1 April 1994. This is a vertically-integrated railway: Island Line is responsible for all railway operations and maintenance of the infrastructure.

Further details regarding the individual routes can be found in Annex D.

A network-wide, national scale map can be found in Annex E.

3.2.2 Connected railway networks

Network Rail's infrastructure, the main rail network, is connected to the railway infrastructure owned and/or operated by:

- HS1 – the railway between St Pancras International in London and the Channel Tunnel which connects with the international high speed routes to Paris and Brussels. It should be noted that the Network Statement produced by HS1 Limited deals with this route. HS1's Network Statement can be accessed at: http://highspeed1.co.uk/regulatory/network-statement
- Eurotunnel at a boundary point between Dollands Moor and the UK portal of the Channel Tunnel. The Channel Tunnel constitutes the only fixed rail link between Great Britain and other European networks. Eurotunnel's Network Statement can be accessed at: http://www.eurotunnelgroup.com/uk/eurotunnel-group/Eurotunnel-Railway-Network/
- London Underground Limited, in relation to the London Underground system
- Rail for London, a division of Transport for London, in relation to the East London Line
- Nexus (Tyne and Wear Passenger Transport Executive), in relation to the Tyne and Wear Metro
- Heathrow Airport Holdings Limited
- Transport for Greater Manchester, in relation to Manchester Metrolink.
- Associated British Ports, Hutchison Ports UK and other port authorities
- numerous 'heritage' railways, often operating in the leisure sector
- numerous third party industrial railways or sidings.
- various private freight terminals. Please refer to Section 3.6.2 for details.

Following public consultation, Network Rail submitted an application to the Secretary of State for Transport on 13 March 2015 for the necessary powers to construct and operate a chord at Tinsley to connect the existing Network Rail and South Yorkshire Supertram networks, enabling the operation of a pilot Tram Train service between Sheffield and Rotherham.

The Network Statements of other European IMs can be downloaded from the RNE website. Please see the following link: http://www.rne.eu.

3.2.3 Further information

Detailed information and data about the infrastructure is contained in the Sectional Appendix, which is described in Section 3.3.1.

The Sectional Appendix contains detailed data about the infrastructure of the main rail network, comprising running lines (but not necessarily sidings) on a line of route basis, usually in diagrammatic or tabular form. There are several references to tables within the Sectional Appendix as sources of detailed information in the following section.

3.3 Network description

3.3.1 Geographical identification (Sectional Appendix)

The operational configuration and physical attributes of the railway infrastructure controlled by Network Rail are described in the Sectional Appendix, which is required to be made available (in whole or part) to those accessing the railway infrastructure. It also contains any special instructions required to amplify the Rule Book in respect of operations at specific locations. Some railway undertakings choose to take one copy of each relevant Sectional Appendix and use it to create their own atlas by adding relevant commercial information.

The Sectional Appendix is available as a printed document or can be viewed electronically in a format which contains the latest weekly amendments via the National Electronic Sectional Appendix (NESA). Further information regarding access to NESA can be found at:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/national-electronic-sectional-appendix/

The dynamic nature of our infrastructure requires a regular stream of amendments, all of which must be made available to those in receipt of an Appendix. These are contained in the Weekly Operating Notice (WON) and then further collated into the Periodical Operating Notice (PON) which is issued every quarter. Copies of both documents are supplied electronically to those who have secured access rights or upon demand.

To obtain electronic copies of PONs and WONs, or to request a printed version at cost to requester, please contact planningpublications@networkrail.co.uk.

General queries regarding these documents can be progressed by contacting the Publications Team.

3.3.1.1 Track typologies

The definitive source of reference material for the various track typologies – single track, double track/multiple track etc. - is Table A of the Sectional Appendices.

3.3.1.2 Track gauges

The main rail network operates to one nominal standard track gauge of 1435 mm.

3.3.1.3 Stations and nodes

Annex D contains maps for each strategic route section including locations of stations on the main rail network.

There are approximately 2,550 stations on the main rail network, nearly all of which are owned by Network Rail. Network Rail manages 18 of the larger stations, see Section 1.1 for full list, the remaining stations owned by Network Rail are leased to RUs, usually franchised passenger operators.

The stations that are not owned by Network Rail are:

- Adrossan Harbour
- Aylesbury Vale Parkway
- Bromsgrove
- Coleshill Parkway
- Dunrobin Castle

- Fishguard Harbour
- Horwich Parkway
- Prestwick International
- Southend Airport
- Stranraer Harbour
- Warwick Parkway

For further information relating to these stations please contact our Leasing Manager.

Section 5.3 describes these arrangements in more detail. Distances between stations and other principal nodes, such as junctions, can be derived from Table A of the Sectional Appendix, see Section 3.3.1. Details about the maximum length of train that may be accommodated at a station can also be found in the Sectional Appendix. The exact table that carries this information differs by route publication.

3.3.2 Capabilities

3.3.2.1 Loading gauge

3.3.2.1.1 Loading gauge – freight vehicles

The physical dimensions of a railway vehicle and its load can be defined as conforming to one of a series of height and width profiles or standard freight gauges. These gauges can also be applied to a given route, for the purpose of ensuring that a railway vehicle will not come into contact with a lineside or overline structure, such as station platforms, canopies, overhead power supplies (catenaries), overbridges or tunnels.

Particular wagon and load combinations may actually be larger than the published gauge of a route with regard to key and critical dimensions. In these situations, following bespoke analysis, a particular combination may be able to run as an 'out of gauge' load to be moved by rail.

This analysis may require a special survey of the route in question to verify the currently available clearances, and the train may need to be operated at a reduced speed. In exceptional cases there may also be restrictions on trains using adjacent lines while the 'out of gauge' load is moving. For further information about the gauge capability of the network please refer to our website.

This link also contains guidance for obtaining access to the definitive source of detailed information regarding the gauge of the network – the National Electronic Sectional Appendix – see Section 3.3.1.

3.3.2.1.2 Freight loading gauges on the main rail network

The maximum standard gauge profile for each route varies, reflecting the constraints on rail vehicle size caused by lineside and overline structures. Detail of the freight loading gauge for each route section is given in the Sectional Appendix – see Section 3.3.1. Historically, Britain's railways were constructed by separate companies, often to differing loading gauges. Network Rail has adopted a set of defined loading gauge standards for freight vehicles. Railway wagons built to the basic loading gauge (W6A) and currently in operation are capable of operating on virtually any route on the national rail network. For advice on new build (or modified) wagons see Section 2.7 of this statement. The larger loading gauges tend to have greater headroom, to enable intermodal flat wagons to carry tall containers and swap bodies on certain routes. The following table provides some illustrative examples of the application of wagon and load conditions within these standard gauges.

:

Examples of load conditions within standard gauges						
Unit Width Wagon Type	Container			Container		
	8’			2500mm		
	FEA	IFA	IKA	FEA	IFA	IKA
Maximum Unit Height	Feet, inches			mm		
W6A	8'	8'	8'6"	2402	2448	2568
W7	8'	8'	8'6"	2402	2448	2585
W8	8' 6"	8'6"	9'	2638	2673	2793
W9	9'	9'	9'6"	2725	2770	2896
W10	9' 6"	9'6"	9'6"	2896	2896	2896

Full details and definition of the standard freight gauges currently in use in GB are set out in Railway Group Standard GE/RT8073 (Issue 3 – December 2015) ‘Requirements for the Application of Standard Vehicle Gauges’. The nomenclature W6 is generally taken to include the W6A profile (modified for third rail). The gauges W6A, W7, W8 and W9 are broadly incremental (i.e. the smaller-numbered gauges ‘nest’ inside the larger-numbered ones); however W10, W11 and W12 do not (e.g. W9 does not fit completely inside W10).

When new or modified freight locomotives and wagons are being brought onto the network it is important not to make assumptions regarding the extent to which Standard Gauges may be relied upon. Further information regarding the Standard Gauges (including Locomotive Gauge) can be found on our website.

3.3.2.1.3 Loading gauge – passenger vehicles

Modern passenger vehicles are built by a wide range of manufacturers to differing generic profiles and therefore these vehicles are cleared on a route-by-route basis as part of their acceptance onto the network. The gauging of passenger vehicles also has to take account of the stepping distances between station platforms and trains. Detail of the passenger train loading gauge clearance is given by train and vehicle class for each route section in the Sectional Appendix – see Section 3.3.1.

3.3.2.2 Weight Limits

In Great Britain, the rules for determining the RA value of a vehicle are set out in the RGS GE/RT8006 (‘Assessment of Compatibility of Rail Vehicle Weights and Underline Bridges’), which is accessible through RSSB’s website at: http://www.rssb.co.uk

Axle weight limits and equivalent evenly distributed vehicle loadings which the current network can carry vary according to the engineering characteristics for each route, particularly for underline bridge and viaduct structures. Axle weight limits and equivalent distributed vehicle loadings are classified into Route Availability (RA) values between 1 and 10.

Examples of permitted traffic weights as expressed by an RA number are given in the table below:

Examples of load conditions within standard gauges	RA
Two-axle vehicle - Gross Laden Weight (tonnes)	
Up to 27.9t	1
Over 27.9t and up to 30.4t	2
Over 30.4t and up to 33.0t	3
Over 33.0t and up to 35.5t	4
Over 35.5t and up to 38.1t	5
Over 38.1t and up to 40.6t	6
Over 40.6t and up to 43.1t	7
Over 43.1t and up to 45.7t	8
Over 45.7t and up to 48.2t	9
Over 48.2t and up to 50.8t	10
Four-axle vehicle (2 x two-axle bogies) - Gross Laden Weight (tonnes)	
Up to 66.0t	3
Over 66.0t and up to 71.1t	4
Over 71.1t and up to 76.2t	5
Over 76.2t and up to 81.2t	6
Over 81.2t and up to 86.3t	7
Over 86.3t and up to 91.4t	8
Over 91.4t and up to 96.5t	9
Over 96.5t and up to 101.6t	10

Depending on the total and distributed load effects of the vehicle, including effects produced by the spacing of axles in the vehicle and uneven vehicle loading, the maximum vehicle weight may need to be reduced so that the load effects from the vehicle (including payload) do not exceed the relevant RA value.

Maps indicating these groupings for current permitted traffic flows are contained in the Route Specifications and may be accessed by the following link:

https://www.networkrail.co.uk/running-the-railway/our-routes/

The maps provide a broad indication of the predominant capability on each strategic route section. The Route Specifications are not intended to be live operational documents and enquirers should refer to the Sectional Appendix to ensure that any data being used is the latest available information. Where the contents of the Route Plans or the Sectional Appendix in relation to this capability give rise to a need for clarification, enquiries should be made to Network Rail at the contact points given in Section 1.8.

A more detailed expression of the RA for each operational route section is contained in the Sectional Appendix. It should be noted that in some cases the passage of traffic heavier than the capability of structures may be permitted, subject to operating restrictions.

The RA detailed in the Sectional Appendix is valid for the permissible speed given in the Sectional Appendix (taking account of the permissible speed at each bridge) in conjunction with the following:

- the speed corresponding to the greater of any standard differential speeds
- the maximum RA for freight traffic at 75mph is RA8
- capability stated as RA9 or RA10 is for a maximum speed of 60mph (50mph on South East and Wessex Routes)
- capability stated as RA8 is for speeds in excess of 60mph up to a maximum of 110mph

- capability stated as RA7 is for speeds in excess of 110mph up to a maximum of 125mph.

For permissible speeds indicated by letters in the Sectional Appendix in Table A, for new vehicles and changes to the operation of existing vehicles the RA is limited to:

- RA5 for HST differential speed;
- RA3 for MU/DMU/EMU differential speeds;
- RA1 for SP differential speeds;
- RA for EPS speed is given on an individual basis for each vehicle type on the specific routes stated in the Sectional Appendix.

For passenger multiple units and locomotives with maximum permitted speeds in excess of 90mph and freight traffic with maximum permitted speeds in excess of the criteria set out for RA8 to RA10 above, additional checks are required to confirm the compatibility of vehicles and underline bridges. This is due to the a risk of potentially excessive dynamic effects including resonance arising from such rail traffic. Early consultation with Network Rail is recommended in such cases.

Early consultation with Network Rail is recommended when considering options for new vehicles or operations that exceed the RA of lines or the limits of validity of the RA System.

The capability of track to carry traffic is dependent on its construction and the maintenance, which is prescribed through the Asset Policies and is aligned to the traffic demands of the route. There are some routes where an increase in tonnage can be accommodated only with a prior increase in maintenance and renewal activity. Timescales associated with such work can range from several months in cases where increased maintenance is required through to several years where longer term work on structures is required. With this in mind, potential users of the network are encouraged to discuss their requirements with Network Rail at the earliest possible opportunity.

The guidance given also explains that it is important not to confuse total tonnage capability (which refers to the total volume of freight that a route may carry) with RA (which determines the axle loading of individual trains).

3.3.2.3 Line gradients

The gradients on a route will have a direct effect on the power to weight ratio necessary to operate a train effectively and efficiently. Gradients on the main line network may be as steep as 1 in 37. In such cases additional locomotives may be required on occasion to assist heavy freight trains. Some loss of performance may be experienced across all vehicle types but this will be accommodated in section timings. Short extent gradients up to 1:25 occur in very specific locations (such as Farringdon at 1:29 and other station approaches) due to surrounding non-railway infrastructure. There is no evidence of these conditions affecting historic services, however, the effect on drawbar load and traction performance should be considered by the proposers of future services.

Line gradients for each route section are established at the time of a route's construction. A summary map showing prevailing gradients on each route, classified according to severity, is provided in Annex F.

3.3.2.4 Line speeds

Each route section is governed by speed limits: normal, raised and wrong direction working. Different limits may be imposed for different types of passenger and freight trains. In some cases, in order to minimise potential damage to the track and structures, a special freight heavy axle weight speed restriction may apply over and above the restrictions for other types of trains. Network Rail is reducing the number of locations where such restrictions apply. Permissible speeds will also be governed by other factors, including the capabilities of the signalling or the nature of the track. Permissible speeds impact mostly on freight trains to varying degrees, and this is taken into consideration when constructing a timetable.

The permitted speeds per line for each route section are contained in Table A of the Sectional Appendix, see Section 3.3.1.

3.3.2.5 Maximum train lengths

The maximum length at which a train may operate is usually determined by infrastructure parameters such as length of sections between signals, length of loops or sidings that may be required to recess a slower train for a faster one to pass, ability to hold a train at a junction without detriment to other movements and the length of platforms and lines at terminals.

Permitted passenger train lengths are published in the Timetable Planning Rules - see Section 4.4.1.1.

During the train planning processes described in Section 4 (capacity allocation) it may be possible to identify opportunities to run longer trains which exceed the normal parameters (which are known as 'Operating Constraints'). This particularly applies to the operation of freight trains.

Network Rail will use all reasonable endeavours to facilitate operations that maximise the traction capability of the train and allow the above parameters to be exceeded where this can be done without importing undue risk of delay to the operation of others. This may dictate the need to apply other limitations as to the allocation of a train path (such as by time of day, so as to avoid busy periods).

Permitted freight train lengths are published in the Freight Train Loads Books (FTLBs). See Section 2.4.3.

Passenger train lengths may be limited by safety requirements at stations with short platforms or may require (in the case of trains with power operated doors) a capability for selective door operation. The railway undertaking is responsible for managing these safety risks.

When we renew and enhance the network we consult with stakeholders in order to identify effective opportunities to improve the infrastructure to accommodate longer trains.

3.3.2.6 Power supply

Around 42 per cent of the main rail network is equipped with power supplies for electric trains. These supplies divide into three groups:

- 25kV AC overhead supply, provided through overhead wires (catenary), collected by a pantograph on the locomotive or carriage roof
- 1500V DC overhead supply, provided through overhead wires (catenary), collected by a pantograph on the locomotive or carriage roof
- 750V DC third rail supply, provided by a third rail running alongside the running lines, collected by shoes fitted to the locomotive or carriage bogies.

Electrification at 25kV AC principally covers the West Coast, East Coast, the Thameslink suburban section of the Midland Main Line, the Great Eastern Main Lines and associated feeder routes, and most of the Glasgow suburban area. Electrification at 1500V DC is confined to a small area between Pelaw, Sunderland and South Hylton. Electrification at 750V DC is confined to the South East of England and Merseyside. New electrification is now generally constructed to the 25kV AC system.

Regenerative braking is supported by both the 25kV AC and 750V DC electrification systems(but not universally).

For freight services, trains may switch between locomotives at major hubs, such as between diesel and electric locomotives. Therefore, whether the points of origin and destination are electrified need not be a major constraint upon operation by electric traction. Indeed, third rail and overhead power supplies are normally excluded from freight terminals on safety grounds. In such cases, diesel shunting locomotives may be required to pull trains to and from the electrified main line network, or electric locomotives may be allowed to reverse trains into a terminal using

an electrified spur. This leaves the wagons beyond the electrified network, allowing for safe access by terminal operators and cranes.

A national scale map showing the general extent of electrification of the network is provided in Annex G. Further details of upcoming electrification works can be found within our Enhancements Delivery Plan.

3.3.2.7 Freight train capability – advice and support

Network Rail appreciates that the guidance given in this Section is technically complex. If you do not have access to any of the sources of data referred to or are in need of further guidance please email our Access Coordinator with your requirements.

3.3.2.8 Network capability

Network capability includes the linespeed, gauge, route availability and electrification capability of the network. Network Rail publishes the capability of the network in it's Annual Return.

3.3.2.8.1 Network Change

A Network Change is a change which is likely to have a material effect on the operation of the network or on the trains that operate on the network. Network Changes can either be:

- physical - e.g. changes to the layout, configuration or condition of the network
- operational - e.g. the introduction of a speed restriction on a section of track or a change to the way Network Rail maintains track.

Operational changes are only classed as Network Changes if they last, or are likely to last, for more than six months.

Network Rail publishes the below on it's website.

- every completed and current Network Change proposal
- every response to a Network Change
- determinations of matters referred to ADRR
- authorised variations
- standard forms for requesting, issuing and responding to Network Change proposals
- model terms and conditions

Further details regarding the Network Change process can be found in Part G of the Network Code.

3.3.2.8.2 Discrepancies between actual and published data

Discrepancies between the actual and published capabilities of the network are published in the Annual Return 2016.

We are taking action to resolve these discrepancies. Pending resolution, current operational capability of the network is stated in the National Electronic Sectional Appendix ('NESA'), see Section 3.3.1.

3.3.3 Traffic control and communication systems

Traffic control is exercised through a network of Route Control Offices. A National Operations Centre also exists that provides an overview of the control function. Controllers take action in relation to current train running and in response to incidents and emergencies to mitigate the impact of any disruptive events. In some cases train and freight operating companies' control staff are co-located in these control offices. In the following sections we set out details of the principal systems of control and communication.

3.3.3.1 Signalling systems

The rail network is controlled by a variety of signalling systems, ranging from modern electronic installations to the older mechanical types usually to be found on secondary routes. Electronic signalling systems operate points and signals remotely from signalling centres, though the extent of

control can vary according to the scope of the re-signalling scheme that replaced the older signal boxes. Mechanical signalling is usually operated by cables and levers, controlled from a local signal box which covers a relatively short length of line.

The type of signalling, and the spacing between signals, may impact on the line speed and capacity available on a section of track. A particular issue for new rail freight terminals is the impact of signalling on the development of new connections to the national rail network.

Signalling on principal routes is either the multiple aspect (three or four) colour-light type or semaphore signals. On some single-track routes fixed signals are used and can be supplemented by the use of tokens (see below).

Railway lines are divided into sections known as blocks. In normal circumstances, only one train is permitted in each block at a time. This principle forms the basis of most railway safety systems. Control of train movements is obtained through various block systems depending on the age of the signalling installation. The principal types of block system are:

- Track circuit block
- Absolute block.

Some other types of block systems currently in use on single track lines include:

- Electric token block
- Radio electronic token block
- Tokenless block
- One train working
- 'No signaller' token working

NESA Table A provides details of the system in use on individual sections. For information on how to request access to NESA please follow this link:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/national-electronic-sectional-appendix/

Traffic Management Systems

Network Rail utilises a variety of technologies to implement the routing of trains. Typically computer based train routing systems are used for all new signalling schemes. Whilst a number of these systems have automatic route setting capability, these have fairly limited understanding of the overall status of the railway. Network Rail is currently introducing Traffic Management Systems that are able to plan and replan train services such that the automatic route setting system is able to react more strategically in order to recover the service more quickly from perturbations to the timetable.

European Rail Traffic Management System ('ERTMS')

ERTMS in the form of the signalling component European Train Control System ('ETCS') Level 2 signalling is in operation on the Cambrian line between Sutton Bridge Junction (near Shrewsbury) and Aberystwyth and Pwllheli. Communications from the radio block centre to trains use GSM-R (see below) which gives the driver an in-cab movement authority. The passenger trains currently using the route have been fitted with an ETCS signalling system which interfaces with the infrastructure. For other trains an ETCS-fitted pilot locomotive is provided.

Network Rail has the following plans for further introduction of ETCS Level 2.

Great Western Main Line

ETCS Level 2 is planned to be implemented on Great Western Main Line infrastructure from Paddington to Bristol, initially as an overlay whilst retaining line-side signals and the AWS/TPWS train protection systems, both of which will be retained until decommissioning and removal from 2025/26. The removal date is dependent upon the train fitment programme.

The key driver for deployment of ETCS on Western Route is the need to replace the Great Western automatic train protection (ATP) system is expected to reach the end of its economic life around 2025/26.

The current deployment plan is to commission ETCS level 2 as an overlay from Heathrow Airport to the London Paddington area by the end of April 2019, in accordance with Network Rail's Crossrail Programme Key Milestone dates. ETCS Level 2 as an overlay is also planned to be delivered on the remainder of the Route between Paddington and Bristol Temple Meads. The exact timing of this implementation is currently under review recognising a number of factors including other business change activities currently being implemented or proposed for the Western Route.

Thameslink Core & approaches

ETCS Level 2 with line-side signals is planned to be operational to support the introduction of Automatic Train Operation between St Pancras (Low Level) and Blackfriars (the Thameslink Core Area) and on the Thameslink lines round to London Bridge, to support delivery of a 24 trains per hour train service through the Core Area from December 2018.

3.3.3.2 Traffic control systems

The Total Operations Processing System (TOPS) is a mainframe computer system that monitors in real-time all train movements on the network. Many reports on movements are derived automatically through the signalling systems but some manual reporting by staff at certain locations is required. Train Consists (statements of train formation) for freight trains contain essential information about the composition of trains, including vehicles being conveyed, weights and lengths, and any special information about dangerous goods. The operator inputs the Train Consists detail into the TOPS before its departure and the Consist remains 'live' in the TOPS until the train reaches its destination.

Train movement information in TOPS is compared with information about a train's schedule through a sub-system called TRUST to provide current train running information to a variety of other systems (such as Customer Information Systems on station platforms) and advance information to signallers and controllers. TRUST is also used to identify the source of delays to trains and, through an attribution process, the causes of delay are recorded for subsequent performance analysis.

3.3.3.3 Communication systems

Railway Telecommunications systems provide services used in safe train movement authorisation, direct operation of the railway and customer information. The Railway Telecommunications network consists of:

- Transmission systems (e.g. core, aggregation, access and network management systems)
- Operational voice communications including safety-related voice communications (e.g. fixed lineside telephone systems and train borne and hand portable radio systems such as GSM-R, Level Crossing Public Emergency Telephone Systems)
- Cabling (e.g. fibre and copper cabling) and cable route
- Telephone exchanges
- Level Crossing CCTV systems
- Driver Only Operation CCTV and mirrors
- Station Information and Surveillance Systems
- Security (e.g. firewalls, security systems and security operations centre)
- Business fixed and mobile voice & data networks and systems

Below is a brief explanation of our transmission systems and operational voice communication systems:

FTN – Fixed Transmission Network (SDH)

The FTN is a national communications transmission network based on SDH (Synchronous Digital Hierarchy) technology which is used as the communication bearer to carry operational traffic such as GSM-R, Signalling transmission, SCADA transmission, axle counters and operational voice systems. The platform was designed and delivered

within the FTN/GSM-R programme with a primary purpose of carrying the GSM-R traffic from the trackside masts back to the core platforms in Stoke and Didcot. In addition the platform has been used to carry Signalling and SCADA data back to the relevant central locations (Infrastructure Control Centre/ Rail Operating Centre). The asset-base and technology is now reaching life expiry and will require renewal in the near future.

FTNx – Fixed Transmission Network Enhanced (DWDM, IP/MPLS)

The FTNx is a national(*) communications transmission network based on DWDM (Dense Wave Division Multiplexing) utilising OTN (Optical Transport Network) technology and IP/MPLS (Internet Protocol/ Multi-protocol label switching) technology which is used as the communication bearer to carry operational traffic such as GSM-R, Signalling transmission, SCADA transmission, axle counters, CCTV, Corporate and Operational Voice systems. The platform was designed and delivered in CP5 and utilises next-generation industry standardised technology (Ethernet) to carry transmitted traffic from the trackside to various end-locations (ICC/ Rail Operating Centres). The FTNx transmission network has been built and designed to replace the FTN (Fixed Transmission Network) network over a period of time and to deliver additional capacity, capability and improved service offerings via next-generation COTS technology and enabling the foundations of a Digital Railway.

* At the present time the IP/MPLS core network is deployed across 8 core locations and circa 25 aggregation locations. National coverage is planned via CP5 and CP6 enhancement and renewal programmes.

Distribution and Access Networks utilising the core are being deployed and at present the number of live nodes exceeds 140. The network has been design to carry and support the latest TDD (Time Division Duplex) mobile services and their clocking requirements. The FTNx core and aggregation network is certified to CAS-T.

NRN – National Radio Network

Following the introduction into operational service of the national GSM-R network, NRN was withdrawn from operational service in December 2015. This includes the use of NRN in back to back mode.

CSR – Cab Secure Radio

Following the introduction into operational service of the national GSM-R network, and migration of operators onto this system (including HS1 and HEX in 2016), CSR has been largely removed from operational service. The withdrawal of the remaining Thameslink sections is planned to be completed by the first quarter of 2017.

IVRS – Interim Voice Radio System

IVRS is a service used for emergency communications between train crew and signaller in defined geographical areas as shown in Table A of the Sectional Appendix, see Section 3.3.1. The facility was used as a temporary measure until GSM-R went live at specific locations where axle counters replaced track circuits as the means of train detection. IVRS decommissioning is planned to be completed by the first quarter of 2017.

GSM-R

GSM-R is a secure radio system used for communication between drivers and signallers that has been introduced through a national programme as a direct replacement for NRN and CSR. It allows signalling staff to address drivers of individual trains based on journey details rather than stock number and to create emergency calls and other broadcasts to all trains in pre-defined areas to alert them to incidents or operational circumstances that affect them. Drivers may also create similar emergency calls in the event of an emergency that threatens the operational safety of other vehicles.

The national programme to deliver the GSM-R network was completed in July 2014. Fleet fitment, including HEX and HS1 was completed in 2016. GSM-R, an essential subsystem of ERTMS, is mandated by the EC CCS

TSI. (European Commission – Control Command and Signalling – Technical Specification for Interoperability).

A map showing live GSM-R coverage is provided in Annex H.

3.3.3.4 Train Control Systems

Shunting locomotives specifically confined to marshalling yards may be exempted from train control systems.

AWS – Automatic Warning System

AWS is a mandatory system fitted in driving cabs on locomotives, Driving Van Trailers (DVTs), multiple-units and on-track machines. It provides a visual and audible reminder to the driver of:

- a 'warning' or 'clear' signal indication, or
- certain specific permanent or temporary speed restrictions.
-

Failure of the driver to acknowledge AWS warning indications will automatically apply the train brakes.

TPWS – Train Protection Warning System

TPWS is a mandatory automatic system fitted in every driving cab on locomotives, DVTs, multiple-units and on-track machines, which is designed to:

- initiate a brake application should the train pass selected signals at danger or approach selected signals at danger too fast
- initiate a brake application should the train approach buffer stops too fast
- initiate a brake application where a train approaches certain permanent speed restrictions too fast.

ATP – Automatic Train Protection

ATP is the system utilised on specific sections of the network to provide absolute train control in the event of a driver failing to control the train in accordance with the permitted speed or in the absence of a movement authority. It is only fitted on certain trains operating on the Great Western Main Line and the Chiltern line. Further expansion of ATP is not envisaged as this functionality will be provided by the future ETCS implementation.

3.4 Traffic restrictions

Information relating to general restrictions is covered in Table D of the Sectional Appendix. This deals with each of the route sections as set out in Table A of the same Sectional Appendix (see Section 3.3.1)

3.4.1 Specialised Infrastructure

Network Rail may designate particular sections of its infrastructure for use by specified types of rail service and may give priority to that specified type in the allocation of infrastructure capacity. This is subject to certain matters as set out in Regulation 25 of the Access and Management Regulations. The purpose of such a designation is to enable priority to be given to the specified type of rail service, even though there may be other types of rail service which conform to the characteristics necessary to use that infrastructure. The identification of characteristics of rail service that may be precluded from using sections of infrastructure is not in itself such a designation.

There are two sections of the network which are designated as specialised infrastructure:

- High Marnham test track
- Old Dalby test track.

In each case the facility has been subject to specific investment to enable it to serve as a testing facility for new and modified vehicles for the benefit of the rail industry. In order to safeguard the primary purpose of these test

tracks the normal arrangements for network access do not apply and special charges are made for access to reflect the special services provided. All access is granted subject to availability on a 'first come, first served' basis at the point of application. Applications for access are made to the facility manager via our Retail Innovation and Development Centre who can be contacted at:

RIDC.RIDC@networkrail.co.uk

3.4.2 Environmental restrictions

The operation of trains on the main rail network is subject to the requirements of UK environmental and related law, including statutory nuisance such as noise and fumes, and deposit of waste from train toilets, with which railway undertakings and Network Rail are required to comply. On the discharge / and or deposit of waste from train toilets, we recognise the exemption that covers some old rolling stock which has no capacity to have grey water and toilet waste retention tanks retrofitted. In such cases, as stipulated in the exemption, discharges on the track may happen but must not exceed 25 litres of water per discharge.

Section 122 of the Railways Act 1993 also provides a level of statutory authority as a defence to actions in nuisance and certain other legal proceedings.

3.4.3 Dangerous Goods

The Working Manual for Rail Staff (Pink Pages) document sets out the circumstances and conditions for the movement of dangerous goods consignments by rail. The following permanent restriction is in force:

A train conveying Dangerous Goods may not pass through the Severn Tunnel at the same time as any other train. This restriction can impact on timetable capacity through the Tunnel. This restriction applies to a c. 4½ mile (7.25 kilometres) section of the network. The Tunnel is located between Pilning (Avon) and Newport (South Wales). An alternative route is available via Gloucester.

3.4.4 Tunnel restrictions

Table A of the Sectional Appendix lists each tunnel structure giving its precise location and length. Examples of specific tunnel restrictions in force are shown below:

Trains hauled by certain locomotive types may not pass through Tankersley Tunnel (South Yorkshire) due to limited clearances. The structure is located between Meadowhall and Barnsley (South Yorkshire). An alternative route to this tunnel is available via Swinton (South Yorkshire).

Trains worked by diesel traction may not normally pass through the underground sections of the electrified Merseyrail system, due to the limited ventilation system and risk of fire.

Full details of restrictions are contained in the Sectional Appendix. The infrastructure is subject to change through planned renewal and enhancement activity, which can impact on the need for tunnel restrictions. See Section 3.3.1 for further information.

3.4.5 Bridge restrictions

Information relating to general restrictions on Route Availability is covered in Table D of the Sectional Appendix. These deal with each of the route sections as set out in Table A of the same Sectional Appendix. The infrastructure is subject to change through planned renewal and enhancement activity, which can impact on the need for bridge restrictions, see Section 3.3.1 for further information.

3.4.6 Restrictions due to natural elements

Restrictions are imposed from time to time to manage the risk associated with adverse or extreme weather. These restrictions may consist of speed

restrictions, train service reductions, or complete suspension or curtailment of services. Network Rail has defined procedures for dealing with these issues which, broadly speaking, fall into two categories:

- direct impact of weather or seasonal factors:
- high wind speeds or gusting in excess of 50 mph, including the impact upon overhead line equipment (25kV AC electric traction system)
- high tides which could breach exposed sea defence walls
- precipitation (rain or snow), including the impact of flooding, flash floods, embankment saturation and snow drifts
- extremes of temperature, including high rail temperatures, icing upon the conductor rail (750V dc electric traction system), icing on overhead line equipment, icicles.

Indirect impact of weather or seasonal factors:

- poor railhead adhesion caused by leaf fall contamination.

3.5 Availability of the infrastructure

Infrastructure availability is affected by the restrictions required for the purpose of maintenance, renewal and enhancement works, which are set out in the Engineering Access Statement (EAS). Further information regarding the EAS is included within Section 4.5.

The EAS describes the rules regulating the arrangements for engineering access to the rail network.

It sets out the location, number, dating and duration of possession access (restrictions of use) which Network Rail requires to deliver inspection, maintenance, renewal and enhancement work activities to the infrastructure.

Sections 1 to 3 of the EAS set out the national process for negotiating and securing engineering access to the rail network.

Sections 4 to 7, the bulk of the EAS document, contain route-specific details of our engineering access opportunities and requirements.

3.6 Service facilities

Please refer to the Connected Facilities Details (Section 5.2.3) for more information.

3.6.1 Passenger stations

Details of facilities at the 18 stations managed by Network Rail (as listed in Section 1.1) may be accessed at:

https://www.networkrail.co.uk/communities/passengers/our-stations/

The extent of most facilities provided at stations managed by railway undertakings is usually determined by the facility owner. Details of the facilities at these stations can be accessed at:

http://www.nationalrail.co.uk/stations/.

Platform heights at all stations on the main rail network in Great Britain are generally higher than those encountered on railways in continental Europe. The stepping distance (both vertical and horizontal) between platforms and trains is part of the consideration afforded in the course of acceptance of new rolling stock onto the network. More information on rolling stock acceptance is given in Section 2.7.

3.6.2 Freight terminals

There are several types of facilities that are commonly described as freight terminals, and there are other facilities that have a capacity to receive or despatch goods, operate as a terminal point in freight transport and serve, or potentially serve, multiple final customers. Network Rail is the freeholder at a number of terminals nationwide (variously it then under leases to railway undertakings or directly to end users) but as the IM it does not operate freight terminals nor offer any terminal facilities

Any party wishing to use these terminals would need to reach a separate agreement with the facility owner or service provider of that terminal, to whom the Access & Management Regulations apply.

Network Rail maintains information that is relevant to enquiries for the purposes of seeking to identify existing terminals or to build new ones. This information can be accessed at:

https://www.networkrail.co.uk/industry-commercial-partners/rail-freight/

3.6.3 Marshalling yards and train formation facilities

(including shunting facilities)

Though some train formation yards are owned by Network Rail and leased to other railway undertakings. Network Rail does not generally control access to any train formation yards, with four specific exceptions;

- Carlisle Kingmoor
- Ipswich Reception Sidings.
- Wembley WEFOC
- Doncaster Up Decoy.

Any prospective railway undertaking or other entity wishing to use one of the non-Network Rail managed yards for train formation or recessing purposes would need to reach an agreement with the Facility Owner of that yard.

Applications to use Carlisle Kingmoor yard or Ipswich Reception Sidings would be considered by Network Rail as part of the capacity allocation process described in Section 4.

3.6.4 Storage sidings

National Supply Chain hubs

Network Rail does own some storage sidings in connection with its infrastructure haulage operations, however these are specialist sites that would not be generally available for storage of other types of train, vehicles or other rail-borne equipment.

Network Sidings

In some circumstances network sidings may be used for stabling or storage of vehicles where this can be accommodated without detriment to infrastructure operators. Applications for access should be made as for the rest of the network in accordance with the process described in Section 4.

Nodal Yards

Network Rail currently has 3 Nodal Yards: Ipswich, Doncaster Up Decoy and Wembley WEFOC. In terms of availability and planning they are managed as part of the national network and serve to provide line of route recess, regulation & crew relief capability for freight services. They are effectively grouped sets of freight loops with a pattern of dynamic service occupancy and are not intended for long term storage of vehicles.

Railway Undertaking sidings

Facilities to store trains, vehicles and rail-borne equipment may be available in yards, terminals and depots operated by other railway undertakings, as described in other sub-sections, but would require separate agreement for use with that Facility Owner.

3.6.5 Maintenance facilities

Though some light maintenance depots are owned by Network Rail and leased to other railway undertakings, as IM, Network Rail does not operate nor offer facilities at such depots.

The operator of a depot is known as a depot facility owner. Other train operators, or third parties procuring depot services on behalf of a train operator (known as beneficiaries), who want to use the depot must enter into an access contract with the relevant depot facility owner. ORR's approval of the agreement is usually required. Please refer to the Connected Facilities Details (Section 5.2.3) for more information.

3.6.6 Other Technical facilities

HABD – Hot Axle Box Detector(s)

This is a piece of line-side equipment, consisting of sensors mounted at rail head height and designed to detect abnormal temperatures in wheel arrangements of passing train services. This system facilitates the operation of trains without the need for frequent intermediate stops for physical examination where the passage of the trains cannot otherwise be physically observed from remotely positioned signalling centres.

The equipment transmits a message with the passing of each train to the signalling centre responsible for the portion of line concerned. When an alarm is generated, a record will be generated showing the wheel (axle) arrangement, which allows the signaller to identify the position of the defect and bring the train to a stand at a suitable location to facilitate confirmatory inspection by the train driver.

There are 217 such installations, predominantly on routes with significant freight traffic operating over long distances.

A list of the installations and their location is provided in Annex C.

WILD – Wheel Impact Load Detector(s)

This is track-mounted equipment that registers the impact upon the railhead of each wheel of a passing train. This equipment is designed to give early warning of latent defects in the wheel surface, tyre or tread and to generate an alarm message where the output reading exceeds the required threshold.

The equipment transmits a message with the passage of each train to a nominated control centre. When an alarm message is generated, staff at the control centre will be responsible for identifying the train involved and notifying the signaller at the centre through which the train will shortly pass. This will enable the train to be stopped at a suitable location for the driver to examine the wheel-set(s) concerned.

Network Rail has started to install an advanced measurement system for Weighing In Motion (WIM) and Wheel Defect Detection (WDD) of trains. This system takes into account the track profile to provide a more accurate output that is less susceptible to track condition.

There are installations at 27 sites across the network. A list of these installations and their location is provided in Annex C.

PME – Pantograph Monitoring Equipment

This is installed on routes equipped with the overhead line electrical system (25kV, 50Hz AC), with line-side equipment that calculates the uplift of each operating pantograph of a passing train. This installation is designed to give early warning of latent defects in the pantograph equipment and to generate an alarm message where the output reading exceeds the required threshold.

The equipment transmits a message with the passing of each train to a nominated control centre. When an alarm message is generated, staff at the control centre will be responsible for identifying the train involved and notifying the Train Operator to which the train belongs. The Train Operator's Control will then make arrangements for the driver to examine the pantograph(s) concerned at a suitable location.

There are installations at 13 sites across the network. A list of these installations and their location is provided in Annex C.

3.6.7 Maritime and inland port facilities

These may be provided by the operators of rail connected facilities, but are not provided directly by Network Rail.

Further information about maritime and inland port facilities can be found on our website or on http://www.railfreightlocations.eu/.

3.6.8 Relief Facilities

These may be provided by the operators of rail connected facilities, but are not provided directly by Network Rail.

3.6.9 Refuelling facilities

Network Rail does not operate nor offer any diesel refuelling facilities. Any prospective new operator wishing to use fuelling facilities would need to reach an agreement with the relevant facility owner.

Provision of water for steam locomotives is not offered by Network Rail as standard and is usually undertaken by the Railway Undertaking. There are situations where Network Rail may be able to assist with provision of water for steam locomotives however this cannot be guaranteed, this dependent upon location and will be considered on a case by case basis.

3.7 Infrastructure development

The main rail network is constantly changing to meet the needs of our customers and other stakeholders.

Infrastructure projects that are in progress or being planned for the period to March 2019 are contained within Network Rail's CP5 Delivery Plan (published 31 March 2014) and subsequent updates.

Please see Section 3.8 below for links to these documents.

3.8 Delivery planning and the Long Term Planning Process (LTPP)

3.8.1 Delivery planning

Network Rail has a key role in a complex industry, with responsibility for the safe operation, maintenance, renewal and, in co-operation with railway undertakings and funders, the development or enhancement of the national rail network.

In March 2014 Network Rail published its Delivery Plan, which sets out how the company will deliver the outputs required in Control Period 5 (2014-2019). This forms the 'contract' against which the Office of Rail Regulation (ORR) will measure our performance. It is also intended to assist train operators, funders and stakeholders to plan their businesses with a reasonable degree of assurance in CP5. We will update our plan for material changes as we progress through the control period.

In addition, Network Rail produced an Enhancements Delivery Plan for CP5 which contains the details of each proposed enhancement to the network including the outputs, scope and milestones for each project. It is used both by the regulator, to hold us to account, and by our customers and funders, to give them visibility of our plans. Network Rail publishes an updated version of the EDP every quarter.

In January 2016 an update to the Enhancements Delivery Plan covering England and Wales was published in draft to support the Hendy review of Network Rail's enhancements programme for CP5. The review confirmed that Network Rail will continue to deliver a very significant enhancement programme during the period to 2019. Most of the originally planned projects will still be delivered in CP5 with significant benefits for passengers and freight users. We will work with our industry partners to deliver the planned benefits to the end user as soon as they can be achieved, so the benefits of other industry changes such as new franchises are delivered. The Department for Transport has now formally accepted the replanning of the enhancements portfolio for CP5 which was proposed in the Hendy review.

3.8.2 Long Term Planning Process (LTPP)

Network Rail has established the Long Term Planning Process (LTPP), which was developed in consultation with rail industry partners to build on the success of the Route Utilisation Strategy (RUS) programme, and to

inform future franchise specifications and discussions on rail industry funding requirements.

The LTPP (and, in particular, the Route Studies) provides a key part of the evidence base for future updates of the Network and Route Specifications. It brings together all the medium and long term plans for the development of a route, drawing on sources including RUSs, renewal plans, development of major projects and resignalling programmes.

The LTPP consists of a number of different elements including Market Studies, Network Strategies (Network Studies), Route Studies and Cross-boundary analysis, which, when taken together, seek to define the required future capability of the network, both in the shorter term (ten years) and the longer term (thirty years).

The market studies form the first phase of the new Long Term Planning Process. They were published in November 2013 and established by ORR in January 2014. There are four market studies in total:

- Freight
- London and South East
- Long Distance
- Regional Urban

A link to the established market studies can be found below, these set Contingent Outputs, which are then used to inform the development of Route Studies.

The Route Studies, informed by the Market Studies, follow a similar process to the RUSs, identifying how to deliver the Contingent Outputs, gaps between the present services and those Outputs, and options to address those gaps. So far, six final Route Studies have been published:

- Anglia
- East Midlands
- Scotland
- South East Sussex
- Wales
- Wessex
- Western

As of August 2016 there are currently three Route Studies underway with the West Midlands and Chilterns Route Study published as a draft for consultation:

- East Coast Main Line
- Kent
- West Midlands and Chilterns

In addition to Route Studies, Network Rail has established a number of Network Studies, which consider network wide enhancements for the longer term, for example, an electrification strategy. These strategies consider the case for future investment to support the increased efficiency and capacity of the rail network.

There are currently three Network Studies underway:

- Electrification
- Freight
- Interoperability.

The Freight Network Draft Study for Consultation has been published on 11 August 2016. More information on Network Studies can be found on Network Rail's website.

As well as the aforementioned elements of the LTPP, a cross-boundary analysis work stream also plays a key role. It enables appropriate treatment of cross-boundary services in the Route Studies and/or assesses the impact of strategic options on ‘route’ services. It identifies strategic requirements and issues for cross-boundary services, for example how best to get freight traffic to Scotland in a post High Speed 2 scenario.

Section 4 – Capacity Allocation

4.1 Introduction

Network Rail is responsible for the overall timetabling process on its part of the GB rail network. Railway undertakings provide Network Rail with details of the trains they wish to run on the network, and Network Rail co-ordinates these capacity requests into a working timetable.

Railway undertakings have specific rights to be allocated capacity on those parts of the GB rail network for which Network Rail is IM. These are set out in a Schedule (usually Schedule 5) to each track access contract that the railway undertaking has with Network Rail. Provision is also made for those who aspire to obtain a track access contract to have access to capacity information. This is to assist them in obtaining the necessary track access contract and train slots in the timetable (see Section 2.2.1).

4.2 Description of process

How Network Rail allocates capacity is set out in the Network Code Part D, Section 2 (please see Section 2.2.1).

Requests for capacity should be made in the form detailed in the Network Code D2.5.

Where international train slot requests are concerned, RNE has provided for a harmonised timetabling process across Europe. RNE's handbook sets out how railway undertakings and other applicants can request and obtain international train slots . Information is available via the RNE website at:

http://www.rne.eu/sales-timetabling/timetabling-calender/

Network Rail is a member of North Sea-Mediterranean Rail Freight Corridor, the capacity allocation process for which is located in Book IV of their Corridor Information Document.

Customers with international train slot requests may also take advantage of the OSS arrangements mentioned in Section 1.10.1.

4.3 Schedule for Path Requests and Allocation Process

So that timetable changes occur on the same day across Europe, the Network Rail annual timetable starts on the Sunday immediately after the second Saturday in December. This is known as the Principal Timetable. To allow railway undertakings to fine-tune their services mid-way through the year, a new updated timetable is published each May. This is known as the Subsidiary Timetable.

The 2018 Principal Timetable runs from Sunday 10 December 2017 to Saturday 19 May 2018, and the Subsidiary Timetable runs from Sunday 20 May 2018 to Saturday 8 December 2018.

The key dates for the production of the 2018 Principal Timetable (December 2017 change date) are set out in Annex B but a summary is set out below:

- 5 August 2016 – Network Rail publishes the International Freight Train Notice
- 16 September 2016 – Network Rail begins formal consultation on the draft Timetable Planning Rules and Engineering Access Statement
- 16 Septemer 2016 – Network Rail to provide an updated International Freight Train Notice

- 18 November 2016 – Network Rail begins the process of developing the New Working Timetable, by working with railway undertakings to understand their aspirations for changes to their services
- 6 January 2017 – Notification of Provisional International Paths
- 5 February 2017 - Network Rail publishes the Timetable Planning Rules and Engineering Access Statement
- 3 March 2017 – Priority Date by which Operators submit their access proposals for the 2017 timetable to Network Rail. Any requests submitted after this date will only be accommodated as far as reasonably practicable
- 9 June 2017 – Network Rail publishes the New Working Timetable which is subject only to changes as a result of any appeals, which must be made within 20 working days.

The relevant dates for the production of the 2018 Subsidiary Timetable (May 2018 change date) are:

- 24 February 2017 – Network Rail begins formal consultation on the draft Timetable Planning Rules and Engineering Access Statement
- 28 April 2017 – Network Rail begins the process of developing the New Working Timetable, by working with railway undertakings to understand their aspirations for changes to their services
- 14 July 2017 – Network Rail publishes the Timetable Planning Rules and Engineering Access Statement
- 11 August 2017 – Priority Date by which railway undertakings submit their access proposals to Network Rail. Any requests submitted after this date will only be accommodated as far as reasonably practicable
- 17 November 2017 – Network Rail publishes the New Working Timetable which is subject only to changes as a result of any appeals which must be made within 20 working days.

Following the Priority Date, Network Rail works for a period of 14 weeks to construct the New Working Timetable. Network Rail seeks to deliver the railway undertakings' aspirations but must construct the timetable in accordance with the priorities and Decision Criteria which are set out in Part D of the Network Code. These decision criteria specify Network Rail's obligations to define how it determines allocation priorities in accordance with Regulation 29 (3) of the Access, Management and Licensing Regulations.

Network Rail will publish the New Working Timetables for 2018 on 09 June 2017 and 17 November 2017. Railway undertakings have a right of appeal if they are dissatisfied with Network Rail's decisions.

4.3.1 Schedule for Working Timetable

Each year at D-67 before the principal timetable change date Network Rail publishes a schedule of dates for timetable production. This is set out in Annex B to this Network Statement. The Network Code sets out when each step should be completed by D – x. Each New Timetable starts at D-0 so D-1 is at 17:00 on the Friday one week before the timetable change. The various steps then number back from this point.

Network Rail produces a more comprehensive document[4] setting out all the dates and stages involved in creating the Principal and Subsidiary timetables and the weekly amended timetable process. Copies of this document are supplied free of charge to all people and organisations who participate in the capacity allocation process. Initial copies are available from Network Rail at the address shown in Section 1.8 above and on the Network Rail website

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/

Potential railway undertakings are advised to contact Network Rail to obtain further information about the timetabling process.

Risk Assessment and Briefing of Timetable Change

4 Operational Planning Production Schedule.

The timetabling process includes a detailed review and assessment of forthcoming changes to the timetable introduced in December and May each year. It also considers the effects of past changes including feedback on actions and looks ahead to the implications of change aspirations proposed to take place beyond the next timetable.

The Timetable Change Risk Assessment Group (TCRAG) chair shall review all timetable changes for their significance and determine the appropriate level of assessment to be carried out based on local knowledge and information.

The Timetable Change Assurance Group (TCAG) carries out a high-level assurance check to monitor the activities of TCRAGs and also reviews aspirations for change beyond the next timetable.

TCRAG may also be required to assess major engineering works (e.g. blockades) and key business change activities in advance of any prescribed timetable being available. TCRAGs of this type may be held a significant period before such a change may take place and may use service specifications forecasts to allow the assessment to be undertaken. This may include service specifications developed by Events Steering Group (ESG).

TCRAG chairpersons shall review the Calendar of Events (CoE) and the associated list of ESGs which detail where timetables are or may be changing.

4.3.2 Schedule for Train Path Requests Outside the Timetabling Process

(Ad-Hoc Requests)

After the New Working Timetable is published railway undertakings may wish to obtain additional train paths or amend any of their train paths already included. These changes are called Timetable Variations and the process for dealing with them is set out in Condition D3.1 of the Network Code.

In line with Network Rail's obligations under the Access and Management Regulations and Network Rail's network licence, our procedures for dealing with requests for capacity allocation (including ad hoc requests) are designed so that we treat all current and potential railway undertakings (including freight operators and the operators of international services) in a fair and non-discriminatory way.

Railway undertakings can make ad hoc requests for capacity under condition D3.3 of the Network Code to meet variations in traffic and can be handled through the train planning process down to 48 hours notice.

Variations within the last 48 hours before operation are handled by Network Rail's Operational Controls.

Changes for engineering work under condition D3.4 are planned on a weekly basis with the objective of having a confirmed timetable 12 weeks in advance of operation which can then be used, with confidence, by railway undertakings, and for their passengers to plan their journeys.

However sometimes Network Rail has to undertake short notice possessions. These are dealt with under condition D3.5 of the Network Code.

4.4 Allocation processes

4.4.1 Coordination process

The coordination process regarding requests for infrastructure capacity referred to in Regulation 23 of the Access, Management and Licensing Regulations is set out in Part D2 of the Network Code.

For the 2018 timetable, Network Rail is liaising with all railway undertakings to identify significant Events that will be taking place over the remainder of CP5 and into the early part of CP6 and recording this in a Calendar of Events. An Event is a major change which may require alteration to an existing timetable that is more extensive than usually

occurs during the bi-annual timetable change. Smaller changes that do not qualify as Events are recorded and distributed using the same approach. These changes are managed through an Event Steering Group established in accordance with Network Code D7. A draft version of the 2018 Calendar of Events was published at D-64 (16 September 2016). The final version of the Calendar of Events is due to be published at D-54 (25 November 2016).

Network Rail has published a Strategic Capacity Statement Code of Practice. This sets out how Network Rail will produce the Strategic Capacity Statement, which details the strategic paths that are identified for potential future use on key routes on Network Rail infrastructure. The Strategic Capacity Statement for the 2018 Principal Timetable is due to be published at D-55 (18 November 2016).

4.4.1.1 Timetable Planning Rules

The Timetable Planning Rules set out the building blocks of the timetable. They include items such as sectional running times (the time trains take between two points) and headways (the time interval between two trains on the same track).

The Timetable Planning Rules contain two parts: a National Overview and route-specific sections, containing wide-ranging information required to undertake the compilation of the timetable.

The National Methodology for the Timetable Planning Rules change contains a 'plain English' description of the timetable planning process, together with details of the planning schedule and requirements to be met in railway undertakings' requests for train slots. It also contains a procedure for the agreement of short term changes to the Engineering Access Statement and Timetable Planning Rules.

The route-specific sections contain such data as standard timing points[5], sectional running times[6] for specific train types, headway[7] and margin[8] limits to be maintained between trains, station working rules[9] and route capability data.

They set out the rules regulating the standard timings between stations and junctions together with other matters enabling trains to be scheduled into the working timetable for the various parts of the main rail network.

Railway undertakings planning significant new services or significant amendments to their services that are not considered Events must notify Network Rail at the earliest opportunity and when possible before D-55. Network Rail then works on advanced proposals from D-55 to D-40. The latest schedule of dates for the timetabling process can be found in Annex B.

Railway undertakings wishing to amend their services should send Network Rail an access proposal. Access proposals received by the Priority Date at D-40 have a higher priority than those received after the Priority Date. If railway undertakings wish to run new services they should state if they have unused access rights they wish to exercise, or if they intend to obtain new access rights. Services that are unchanged by an Access Proposal will continue in the timetable as a Rolled Over Access Proposal.

Once Network Rail has all the Access Proposals and all the Roll Over Access Proposals it will co-ordinate all the Train Slots within the timetable, so that each train is compliant with the Timetable Planning Rules. This takes place between D-40 and D-26. The New Working Timetable is

5 Those points on the network where all trains must be timed so that all pathways can be compared one with another.

6 The amount of time, based on the characteristics of haulage capacity and trailing weight, required to pass and/or stop at any two consecutive standard timing points or stations.

7 The minimum period of time which must elapse at a standard timing point, between any two consecutive trains travelling on the same section of track.

8 The minimum period of time which must elapse between any two consecutive trains where one train must cross the path of the other. This is generally required at junctions and on the approach to main (multi-platform) stations.

9 These rules include the minimum time that must be observed between a train arriving and departing, or terminating and departing on a subsequent journey.

published at D-26. If Network Rail is unable to find compliant slots for all Access Proposals and Roll Over Access Proposals it will allocate Train Slots in the Priority order as set out in Network Code D4.4. If Network Rail has to make a decision on how to timetable Train Slots with the same level of priority it will do so using the decision criteria shown in the Network Code in D4.6.2.

4.4.2 Dispute resolution process

4.4.2.1 Timetable panel

Railway undertakings have certain rights of appeal in respect of decisions made by Network Rail during the timetabling process. These appeals are heard by a specialist Timetable Panel established by the Access Disputes Resolution Committee, an independent body with a majority of members elected by railway undertakings and others appointed by Network Rail (for contact details, please see Section 1.8.3).

Appeals are governed by Condition D5 of the Network Code together with the Access Dispute Resolution Rules (see below). These rules provide the framework within which the Timetable Panel may request information for the purposes of determining how a dispute may be resolved.

Referrals to the Panel must be made within the periods prescribed by Condition D5, which range from 5 to 25 working days. The dispute procedures are designed to avoid or minimise impact on the timescales of the timetabling process. Determinations of the panel may be subject to a further level of appeal to ORR.

4.4.2.2 Access Dispute Resolution Rules (ADRR)

The ADRR set out the options for resolution of disputes which arise out of particular commercial contracts. The purpose of the ADRR is to provide a clear, coherent, and effective structure for dealing with disputes that arise from access contracts and the Network Code (including Network and Vehicle Changes but excluding timetabling disputes unless there are compelling reasons why it should not be allocated to the timetable panel).

Further information on the ADRR can be found at the Access Disputes Committee website. As well as containing useful guidance documents and other explanatory information on the use of the ADRR, this website also contains details of dispute panel determinations.

Disputes relating to performance are managed in accordance with the specific provisions of the performance regime itself (set out in full in Schedule 8 of each track access contract), which enables prompt resolution directly between the access contract parties. Parties may also seek guidance from the cross-industry Delay Attribution Board, established under Part B of the Network Code. In the event that a dispute remains unresolved through these channels, then the ADRR provisions apply.

4.4.3 Congested Infrastructure: Definition, Priority Criteria and Process

Network Rail consulted industry parties during 2015 on the processes used to address its obligations to identify and manage congested infrastructure. The responses to the consultation have been considered, and the revised approach is published alongside this Network Statement as a Code of Practice.

Currently there are two areas of declared congested infrastructure. These are detailed below.

Midland Main Line (Leicester to Cricklewood via Market Harborough and Corby)

This section of route was declared as congested infrastructure on 24 September 2014 because, after being unable to accommodate certain short-term freight services, Network Rail considered that the infrastructure was unlikely to be able to accommodate all access requests in the next timetable period. The subsequent capacity analysis and capacity enhancement plan are published on our website.

Key constraints identified were the reversible slow line between Bedford and Kettering, the single line between Kettering and Corby, and the double track section with no passing loops between Kettering and Leicester. Network Rail is addressing each of these issues as follows:

- Sharnbrook – Kettering South: the redoubling of part or all of the reversible slow line is expected to be commissioned by December 2018.
- Kettering North – Corby: this single line is currently being redoubled and is expected to be commissioned by May 2018.
- Kettering North – Kilby Bridge: this route is not a priority for capacity enhancements because the alternative route via Corby is being enhanced to accommodate additional traffic. However there are potential longer-term investments identified for this section and other parts of the congested infrastructure. Details may be found in the capacity enhancement plan on the webpage given above.

Reading to Gatwick Airport

This route was designated as having congested infrastructure in 2006 because a second hourly Great Western Railway service could not be accommodated on the Reading – Redhill – Gatwick route.

Key constraints identified were platform capacity at Redhill for reversing services, slow line capacity from Redhill to Gatwick and platform capacity at Gatwick.

Network Rail is addressing each of these constraints as follows:

- Redhill platform capacity: a new platform (Platform 0) was funded through the CP5 regulatory settlement and is expected to be commissioned in December 2017.
- Slow line capacity Redhill – Gatwick: no enhancements are planned, because the planned improvements at Redhill and the completed works at Gatwick will allow pathing of a second Reading train in most hours where the services currently terminate at Redhill
- Gatwick platform capacity: a new platform (Platform 7) was opened in 2014, which has released capacity at platforms 1 and 2 for the additionalReading trains.

Additional declarations

As the network grows busier, the probability of making declarations of congested infrastructure can be expected to increase. Network Rail will consider declarations in respect of each timetable planning cycle, and will make consequential amendments to this section of the Network Statement during the course of the year if required. Industry parties will be informed directly as appropriate.

4.4.4 Impact of Framework Agreements

A Framework Agreement (or track access contract) is an agreement between Network Rail and a railway undertaking which specifies the capacity to which the railway undertaking is entitled (access rights) for a period in excess of one year. Access rights can be firm or contingent. The New Working Timetable, as described in Section 4.3, must be consistent with the exercised firm rights of Railway Undertakings, provided that they have been exercised at or before the relevant Priority Date. Network Rail must also attempt to accommodate all access proposals supported by contingent rights but firm rights always take priority. If it is not possible to accommodate all access proposals then train slots will be allocated in the following priority order, as set out in Part D4.2 of the Network Code, subject to Network Rail exercising its flexing rights:

- Firstly to firm access rights exercised at the Priority date which cover the whole of the timetable period, together with any rights which Network Rail has for Network Services
- Secondly to firm access rights exercised at the Priority Date which cover part of the timetable period and where the railway

undertaking is expected to obtain new firm rights covering the remainder of the timetable period

- Thirdly to contingent rights or any expectation of rights exercised at the Priority Date
- Fourthly to any Access Proposals submitted after the priority date, and Strategic Slots in the Strategic Capacity Statement.

4.5 Allocation of Capacity for Maintenance, Renewal and Enhancements

As part of the timetable production process set out in Part D of the Network Code, Network Rail produces the Engineering Access Statement which sets out the times when Network Rail could or will take possession of the line, referred to as 'Restrictions of Use'.

Major changes are consulted upon once a year for the principal timetable, this is between D-64 and D-60. Version 1 is issued as a draft at D-59 and Version 2 issued as a final version at D-44, in readiness for the start of the timetable development process at D-40. For the subsidiary timetable a Version 3 is issued as a draft at D-59, with minor changes unforeseen when Version 2 was issued, with Version 4 issued as a final version at D-44. Railway undertakings comment to Network Rail on Versions 1 and 3. Network Rail considers these comments and decides whether to include amendments in Versions 2 or 4.

Decisions are taken in accordance with the decision criteria of Part D4.6 of the Network Code. This document is subject to a right of appeal.

Once agreed, this document forms Network Rail's firm rights for running Network Trains and allocating capacity for the purpose of undertaking engineering activities.

The procedures for scheduling planned and unforeseen maintenance work are set out in Sections D2 and D3 of the Network Code respectively. The former involves the production of an Engineering Access Statement which is described further in Section 4.5.1.

4.5.1 Engineering Access Statement

The Engineering Access Statement sets out the rules regulating the arrangements for access to the various parts of the main rail network, when affected by inspection, maintenance, renewal and other works.

The Engineering Access Statement consists of two parts. The first part is a short National Overview; which sets out the planning rules, for the primary benefit of those who require engineering (as opposed to train) access to the network. The second part contains route-specific information, and provides details of planned surrender of use of the network due to maintenance, renewal and enhancement work. The contents can be summarised as follows:

- Section 1 - introduction to the document and processes within.
- Section 2 - Glossary of terms, helping users to understand terminology and acronyms used.
- Section 3 - Guidelines for Granting Possessions, sets out what information is required when requesting a possession, how to request late notice possessions and dates for submissions.
- Section 4 - Standard Possession Opportunities, set out, for the benefit of those requiring access to the line for inspection, maintenance and renewal, those times when there are no trains planned to run in the working timetable or when the working timetable supports trains running over a reduced number of lines, and when, therefore, access is usually available.
- Section 5 - Strategic Maintenance, sets out details of engineering activity which is planned on a cyclical basis (activities that are repeated at planned regular intervals) and may require some changes to trains contained in the working timetable.

- There is no Section 6 within the Engineering Access Statement.
- Section 7 - Register of Disruptive Possessions, sets out details of the temporary closure of parts of the network required to deliver maintenance, renewals and project works which will impact on trains contained in the working timetable. Details include dates, times, locations, lines affected in respect of possessions, temporary speed restrictions, temporary methods of working and any other restrictions of use.

The Engineering Access Statement is published on our website as part of the 'Operational Rules'.

4.6 Non-Usage / Cancellation Rules

Part J of the Network Code, which is incorporated into Framework Agreements, provides a means by which access rights may be removed in the event that a railway undertaking fails to use them, unless this failure is due to non-economic reasons beyond the railway undertaking's control. The specific threshold quota required by Regulation 29 of the Access Management and Licensing Regulations is specified by Part J4.2 of the Network Code but should be read in conjuction with the entirety of PartJ4.

It also provides for the transfer of rights that support a haulage contract that has been transferred to another RU. This reflects Article 52 of EU Directive 2012/34/EU.

4.7 Exceptional Transports and Dangerous Goods

A railway undertaking which wishes to run exceptional or dangerous goods should apply to Network Rail for slots sufficient to accommodate the passage of those goods within the process described in this document. Railway undertakings will need to agree and have issued an RT3973 form where applicable to control the access to Network Rail Infrastructure.

Prior to any application, in the first instance it is the responsibility of the railway undertaking transporting the relevant goods to maintain compliance with all relevant legislation including UK and European law. Network Rail will afford any new railway undertaking assistance in compiling the necessary risk assessments together with advice on suitable routes. Only once these assessments have been completed can an access request be submitted. See also section 2.5 and section 2.6.

4.8 Special Measures to be Taken in the Event of Disturbance

4.8.1 Principles

The measures to be undertaken in the case of disruption or anticipated disruption so as to sustain, and where necessary restore, operation of train services on the network in accordance with the working timetable are set out in the Railway Operational Code – please see Section 2.4.1.

When a disruptive event occurs, Network Rail has to determine the appropriate actions to restore the working timetable as soon as is reasonably practicable, taking into account the needs of passengers and freight customers, the interests of safety and security and the efficient and economical operation of trains and the network. Railway undertakings are required to co-operate as regards such actions, which may include the provision of traction and train crew to clear the line.

Network Rail leads the process of development and maintenance of contingency plans and codes of practice which can be implemented in cases of major disruption. Where disruption is expected to continue for an extended period (typically in excess of two days), it is usual for an amended timetable to be implemented. These timetables are often

prepared in advance by Network Rail in consultation with the affected railway undertakings, so they can be implemented quickly.

4.8.2 Operational Regulation

Network Rail develops and maintains train regulation policies so as to provide a framework to enable regulating decisions to be made by signallers in a way that is fair, consistent and in the best interests of all railway undertakings and their passengers and freight customers so far as can reasonably be achieved, facilitating achievement of their performance objectives. Train regulation policies are established by Network Rail in consultation with railway undertakings, who may propose variations to them. Any disputes are determined by the Timetabling Panel of the Access Disputes Committee and if necessary by further appeal to ORR. The arrangements are governed by the Railway Operational Code – please see Section 2.4.1.

4.8.3 Foreseen Problems

The Railway Operational Code provides for contingency plans to accommodate changes to the train service which may be expected to result in operational disruption. This may include pre-planned amended timetables that can be uploaded to the industry systems quickly so that passengers can see what train services will be running the following day.

4.8.4 Unforeseen Problems

Where a problem is unforeseen, but may be expected to result in operational disruption, and there is no contingency plan to cover it, Network Rail will, under the Railway Operational Code, consult with affected railway undertakings as may be reasonably practicable, and determine the most appropriate action to be taken.

4.9 Allocation of Capacity for Service Facilities

Capacity for service facilities managed by an IM is allocated in the same manner as outlined in Section 4.4 above. Please see Section 5 for more on service facilities.

4.10 Future access options

A Framework Agreement (for this purpose, a track access option) can be entered into between Network Rail and a body seeking access to the main rail network at some future stage to operate trains for which specific infrastructure must be provided (e.g. additional passing places on a single line) before the services in question can operate. Such commitments (either provided wholly or jointly by Network Rail or the body seeking such access) will be subject to ORR's approval of the option agreement in question. Such approval will have regard to ORR's track access option policy statement, which can be found at:

http://ORR.gov.uk/__data/assets/pdf_file/0014/2066/350.pdf

Section 5 - Services

5.1 Introduction

EU Directive 2012/34/EU and the Access and Management Regulations provide applicants (railway undertakings and others) with an entitlement to a set of services for domestic and international rail traffic. The Regulations create a presumption of access and provide the right for any applicant to apply for access to a range of services and facilities to operate rail services. The entitlement does not apply to certain infrastructure and networks which are identified in Regulation 4(4), including:

- stand-alone local and regional networks for passenger services on railway infrastructure;
- networks intended only for the operation of urban or suburban passenger services; and
- networks situated within a factory, nuclear site, or a site housing electrical plant, within a mine or quarry, used solely in connection with the carrying out of any building works or within a military establishment that are used only by the person responsible for that network for the purposes of freight operations connected with the premises or building works.

Under Regulation 6, access to terminals and ports and the services within them may be subject to restrictions only if viable alternatives by rail under market conditions exist.

Similarly, under Regulation 7, access to service facilities may only be refused if a viable alternative means of the service being provided under market conditions exists.

There are rights of appeal to ORR (see Section 2.1). ORR has also developed guidance for appeals made under the Regulations:

http://ORR.gov.uk/__data/assets/pdf_file/0018/1692/275.pdf

The services fall into the following categories, set out in paragraphs 1-4 of Schedule 2 to the Access and Management Regulations:

5.2 Minimum access package

The 'minimum access package' comprises:

(a) handling of requests for infrastructure capacity; and
(b) the right to utilise such capacity as is granted and, in particular,
    (i) such railway infrastructure including track, points and junctions as are necessary to utilise that capacity;
    (ii) electrical supply equipment for traction current, where available and as is necessary to utilise that capacity
    (iii) train control, including signalling, train regulation, dispatching and the communication and provision of information on train movements; and
    (iv) all other information as is necessary to implement or to operate the service for which capacity has been granted.

5.2.1 Handling of requests for infrastructure capacity

In relation to the main rail network, this service refers to the processes outlined in Section 4 (capacity allocation). This service is provided both to railway undertakings with a Track Access Contract and to potential railway undertakings.

5.2.2 The right to utilise such capacity as is granted

Under a Track Access Contract, Network Rail grants a railway undertaking permission to use the routes on that part of the main rail network specified in the contract. This means permission to use the track

comprised in the specified routes for the provision of passenger or freight services using the railway vehicles specified in the contract. For freight railway undertakings, the general variation request provision contained in paragraph 2 of Schedule 5 of the model freight Track Access Contract allows ad hoc services to run for up to twelve months. Such permission is subject to the 'operational constraints', Network Code, the Engineering Access Statement and the Timetable Planning Rules.

Network Rail provides operational planning, signalling, train control and service recovery from disruptive incidents along with the provision of traction current where the infrastructure has that capability and the railway undertaking requires it (see Section 5.3).

Operational planning is the process which translates customer access requirements into plans for the provision of safe and reliable train paths, leading ultimately to the detailed timetable plans used by front-line staff to deliver the real-time operation of the railway.

Network management is the real-time process by which Network Rail monitors and controls the movement of trains on its infrastructure, with the primary objective of maximising the delivery of services in accordance with the timetable. As incidents occur, the network operations function controls and manages the problem, returning the train service to its planned state as efficiently as possible. As such, network management is crucial for preventing and/or minimising train delays. There are two principal elements to network operations – signalling and train control.

Signalling is the primary process by which Network Rail (through individual signallers) controls the movement of individual trains, movements to be made in accordance with the train plan and determining (in situations where competing demands are being made) which trains have priority.

Controllers monitor network operation across a wider area than is covered by individual signallers. They plan and co-ordinate, with railway undertakings, real time changes to train operations to deal with and then restore services following incidents such as infrastructure or train failures.

5.2.3 Minimum Access Package for Connected Facilities

In relation to rail facilities that are not part of the main rail network, the provision of the minimum access package is the responsibility of the relevant service provider.

In developing the Connected Facilities details Network Rail has attempted to bring together information that goes beyond the physical location of connected facilities into a single resource (link below). Those service providers of connected facilities that have responded to Network Rail's request for information have supplied, as a minimum, appropriate contact details. These details are available for any railway undertaking to use in order to obtain key information such as hours of operation, capacities and capabilities.

Information concerning Connected Facilities is available on our website at:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/network-statement/

Please note that this information has been provided to Network Rail by connected facility service providers. Network Rail does not operate these facilities and as such any queries should be addressed to the relevant service provider in the first instance.

Parties requiring access to certain Connected Facilities (for example some light maintenance depots and stations) may need an access contract, as described in Section 2.1.

5.3 Access to service facilities and supply of services

5.3.1 Access to service facilities

5.3.1.1 Passenger stations

Section 3.6.1 provides further information regarding passenger stations on the rail network. Of more than 2,550 stations in operation in GB, only 18 of the largest are currently operated by Network Rail.

The remaining stations are operated by various parties, normally a railway undertaking acting under a local passenger franchise agreement with the benefit of a lease from Network Rail, where Network Rail is the owner of that station.

The operator of each station is known as the station facility owner. Other railway undertakings who want to use the station (known as beneficiaries) must enter into an access agreement with the station facility owner (Network Rail in the case of the 18 stations which it operates, and otherwise normally the relevant railway undertaking), as described in Section 2.1. Such agreements govern the provision of common station amenities and services by the facility owner, including such matters as the availability of forecourts, concourses and platforms, non-exclusive staff amenities, cleaning and lighting and train despatch.

Such agreements may also deal with services other than those that are common to the use of the station generally, and if their provision is not agreed by the relevant parties, ORR may be requested to direct this.

5.3.1.2 Freight terminals

There are numerous freight terminals connected to the main rail network – see section 3.6.2. Some of these are owned by Network Rail and leased to other parties to operate; others are owned by third parties. Freight terminals are operated by private companies, including some freight railway undertakings, with the benefit of a connection agreement with Network Rail, governing the terms of connection.

The use of such freight terminals is a matter for agreement with the terminal facility owner but, as described in section 2.1, where access is governed by the Railways Act 1993, ORR may be asked to direct that access rights are granted, notwithstanding that agreement has not been reached. Where access or service provision is governed by the Access and Management Regulations, there is a right of appeal to ORR as regards the terminal facility owner's decisions in relation to this.

5.3.1.3 Marshalling yards and train formation facilities, including shunting facilities

Freight services on the GB railway network generally run as block trains direct from origin to destination without the need for intermediate marshalling with other wagons. Some freight train operating companies operate a small number of yards where their pattern of trunk and feeder service requires trains to be re-marshalled.

To obtain further details, please refer to Section 3.6.3 or contact:

Guy Bates
Head of Freight Development
Network Rail
1 Eversholt Street
London
NW1 2DN
Tel: +44 (0) 7825 376 699
Email: guy.bates@networkrail.co.uk

If information is required on locations of these facilities, please refer to the relevant regional contact; details can be found at:

https://www.networkrail.co.uk/industry-commercial-partners/rail-freight/

Train formation and preparation is generally carried out by railway undertakings using facilities owned or leased by them, although this may also take place at network sites. To obtain further details, please refer to Section 3.6.3 or contact Guy Bates, see above.

If information is required on the location of these facilities, please contact the relevant Senior Route Freight Manager / Route Freight Manager; see Section 3.6.3 (above).

5.3.1.4 Storage sidings

Rolling stock which is not in service is generally stabled at facilities owned or leased by railway undertakings. Alternatively, the ability to stable rolling stock in specified sidings ('network sidings') on the main rail network may be granted as part of the access rights under a track access contract.

If information is required on locations of these facilities, please contact the relevant Senior Route Freight Manager / Route Freight Manager; see Section 5.3.1.3.

5.3.1.5 Maintenance facilities (Light Maintenance facilities or depots)

There are around one hundred and ten light maintenance depots around the network which offer light maintenance services

Light maintenance depots[10] are treated as separate facilities. If a railway undertaking requires access to a station or light maintenance depot, it will need to enter into an access contract with the facility owner as described in Section 2.3. The operator of a depot is known as a depot facility owner. Although Network Rail owns most of the light maintenance depots in Great Britain, it is not the facility owner.

Most light maintenance depots are leased to and operated by one or other of the passenger train operating companies, who act as the facility owner, although some are owned and operated by non-train operators, specialist train maintenance companies or FOCs.

Under the Railways Act 1993, railway undertakings and others may only enter into a contract with a facility owner (e.g. Network Rail or another facility owner) for permission to use that owner's railway facility if ORR so directs. If these contracts (and amendments to them) are not approved by ORR where that is required by law, they are invalid.

Where the parties have not been able to agree on the terms of a contract, or a subsequent amendment where the applicant is seeking increased access to the network, ORR may be asked to issue directions requiring the facility owner to enter into or amend the contract as determined by ORR.

Information about connected facilities is contained in Section 5.2.3.

5.3.1.6 Other technical facilities, including cleaning and washing facilities

These may be provided by the operators of light maintenance depots (see Section 5.3.1.5), but are not provided directly by Network Rail.

5.3.1.7 Maritime and inland ports

These may be provided by the operators of rail connected facilities, but are not provided directly by Network Rail.

Further information about maritime and inland port facilities can be found on our website or at http://www.railfreightlocations.eu/

10 'Light maintenance services' are defined in section 82(2) of the Railways Act 1993 as services of any of the following descriptions:

(a) the refueling, or the cleaning of the exterior, of locomotives or other rolling stock; or

(b) the carrying out to locomotives or other rolling stock of maintenance work of a kind which is normally carried out at regular intervals of twelve months or less to prepare the locomotives or other rolling stock for service.

5.3.1.8 Relief facilities

These may be provided by the operators of rail connected facilities, but are not provided directly by Network Rail.

5.3.1.9 Refuelling facilities

Refuelling facilities may be provided by the operators of light maintenance depots (see Section 5.3.1.5), but are not provided directly by Network Rail.

5.3.2 Supply of services in service facilities

5.3.2.1 Shunting

Railway undertakings are responsible for the supply, or arranging for the supply, of shunting and other services for their own trains.

5.3.2.2 Other services

These may be provided by the operators of light maintenance depots (see section 5.3.1.5), but are not provided directly by Network Rail.

5.4 Additional services

5.4.1 Traction current

Traction current, where available in relation to the main rail network, is supplied by Network Rail as part of the access rights provided under Track Access Contracts, and the supply equipment is provided accordingly, so as to support that supply provision. Please refer to Section 3 for the location of electrical supply equipment on the network. Electrical supply for traction current can either be in the form of an overhead contact wire service or as a third (or third and fourth) rail service, depending on location (please see electrification map in Annex G).

5.4.2 Services for trains

Railway undertakings are responsible for the supply of these services for their own trains. Some such services may be provided by the operators of light maintenance depots, as part of the maintenance facilities.

In addition Network Rail may provide access to preheating (shore supply) and water supply at some of its 18 managed stations, under contract.

5.4.3 Services for exceptional transports and dangerous goods

Network Rail can offer advice on how the transport of exceptional loads and dangerous goods can be achieved in accordance with the relevant rules and regulations, which are described in Section 2.5 and Section 2.6.

For advice on the transport of exceptional loads please contact:

Gemma Burgess
Access Coordinator
Network Rail
1 Eversholt Street
London
NW1 2DN
Tel: +44 (0) 20 3356 9562
Email: Gemma.Burgess@networkrail.co.uk

For advice on the transport of dangerous goods please contact:

Paul Ashton
Operations Principles and Standards Manager
Network Rail
The Quadrant:MK
Elder Gate
Milton Keynes
MK9 1EN
Tel: +44 (0) 7799 864 192

Email: Paul.Ashton2@networkrail.co.uk

5.4.4 Supply of fuel

This is not included in the service package of Network Rail.

5.5 Ancillary services

5.5.1 Access to telecommunication network

Neither Network Rail nor any other service provider is obliged to provide these services.

The use of Network Rail's communications network described in Section 3.3.3.3 is primarily for those activities contained within the minimum access package.

5.5.2 Provision of supplementary information

Where information provision by Network Rail is not otherwise dealt with in this Network Statement, please refer to our Stakeholder Relations code of practice which can be found at:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/stakeholder-code-practice/

5.5.3 Technical inspection of rolling stock

Network Rail does not provide this service, which may be carried out by relevant depot or facility owners – see Section 5.2.3 for more information.

5.5.4 Ticketing services in passenger stations

As Infrastructure Manager, Network Rail does do not sell train tickets to passengers. Railway Undertakings, that operate passenger train services, undertake this activity at stations across the country. A passenger can purchase tickets from stations by using the ticket offices or ticket vending machines. Passengers are also able to purchase rail tickets online, which can either be delivered to them or collected at a railway station.

At stations managed by Network Rail, see Section 1.1, the ticket offices are leased to the railway undertaking responsible for selling tickets at that station ('designated lead retailer'). All stations that are not managed by Network Rail have a lead operator who leases the station from Network Rail, including the ticket offices.

5.5.5 Specialised heavy maintenance services

Though some heavy maintenance depots are owned by Network Rail and leased to other railway undertakings, as IM, Network Rail does not operate nor offer facilities at such depots.

The operator of a depot is known as a depot facility owner. Other train operators, or third parties procuring depot services on behalf of a train operator (known as beneficiaries), who want to use the depot must enter into an access contract with the relevant depot facility owner. Please refer to the Connected Facilities Details (Section 5.2.3) for more information.

Section 6 - Charges

6.1 Charging Principles

This section sets out the current charging principles for access to the main rail network applicable for Control Period 5 (CP5) which applies from 1 April 2014 to 31 March 2019- as determined by ORR in its Periodic Review 2013 Final Determination.

The market segments applicable on Network Rail's infrastructure are:

- franchised passenger
- open access passenger
- freight

The above market segments reflect Article 32.1 of Directive 2012/34/EU (transposed into law in Great Britain by the Railways (Access, Management and Licensing) Regulations 2016) which states that the list of market segments defined by infrastructure managers shall contain at least the three following segments: freight services, passenger services within the framework of a public service contract and other passenger services.

The list of market segments is to be reviewed at least every 5 years and the regulatory body referred to in Article 55 shall control that list in accordance with Article 56. This allows for the UK's periodic review process to enable this obligation to be met by the existing regulatory regime. Full and transparent charging arrangements are detailed on our website and on ORR's website. In particular Chapter 16 of the Final Determination details the work undertaken by Network Rail and ORR in respect of the current Control Period. Network Rail engaged closely with the industry throughout PR13, and following formal consultation we concluded on all of our charges and published our work on our website.

6.2 Charging system

Charges are set out in the track access contracts through which Network Rail grants permission to railway undertakings to use the main rail network. These contracts require ORR's approval, and hence this approval extends to the charging arrangements within them. The model forms of contract approved by ORR contain provision for ORR to review those charging arrangements, including on a periodic basis, normally every five years.

In broad terms:

- ORR is responsible for developing the charging framework and Network Rail is responsible for calculating all existing track access charges within this framework. Ultimately, however, the level of track access charges is determined by ORR, rather than Network Rail. Access Charges are set by ORR so as to be consistent with a position in which, under normal business conditions and over a reasonable time period, Network Rail's income from such charges together with surpluses from other commercial activities and any public funds shall at least balance with infrastructure expenditure; and
- the basic cost of providing the main rail network, after taking account of other revenue sources, is met by fixed charges to franchised passenger railway undertakings; and variable charges to franchised passenger railway undertakings, freight and other railway undertakings.

6.3 Tariffs

This section sets out the different charges for access to the main rail network. They are based on the charging arrangements for Control Period 5 (CP5), determined by ORR and applicable from 1 April 2014 to 31 March 2019.

Network Rail levies a range of track access charges on franchised passenger, open access passenger and freight railway undertakings. These charges may include:

- Variable Usage Charge
- Electrification Asset Usage Charge
- Traction Electricity Charge
- Coal Spillage Charge
- Freight Only Line Charge
- Freight Specific Charge
- Access Charge Supplements
- Capacity Charge
- Fixed Track Access Charge
- Additional Charges.
-

These track access charges are discussed in more detail in Section 6.4 and Section 6.5.

The track access charges are underpinned by the Minimum Access Package and Access & Management Regulations as discussed in Section 6.6.

6.3.1 Minimum Access Package

This section discusses in detail the track access charges, including those that comprise the minimum access package (as set out in Section 5.2) that Network Rail levies on franchised passenger, open access passenger and freight railway undertakings.

The CP5 charges which are applicable from 1 April 2014 to 31 March 2019 can be found on the Network Rail access charges website.

Variable Usage Charge

The purpose of the Variable Usage Charge is to recover Network Rail's operating, maintenance and renewal costs that vary with traffic. In economic terms, it reflects the short run marginal cost. Hence, it does not reflect the cost of providing or changing the capability or capacity of the network. The Variable Usage Charge is paid by franchised passenger, freight and open access passenger railway undertakings.

The Variable Usage Charge is largely based on a bottom-up analysis of Network Rail's incremental costs. First, the total variable costs associated with all traffic on the network are established. Then these costs are distributed between individual vehicles based on their relative propensity to cause damage to the network. This propensity is established from an analysis of the causes of wear and tear to the network, and the relative characteristics of different rolling stock types.

The cost of track maintenance and renewal varies with factors such as axle load, speed, unsprung mass and yaw-stiffness. The higher a vehicle's axle load, speed, unsprung mass and yaw-stiffness the higher the consequent infrastructure maintenance and renewal costs. As such, the Variable Usage Charge reflects these characteristics.

Passenger and freight variable usage charges are specified on a pence per vehicle mile and pound per thousand gross tonne mile basis respectively. The charge rates for each vehicle type apply nationally as there are currently no variations by area or region.

For enquiring railway undertakings, Network Rail can produce an estimate of the charge for a new vehicle type when provided with the information such as:

- tare weight
- number of axles
- unsprung mass
- yaw-stiffness
- maximum or operating speed of the vehicle
- seating capacity (passenger vehicles only)
- Ride Force Count (freight vehicles only)
- operating weight (freight vehicles only).

Whilst the basis of the calculation of variable usage charges for freight is similar to that for passenger vehicles, there are some key differences.

First, for freight wagons, adjustments are made to variable usage charges to reflect the relative 'track friendliness' of the suspension/bogie type. The purpose of this adjustment is to incentivise the use of 'track friendly' suspension/bogie types which will result in lower infrastructure costs. This adjustment ranges from a reduction of 14.2 per cent to an increase of 9.8 per cent and is based on a particular freight wagon's Ride Force Count. The Ride Force Count is a metric developed to provide a quantitative assessment of the 'track friendliness' of a wagon's suspension/bogie type, following vehicle dynamics modelling. The introduction of the Ride Force Count methodology was new for CP5 and replaces the previous methodology which allocated a freight wagon to a 'suspension band' based on a qualitative description of the wagon's suspension/bogie type. A key benefit of introducing the new Ride Force Count methodology is that it removes the, arguably, more subjective approach applied previously (i.e. the adjustment to charges is now based on a definitive Ride Force Count value rather a qualitative description of wagon suspension/bogie types).

Secondly, freight variable usage charges vary depending on the commodity type being transported. The reason for this is that the operating speed and operating weight of a freight vehicle can vary materially depending on the commodity type being transported and this is reflected in the Variable Usage Charge. The list of freight commodity types used for charging purposes is set out, below:

- biomass
- chemicals
- Coal Electricity Supply Industry ('ESI')
- coal other
- construction materials
- domestic dutomotive
- domestic intermodal
- domestic waste
- Enterprise
- European Automotive
- European Conventional
- European Intermodal
- general merchandise
- industrial minerals
- iron ore
- mail and Premium Logistics
- other
- petroleum
- Royal Mail
- steel.

The variable usage charge is indexed, annually, to the Retail Prices Index.

Electrification Asset Usage Charge

The purpose of the Electrification Asset Usage Charge ('EAUC') is to recover the variable maintenance and renewal costs associated with Network Rail's electrification assets e.g. OLE network and the DC network ('third rail').

The charge has been calculated by Network Rail using an estimate of the percentage variability of electrification costs. The charge is paid by railway undertakings running electrified vehicles on a pence per electrified vehicle mile basis (or £ per electrified KGTM (Thousand Gross Tonne Mile) basis for freight operators).There are separate rates for vehicles operating on the DC network ('third rail') and vehicles operating on the OLE network.

The Electrification Asset Usage Charge is indexed, annually, to the Retail Prices Index.

Traction Electricity (EC4T) Charges

Network Rail purchases electricity on behalf of railway undertakings which use it to power their electrified train services. Railway undertakings pay the Traction Electricity Charge to cover the costs of traction electricity. The level of the charge is dependent on the price of electricity, the amount of electricity consumed (this may be calculated by way of modelled consumption rates (kWh per train-mile/KGTM for passenger/freight railway undertakings respectively) or metered kWh consumption), transmission losses and the electrified vehicle miles operated (when calculated by way of modelled consumption rates).

Railway undertakings (passenger and freight) are able to choose their strategy for the procurement (including the option to lock tariffs) via Network Rail's contract with its electricity supplier.

The modelled traction electricity charges are defined by the following formula[11]:

EC4T charge (£) = electrified train miles x traction electricity modelled consumption rate (kWh/train mile) x tariff (pence/kWh)

On-train metering (OTM) enables train operators to be billed for their use of traction electricity, based on metered traction electricity consumption data, rather than modelled traction electricity consumption rates.

The metered traction electricity charges are defined by the following formula:

EC4T charge (£) = ((electricity consumption (kWh) x (1+%losses uplift) – regenerated electricity (kWh)) x (1+%losses uplift)) x tariff (pence/kWh)

Traction electricity tariffs are made up of 'energy' and 'delivery' tariffs. 'Delivery' tariffs vary by geographic areas or Electricity Supply Tariff Areas (ESTAs) and 9 season and time of day bands. The charges are billed every accounting period. 'Energy' tariffs are determined by the price of energy procured from the supplier.

At the time of writing, there was an industry consultation taking place regarding a potential third way for railway undertakings to be billed for traction electricity. This third method is referred to as Partial Fleet Metering (PFM). If the industry consultation is successful, PFM will mean that metered traction electricity consumption data from metered trains could be extrapolated and used to bill the non-metered part of the same fleet of trains on the same train service code.

Where a railway undertaking, which uses modelled traction electricity consumption rates, is using regenerative braking, it may opt to receive a discount. The discount reflects the cost savings that result from the lower net consumption of electricity.

11 This formula is applied to the small number of unmetred bi-modal trains on the network.

At the end of each financial year, a volume reconciliation is carried out, which reconciles estimated and actual electricity consumption in each of the ESTAs. Supplementary charges or rebates to railway undertakings, as a result of the volume reconciliation, are calculated. This process confirms that all consumption is accounted for. Network Rail also participates in the volume reconciliation, however, railway undertakings which run charter services, do not participate. Railway undertakings which are billed by way of OTM, do not participate in the volume reconciliation. If the industry consultation referred to above is successful then where a railway undertaking has a fleet of trains billed for traction electricity on the basis of PFM, it is expected that unmetered trains in the fleet will participate in the volume reconciliation.

Following the volume reconciliation, a cost reconciliation is carried out. This reconciles the difference between electricity tariffs billed against the actual cost to Network Rail. Whilst the majority of tariffs are locked, delivery tariffs tend to vary with demand, particularly at peak times. The cost reconciliation confirms that the entire cost is accounted for all railway undertakings, except charter services, which are excluded from the cost reconciliation.

For more information on the traction electricity charges can be found in the Traction Electricity Rules.

Coal Spillage Charge

The Coal Spillage Charge is levied on freight traffic carrying coal. It is designed to take account of the cost impact of spilt coal on rail infrastructure.

The costs attributable to coal comes from the clean-up and delay costs of point failures, preventative work at points that fail repeatedly, reduced service life of switches and crossings, and reduced service life for plain line track.

The coal spillage charge is indexed, annually, to the Retail Prices Index.

Freight Only Line Charge

The purpose of the Freight Only Line Charge is to contribute to the recovery of the fixed costs associated with freight only lines (lines used by freight railway undertakings only). Consistent with relevant legislation, the charge is only levied on the segments of the freight market deemed by ORR as capable of bearing the cost. In CP5 the charge will only be levied on traffic carrying coal for the electricity supply industry, spent nuclear fuel and iron ore. The charge is paid by freight railway undertakings as a mark-up on the Variable Usage Charge.

The freight only line charge is indexed, annually, to the Retail Prices Index.

Freight Specific Charge

The Freight Specific Charge is a new charge that was introduced for CP5. The purpose of the charge is to contribute to the recovery of freight avoidable costs (i.e. costs that would be avoided if there was no freight traffic on the network) that are not recovered through other freight track access charges. Consistent with relevant legislation, Article 32 (1) of the Directive 2012/34/EU, the charge is only levied on segments of the market deemed by ORR as capable of bearing the cost. Consistent with the Freight Only Line Charge, in CP5 the charge will only be levied on traffic carrying coal for the electricity supply industry, spent nuclear fuel and iron ore. The charge is paid by freight railway undertakings as a mark-up on the Variable Usage Charge.

Access Charge Supplements

Access Charge Supplements, paid by franchised and some open access railway undertakings, recover the cost to Network Rail of having to pay compensation for disruption caused by an efficient volume of possessions (or restrictions of use) on the rail network. An Access Charge Supplement also exists under the performance regime for freight and charter railway

undertakings, and is payable in exchange for a limit on payments per incident made through the performance regime.

Railway undertakings incur costs and lose revenue when disruptive engineering possessions are taken on the railway. Schedule 4 of the track access contracts sets out the arrangements by which Network Rail compensates railway undertakings for those costs and revenue losses.

It is accepted that a certain level of engineering related disruption is inevitable on an operational railway. Network Rail is funded for paying compensation up to an efficient level agreed by ORR, through the payment of an Access Charge Supplement.

In planning its engineering work Network Rail is thereby incentivised to take into account the financial impact on operators caused by engineering related disruption, and to develop efficient engineering access plans so that it does not incur additional costs beyond the efficient level for which it is funded. It can also keep costs to a minimum by advising operators of forthcoming disruption as far in advance as possible, and receives a discount on standard Schedule 4 payments for doing so.

In return for the payment of an Access Charge Supplement, franchised passenger railway undertakings (and open access railway undertakings which opt to receive full engineering related disruption compensation) receive formula- based compensation for costs and revenue losses from engineering possessions. In addition, they are able to negotiate compensation in certain instances of more extreme disruption, for example possessions lasting several days or in cases where repeated and regular possessions have led to significantly higher costs and losses by the operator.

By default, open access railway undertakings do not pay Access Charge Supplements but receive compensation for the most significant disruption which they suffer. They can negotiate an Access Charge Supplement type arrangement with Network Rail if they choose to.

The Access Charge Supplement is indexed, annually, to the Retail Prices Index.

Capacity Charge

The purpose of the Capacity Charge is to recover additional performance regime costs as a result of increased levels of traffic on the network. These costs arise because, as the network becomes more crowded, it becomes more difficult for Network Rail to recover from incidents of lateness. These costs differ across the network to reflect different levels of capacity utilisation and different performance regime costs.

For passenger railway undertakings, the charge is recovered by averaging the data by region and time band into an average rate by service code (a specified collection of services). Franchised passenger railway undertakings receive a 33 per cent discount for traffic on Saturdays and Sundays.

During the year, Open Access passenger railway undertakings pay a charge equivalent to the CP4 Capacity Charge levels on existing traffic (which is defined in terms of a financial baseline). A 25 per cent discount is applied for traffic on Saturdays and Sundays. At the year-end, a reconciliation (wash-up) occurs whereby Open Access passenger railway undertakings pay a typically higher rate, referred to as the wash-up rate, on traffic above the baseline. A 33 per cent discount is applied to the wash-up rate for traffic on Saturdays and Sundays.

For freight railway undertakings, a single, average rate is charged for weekday traffic across all operators, service codes and commodities. A 25 per cent discount is applied for traffic on Saturdays and Sundays. Freight railway undertakings pay a charge slightly below the CP4 levels on existing traffic (which is defined in terms of a financial baseline). A separate baseline is set for each of the three main commodity groups, Coal, Intermodal and Other. Freight railway undertakings pay a higher rate, referred to as the wash-up rate, on traffic above the baseline for the

specified commodity type, for which a 33 per cent discount is applied for traffic on Saturdays and Sundays. The wash-up rate is applied through a year-end wash-up, apportioned to freight operators in proportion to their train mileage for the relevant commodity group.

For charter railway undertakings, a single, average rate is applied across all operators and service codes. On existing traffic (which is defined in terms of a mileage baseline), charter railway undertakings pay a charge in line with the freight railway undertakings CP4 charge. A 25 per cent discount is applied for traffic on Saturdays and Sundays. Charter railway undertakings pay a higher rate, referred to as the wash-up rate, on traffic above the baseline, for which a 33 per cent discount is applied for traffic on Saturdays and Sundays. The wash-up rate is applied through a year-end wash-up, apportioned to charter operators in proportion to their train mileage.

The capacity charge rates and the baselines for passenger, Open Access and freight railway undertakings are indexed, annually, to the Retail Prices Index.

Fixed Track Charge

The purpose of the Fixed Track Charge is to recover Network Rail's residual funding requirement after accounting for the forecast income from variable track access charges, the station long term charge, network grants and other single till income (e.g. income that Network Rail receives through other sources such as property assets). The Fixed Track Charge is payable by franchised passenger railway undertakings on an operator-specific basis.

Fixed Track Charges are calculated by allocating Network Rail's net revenue requirement to routes and then dividing these costs between franchised passenger railway undertakings using traffic metrics that are most appropriate to the costs being allocated (for example vehicle-miles, tonnage, train-miles etc). This process is carried out separately for England & Wales and Scotland, i.e. the Scottish net revenue requirement is recovered from the Scottish franchise. The Fixed Track Charge is set for five years and is payable by accounting period. The Fixed Track Charge is based on a residual calculation, it does not cover specific items of costs in the way that the other charges do.

The Fixed Track Charge is indexed, annually, to the Retail Prices Index.

Additional Charges

ORR allows additional charges to be raised if a signal box, for example, needs to be opened specifically outside the hours set out in the timetable planning rules in order to accommodate a new service or new services. These are agreed on a case-by-case basis and set out in the relevant railway undertaking's track access contract.

6.3.2 Track access to service facilities

In addition to the track access charges, the Access and Management Regulations provide for entitlements to track access to facilities and the supply of services as set out in Section 5.3.

Under these regulations, Network Rail may recover the costs associated with the following charges:

- Station Long Term Charge
- Depot Charges
- Qualifying Expenditure (QX)
- Facility Charges
- Property Rent
- Environmental charges
- Scarcity charges
-

These charges are discussed in more detail in Section 6.3.3 and are charged separately to the minimum access package.

6.3.3 Supply of services referred to in Section 5.3

In respect of the stations that Network Rail operates (managed stations), or those that are leased (short or long term) to other station operators (franchised stations), charges are applied under the terms of station access contracts and leases that railway undertakings enter into with Network Rail.

Station Long Term Charges

The Long Term Charge is payable at all regulated railway stations in Britain (both those managed by railway undertakings and those managed directly by Network Rail). The charge enables Network Rail to recover the maintenance, renewal and repair (MRR) expenditure associated with all the stations that it owns.

The long term charge is regulated and set by ORR for each control period. As part of PR13, ORR determined the level of Long Term Charge income from 2014 to 2019. This level is set so as to recover the amount ORR considers to be Network Rail's efficient operational property and Station Information and Surveillance Systems (SISS) MRR expenditure associated with these stations. The inclusion of SISS MRR costs in the Long Term Charge has been introduced for CP5.

At franchised stations, the charge is paid by all train operators calling at that station (in proportion to the number of vehicle departures) to the railway undertaking that operates the station. It is then passed on to Network Rail. The charge should be considered in the context of the full portfolio of stations managed by individual railway undertakings, as it is intended to provide a reasonable expectation of ORR's assumptions on Network Rail's efficient MRR expenditure over the control period at the portfolio level. Charges are allocated to individual franchised stations on the basis of each station's share of long-term (35 year) MRR expenditure across the train operator's portfolio.

Where Network Rail manages a station, railway undertakings pay the long term charge directly to Network Rail, in proportion to the number of vehicle departures at that station. To calculate the Long Term Charge at each managed station, a forecast of efficient MRR expenditure on operational property and SISS is averaged over a 100 and 35 year period, respectively.

Both franchised and managed Station Long Term Charges are fixed for the control period, levied on a constant annual basis and indexed, annually, to the Retail Prices Index.

Facility Charges

Facility charges recover the costs of any station enhancement funded by Network Rail at an operator's or user's request. The charge is paid by the requesting party (and any successor where relevant) over a specified period as defined in the Station Access Conditions for the station where the enhancement has taken place. Incremental ongoing costs resulting from the enhancement (for example, for the operation, maintenance or renewal of the asset during the recovery period) may also be included in the Facility Charge. Network Rail is required to offer a fixed-price for the recovery of these ongoing costs over the recovery period. The method of calculation for these charges is specified in ORR Guidance documents. The rate of return which Network Rail is entitled to charge is set by ORR as part of the periodic review. In CP5, the allowed rate of return for Facility Charges is 4.93 per cent.

Property Rent

Property Rent is paid by station operators under the terms of their station lease, and not regulated by ORR. The rent provides Network Rail, as the property owner, a share of the income received by the station operator from commercial activities at the station- such as retailing and advertising.

Although property rent is subject to RPI indexation, there is no formal process for review or resetting of the rent to reflect changes in the level of commercial activity or income growth at stations.

Qualifying Expenditure (QX) for stations

Qualifying Expenditure (QX) recovers the operating costs of common amenities at managed stations such as station cleaning, refuse collection and disposal, insurance, utilities, and provision of competent and suitably trained staff. It consists of a fixed element which is negotiated with railway undertakings for the control period and a management fee element which is levied as a percentage of the fixed QX charge and recovers indirect central costs and overheads that arise as a result of operating managed stations. The QX management fee also includes a profit element which aims to recover the risk associated with providing 'QXable' services at managed stations on a fixed deal basis. ORR regulates only the management fee element of QX.

QX is fixed for five years, with the charge varying each year by a factor based on RPI-x, where x is an agreed efficiency target at each station (if applicable). It aims to provide certainty to railway undertakings on what they will pay over a five year period, and further incentivises Network Rail to obtain value for money in the services it offers and procures from third parties at managed stations.

Where train operators occupy space at a managed station on an exclusive basis their occupation may be subject to individual leases for the space occupied. Charges under these leases are not regulated. An additional charge may be levied where the railway undertaking has requested specific services.

Depot Charges

Network Rail also levies charges in respect of the depots that it leases to depot operators. Depot operators are either railway undertakings or specialist train maintenance companies.

Network Rail leases light maintenance depots to depot operators. The depot operator pays Network Rail a property rent for the facility, which is generally split between equipment rent and buildings rent. The rents payable by the depot operator are subject to review which generally consists of comparison with the open market value of industrial sites in the vicinity (for land and buildings), a depreciated cost model for plant and equipment, or by reference to an indexation method. While ORR does not set depot charges at a periodic review as with stations, depot income received by Network Rail is taken into account in determining the funding settlement. Depot charges paid by beneficiaries to Depot Facility Owners are regulated by ORR through its approval of Depot Access Agreements.

If there has been a self-funding enhancement at the depot, the depot operator will also pay a facility charge which is calculated in the same manner as station facility charges. These charges are set out in the depot access conditions and are subject to regulation.

Environmental charges

Just as there are currently no environmental charges applicable to other competing nation-wide transport modes in the UK, track access charges do not include any environmental charges (cf. Article 31 of EU Directive 2012/34/EU). However, Part E of the Network Code provides for recovery of costs in relation to environmental conditions arising out of railway undertakings' activities. Discounts, if given, are required to comply with Article 9, and these are referred to later in this section. Article 10 enables Member States to put in place compensation schemes for the use of railway infrastructure which relate to the demonstrably unpaid environmental, accident and infrastructure costs of competing transport modes, insofar as these costs exceed the equivalent costs of rail. No such scheme has been implemented in Great Britain for the direct reduction of access charges; however, the websites of the Department for Transport and Transport Scotland may be consulted for the availability of grants which may compensate in relation to track access charges or the cost of

rail facilities, having regard to the environmental benefits of rail freight transport.

Scarcity charges

Current charging arrangements do not include scarcity charges.

6.3.4 Additional services

Additional services are referred to in Section 5.4 and are generally not provided by Network Rail. For services provided by other service providers, from or in relation to facilities connected to the main rail network, please contact the service provider directly. Service provider information can be found on Network Rail's website.

6.3.5 Ancillary services

To the extent that Network Rail supplies ancillary services, which may comprise access to the telecommunication network and provision of supplementary information, where these fall within arrangements under a track access contract, the charging principles are set out under Section 6.1. Otherwise, the relevant principles are set out in sections 2 and 3 of our Stakeholder Code of Practice approved by ORR under our network licence.

With regards to further information regarding ancillary services, please see Section 5.5.

6.4 Financial penalties and incentives

6.4.1 Non usage charges

At present there are no standard non usage/reservation charge arrangements.

6.4.2 Cancellation fees

At present there are no standard cancellation fee arrangements.

6.4.3 Reduction fee for Framework Agreements

At present there is no standard arrangement for a reduction fee for Frameworks Agreements.

6.4.4 ERTMS Discounts

At present there are no standard ERTMS Discount arrangements.

6.5 Performance scheme

The GB rail industry operates a performance scheme which provides compensation to railway undertakings for unplanned delays and cancellations which they are not directly responsible for. It is a liquidated sums regime which provides compensation based on the marginal effect on future revenues of changes in performance caused by Network Rail or other railway undertakings. Details of the regime are incorporated into the track access contract (Schedule 8 of the model contracts as described in Section 2.3.2.1) of each railway undertaking. In most cases a standard template arrangement applies, though bespoke arrangements are also possible. Schedule 8 sets out a framework by which compensation is paid by either party if train or network performance fails to meet set benchmarks, which are set in line with regulated output targets. Bonuses are received if either party delivers better performance than the benchmark. The performance scheme therefore has incentive properties for both parties (Network Rail and railway undertakings) to improve their performance.

The Network Rail, passenger, charter and freight railway undertaking benchmark targets are set at realistic but challenging levels for all parties.

If Network Rail and railway undertakings perform at their respective benchmark levels then no Schedule 8 payments are made. The freight operator benchmark is based on average freight performance and is common to all freight railway undertakings. The charter operator benchmark is also based on average charter performance, and is common to all charter railway undertakings.

While franchised passenger railway undertakings are incentivised to improve performance generally through their franchise agreement, under Schedule 8 of the track access contract, railway undertakings also pay for delay they cause. They do not directly pay the other operators who suffer the effects of knock-on disruption, but instead they pay Network Rail, because it is only here that the direct contractual relationship exists. In turn, Network Rail pays the affected railway undertaking, and over time and on a national basis this is expected to hold Network Rail neutral to the effect of these consequential liabilities. This incentivises Network Rail to manage the impact of knock-on delays.

Railway undertakings are also able to claim additional compensation from Network Rail if performance is poor over a sustained period, the trigger being where network performance is more than ten per cent worse than the benchmark target on a moving annual average basis.

Freight and charter railway undertakings may also select an incident cap in exchange for paying an Access Charge Supplement. This provides certainty to the railway undertaking of its maximum liability for each incident under the performance regime. Freight and charter railway undertakings also have annual caps, which limits their liability through the performance regime on a yearly basis.

For freight railway undertakings, the Network Rail and freight operator payment rates are common across all freight operators, reflecting the cost incurred by freight operators as a result of lateness and cancellations, and the cost imposed on Network Rail as a result of third party delay. For charter railway undertakings, the Network Rail and charter operator payment rates are common across all charter operators, as in the freight performance regime.

The performance scheme has to meet requirements set out in Regulation 16 and Schedule 3 of the Access, Management and Licensing Regulations. Further information on the performance scheme may be found in ORR's 'Criteria and procedures for approval of track access contracts', which is available at:

http://ORR.gov.uk/what-and-how-we-regulate/track-access/criteria-and-procedures-for-the-approval-of-track-access-contracts

Dispute Resolution

The initial procedure for dealing with disputes relating to the performance scheme are set out within Schedule 8 of ORR's template track access contracts.

6.6 Changes to charges

The charges that Network Rail levies on train operators are determined as part of the periodic review process, which also establishes Network Rail's funding and outputs to be delivered. The periodic review process sets Network Rail's charges for a five year period. The 2013 Periodic Review process (PR13) set Network Rail's charges for the the period from 1 April 2014 to 31 March 2019. During this period changes to charges are limited to small increases each year to reflect inflation. Therefore, with the exception of these small increases, no material changes to charges are expected prior to 1 April 2019. These changes will be determined by ORR, and established in consultation with with the industry, as part of the 2018 Periodic Review process (2018).

6.7 Billing arrangements

Each railway undertaking which operates on the main rail network will for commercial issues communicate with an assigned member of the relevant Network Rail route team.

The relevant Network Rail route team is responsible for the cost recovery of monies owed to Network Rail by the relevant railway undertaking, much of which is outlined in the specific track access contract. Remedies for non-payment include interest charges, suspension of the contract and termination. All invoices are sent to railway undertakings via Network Rail Finance Shared Services and are typically on a periodic (four week) basis.

Section 7 - Annexes

Annex A – CP5 Charges

Annex A can be found on our website:

https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/cp5-access-charges/

Annex B – Schedule of dates, timetabling process

Timetable Development Dates – 2018 Timetable		
Timetable Development Dates	**Principal Change**	**Subsidary Change**
D-67 Formal Notification of Process Dates	26/08/2016	
Revision of Timetable Planning Rules		
D64 to D60 – Network Rail to Consult Proposed Changes to Rules	16/09/2016	24/02/2017
Rules sent to Network Rail's Planning Publications team for processing	12/10/2016	22/03/2017
D59 – Publish 'Draft Rules'	21/10/2016	31/03/2017
D54 – Operator Responses to 'Draft Rules'	25/11/2016	05/05/2017
D54 to D44 – Network Rail review Operator Responses		
Rules sent to Network Rail's Planning Publications team for processing	25/01/2017	05/07/2017
D44 – Publish 'Final Rules'	03/02/2017	14/07/2017
D41 – End of Appeal Period 'Final Rules'	24/02/2017	04/08/2017
Initial Consultation Period		
D64 – Publication of draft Calendar of Events	16/09/2016	24/02/2017
D55 – Publication of Strategic Capacity Statement	18/11/2016	28/04/2017
D55 – Notification by TT Participants of major TT changes	18/11/2016	28/04/2017
D55 – Start of Initial Consultation Period	18/11/2016	28/04/2017
D54 – Publication of Final Calendar of Events	25/11/2016	05/05/2017
D45 – Network Rail to provide copy of 'Prior Working Timetable'	27/01/2017	07/07/2017
	Principal Change	Subsidary Change
D48 – Notification of Provisional International Paths	06/01/2017	
D40 – Priority Date	03/03/2017	11/08/2017
Timetable Preparation Period		
Timetable Preparation Period	**Principal Change**	**Subsidary Change**
D40 – Start of Timetable Preparation Period	03/03/2017	11/08/2017
D37 - Timetable Change Risk Assessment Group (TCRAG)	24/03/2017	01/09/2017
D32 - Timetable Change Assurance Group (TCAG)	28/04/2017	06/10/2017
D26 – Network Rail Publish New Working TT (WTT)	09/06/2017	17/11/2017
New WTT and associated system files available to	09/06/2017	17/11/2017

RDG		
Operator responses to New WTT	23/06/2017	01/12/2017
D22 – End of Appeal Period ‘New Working Timetable	07/07/2017	15/12/2017
Timetable Briefing process complete (D-15)	25/08/2017	02/02/2018
CIF Electronic Data available (D-14)	01/09/2017	09/02/2018
D9 - Timetable Extract taken for NRT Edit	06/10/2017	16/03/2018
D8 - Corresponding Day Timetable Dates Proposed to Operators	13/10/2017	23/03/2018
NRT Data sent to publishers (D-4)	10/11/2017	20/04/2018
Timetable Commencement Date	10/12/2017	20/05/2018
Timetable End Date	19/05/2018	08/12/2018

Annex C – Technical Facilities

Annex C can be found on our website:

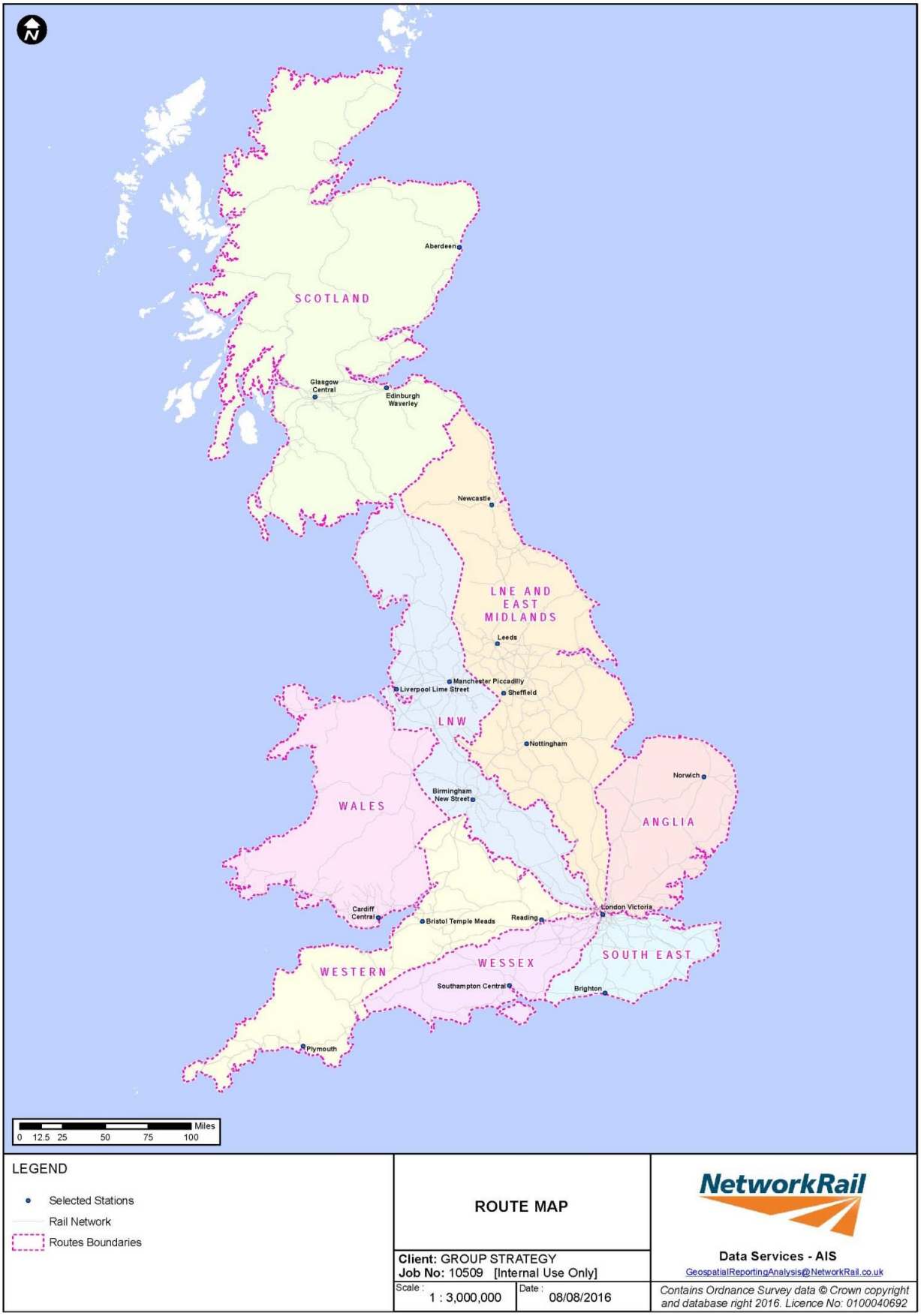
https://www.networkrail.co.uk/industry-commercial-partners/information-operating-companies/network-statement/

Annex D – Network and Route Specifications

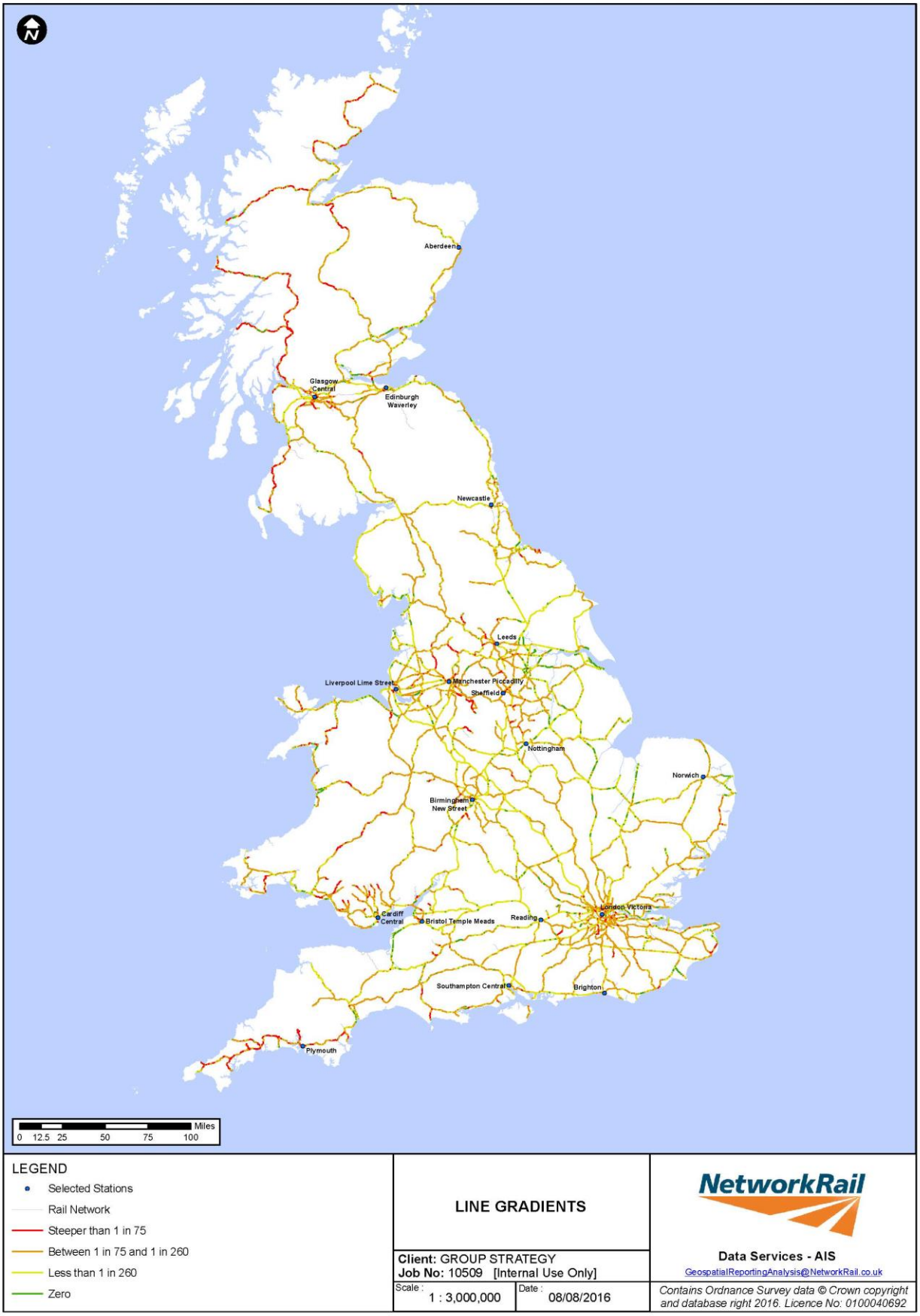
Annex D can be found on our website:

https://www.networkrail.co.uk/running-the-railway/our-routes/

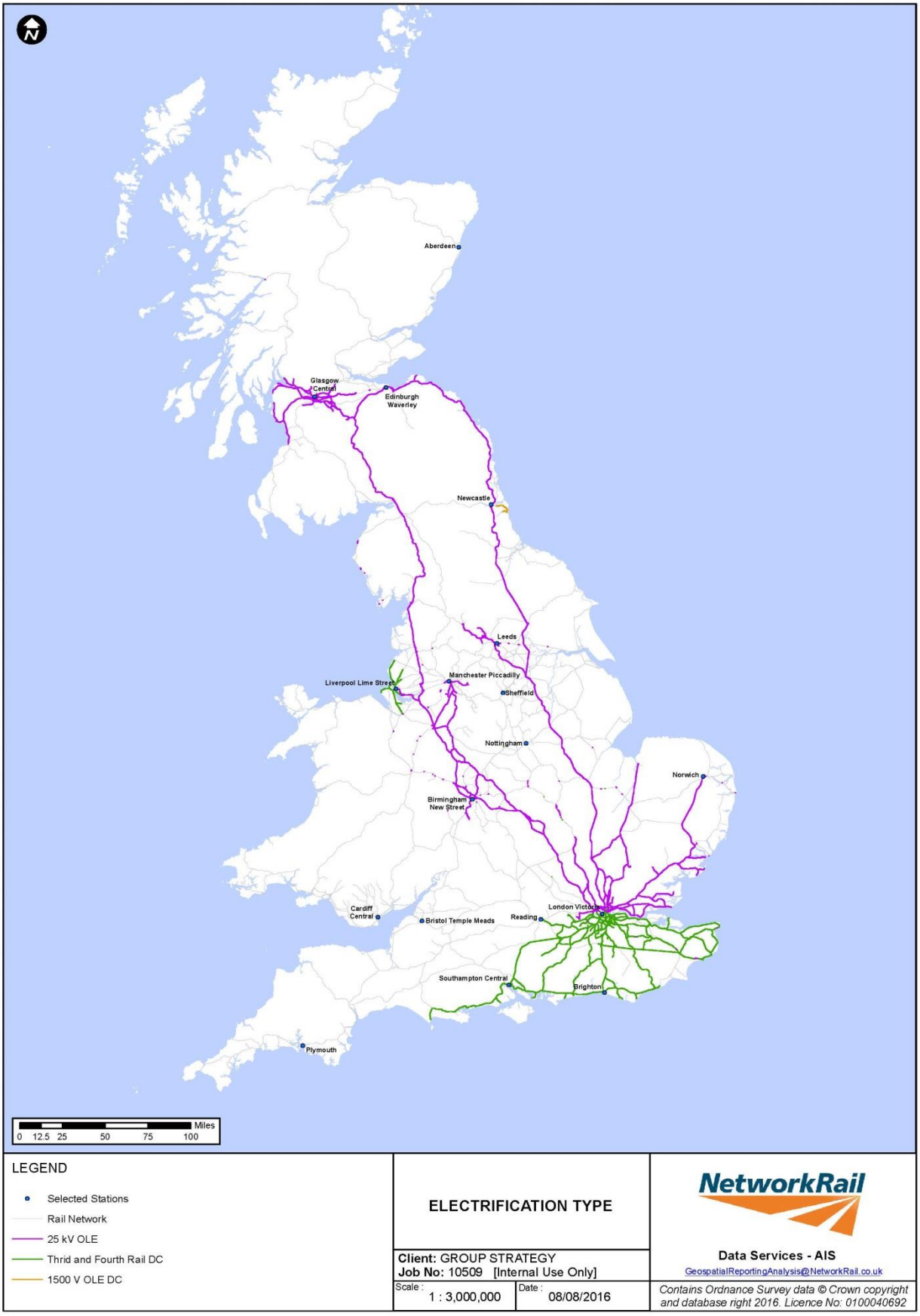
Annex E – Network Rail's Routes



Annex F – Route Capability Gradients



Annex G – Extent of electrification across the network



Annex H – Extent of GSM-R systems across the network