Office of Rail & Road and Network Rail

Mandate L4AR007: Review of Network Capability – Phase 2

Recommendations on the Monitoring and Assessment of Network Capability in CP6

Issue 3-01 | 1 November 2018

Job number 262940-00

Ove Arup & Partners Ltd
Scotstoun House
South Queensferry
Edinburgh EH30 9SE
United Kingdom
www.arup.com

ARUP

Contents

Appendices

1 Executive Summary

General

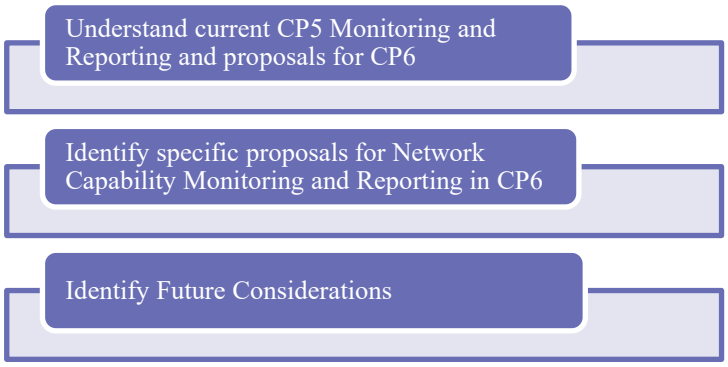
Arup has been appointed by the Office of Rail and Road (ORR) and Network Rail as Lot 4 Independent Reporter to monitor and evaluate Network Rail's delivery of its outputs and commitments.

The purpose of Mandate L4AR007 was to review the process for maintaining Network Capability. Phase 1 was to look at the CP5 processes and Phase 2 (reported here) was to provide suggestions as to how Network Rail could monitor and assess Network Capability in CP6. The Phase 1 review is reported in a separate report submitted to the ORR and Network Rail.

A full copy of the Mandate is included in Appendix A.

Introduction

The Phase 2 review of potential future metrics was structured around following approach:



Current Proposals for CP6

The basis of the future requirements from Network Rail for CP6 is based on the High-Level Output Specifications (HLOS) issued by the Department for Transport[1] (covering England and Wales), and Transport Scotland[2] (for Scotland). The England and Wales HLOS makes no specific reference to Network Capability however the Scotland HLOS has specific requirements regarding the delivery of accurate gauging data over the course of CP6.

The ORR, in its draft determination,[3] requires Network Rail, "*to protect and maintain the baseline capability of the network and for all changes to go through the recognised industry processes through CP6*". ORR also expects Network Rail to set a baseline for

[1] Railways Act 2005 Statement High Level Output Specification; Department for Transport, July 2017
[2] The Scottish Ministers' High Level Output Specification for Control Period 6; Transport Scotland, July 2017
[3] ORR 2018 periodic review Draft determination – overview of approach and decisions June 2018

capability at Route level for 1st April 2019. ORR also suggests[4] a specific metric around the responsiveness of the System Operator to customer (TOC/FOC) questions in relation to capability.

Key to the monitoring current Network Capability is the Network Change process. The review identified that the Network Rail responsibility for delivery is divided between day-to-day delivery in the Routes with training and process management responsibility undertaken by the System Operator function.

Network Rail are proposing to report CP6 outputs in a series of 'scorecards'. These respond to various stakeholder (both internal and external) requirements however it is noted that there are no measures of Network Capability included in the proposed CP6 scorecards although there are some route measures of network change compliance. We understand that Network Rail have not included Network Capability in their scorecards due to the relatively slow rate of change of the measure.

Network Capability Monitoring and Reporting in CP5

An internal audit by Network Rail in 2017 found significant deficiencies in the controls around the Network Change process in CP5, and as a result Network Rail have launched an improvement programme (Network Change Improvement Programme (NCIP)) to address the identified shortcomings. This programme is on-going at the time our review.

Stakeholder responses to ORR's consultation for Route requirements and scorecards identified a range of operator concerns regarding capability. This included comments about the inaccuracy of gauging, and a desire to include the impact of long-term temporary speed restrictions in the capability measure.

The Network Capability Steering Group (NCSG) has been recently 'relaunched' under a new 'chair'. The NCSG includes representation from Rail Delivery Group, ORR and Network Rail. A new set of Terms of Reference for the group have recently been finalised.

In considering how measures for CP6 may be framed, consideration has been of the intent of network capability in the overall railway system and the characteristics of 'good practice' measures.

Recommendations

Our recommendations are made in the context that Network Rail is still in the process of implementing its internal Network Change Improvement Programme (NCIP). We have assumed that in the next year NCIP improvements will be implemented and embedded in the Route operations with suitable internal audit and review by the System Operator function or other Network Rail central team to assure embedment and continuing compliance.

On the above basis the following recommendations are made in relation to Network Capability monitoring and reporting in CP6.

[4] ORR 2018 periodic review draft determination Supplementary document – Scorecards and requirements June 2018

No.	Recommendation	Benefits	Evidence of Implementation	Owner	Target Date for Completion
L4AR007-01	That the Network Capability Steering Group (NCSG) routinely receives a dashboard report on Network Change and Network Capability. This dashboard would comprise a 'basket' of measures selected from Table 2 (below) or similar agreed by the NCSG membership. The dashboard could consider a 360° view on behaviours of the wider industry group. The dashboard would be produced by the System Operator as the basis for discussion at the NCSG.	This will promote visibility of Network Change and Network Capability and form a basis for monitoring and review allowing NCSG members to challenge Network Rail on its performance as appropriate.	Dashboard of measures agreed by all parties to the NCSG; and Minutes of meetings demonstrating the presentation and discussion of the dashboard.	Network Rail to develop draft dashboard based on existing available business information and include in Network Rail Data Protocol.	Develop proposed Dashboard by 1st March 2019 ORR agreement of dashboard by 1 April 2019
L4AR007-02	Develop a single cohesive system wide view of the Network linking capability, performance and capacity.	This will create an integrated view of the three key elements that dictate availability of train paths leading to more holistic decision making.	Production of the integrated view; and demonstration of its applicability to decision making	Network Rail System Operator	June 2019
L4AR007-03	Based on the output of recommendation L4AR007-02 develop a long-term vision for Network Capability across the Network that provides a touchstone against which to test change.	This will provide a check on proposed change to ensure that it protects long-term Network Capability	Production of the long-term vision in a format and of such structure that it can be used to 'test' Network Change; and incorporation of this test in the Network Change process possibly via the Network Code.	Network Rail System Operator	June 2019
L4AR007-04	The inclusion of a simple metric to record customer / stakeholder satisfaction regarding Network Capability; this would form one metric on the dashboard reported to NCSG (see L4AR007-01 above)	This will provide an overall customer / stakeholder focused measure to assess the level of engagement with operators and degree of customer concerns.	Design of process to engage with operators to test satisfaction; and inclusion of the measures in the dashboard reported at NCSG	Network Rail System Operator	Develop by 1st March 2019 (See L4AR007- 01 above)

Table 1: Summary of Recommendations for Network Capability Monitoring and Reporting

The following table identifies a range of metrics that could be included in the dashboard reported at the Network Capability Steering Group (L4AR007-01 above). A selection of metrics (leading and lagging) should be identified for the dashboard reporting taking into account the availability of existing business information to limit the additional regulatory burden.

Aspect	Possible Metric	Type	Comment
Input	Clear Network Capability baseline	Leading	baseline should be agreed with stakeholders
	Data quality provided by the Routes	Leading	
Process	Defined process with clear RACI	Leading	Assumed as part of NCIP
	Audits of documented process compliance	Leading	
Output	Accuracy of National Electronic Sectional Appendix (NESA)	Lagging	
	Accuracy of the Integrated Network Model (INM)	Lagging	
	Accuracy of national gauging database	Lagging	
	Temporary Speed Restrictions (TSRs)	Lagging	Assumed existing Network Rail data
	Speed Restriction Derogation	Lagging	Specifically, for Charter trains
	Specific metrics for each aspect of Network Capability?	Lagging	
	Delivery of Network Capability projects to time	Lagging	
	Stakeholder satisfaction with Network Capability	Lagging	Consider ORR SO metric D16
	Metrics to reflect Scottish HLOS gauging requirement and in particular the reliance on a single source of 'the truth' (see Section 4.2.2)	Lagging	
Outcome	Enable increased capacity (Network Capability as an enabler of improved train service) This could be defined as the number of increased train paths created	Lagging	
	Resilience (route / network based view of network capability - more of a system wide view …)	Leading	
	Mileage of 'digitally enabled' railway routes	Leading	Definition of 'digitally enabled' required

Table 2: Potential Metrics for Network Capability Dashboard

2 Introduction

2.1 General

Arup has been appointed by the Office of Rail and Road (ORR) and Network Rail as Lot 4 Independent Reporter to monitor and evaluate Network Rail's delivery of its outputs and commitments for CP5.

2.2 Scope of the Mandate

The scope of this study is defined in Mandate L4AR007, as copy of which is included in Appendix A.

The purpose of the Mandate was to provide assurance to ORR that baseline capability was being maintained as per Network Rail's obligation set out in the ORR's Final Determination for CP5. The focus of the review was on the processes applied to report capability data (mileage and layout, line speed, route availability, electrification and gauging) from Network Rail's corporate systems (NESA[5], INM[6] and the National Gauging Database) and the process to transform the data from these systems to the reporting format provided by Network Rail in its Annual Return.

This assurance was to be arrived at based on evidence provided by, and direct engagement with, Network Rail. It was also to be based on supporting evidence provided by ORR from stakeholders.

Specifically, where capability has changed, ORR was seeking assurance that Network Rail had followed the Network Change process as defined in the Network Code. Additionally, ORR was seeking professional input from the Reporter on how Network Rail management of Network Capability may be best assessed in CP6.

The output of this work was to inform the ORR's Final Determination for CP6 on 31st October 2018.

2.2.1 Phasing

The Mandate identified two phases of the study which were defined in three tasks.

Phase 1

The two tasks in Phase 1 were:

- Verify the consistency and accuracy of Network Rail's data management and reporting processes, procedures and associated governance, to assure ORR that Network Capability is being reported correctly, and that Network Rail's assessment of performance against the regulated output can be relied upon.
- At locations where Network Rail or the Reporter identifies that the capability of the network has changed since 1st April 2014, evaluate Network Rail's compliance with

[5] National Electronic Sectional Appendix
[6] Integrated Network Model

the Network Change element of the Network Code (having regard to the findings of Network Rail's Internal Audit Report[7]).

Phase 2

Phase 2 had one task:

- Make recommendations as to how Network Capability could be better monitored and reported in CP6, taking account of the HLOS requirements, ORR's PR18 consultation responses, and Network Rail's proposals in this area.

This report is the Independent Reporter's response to the Phase 2 task. The Phase 1 work has been reported separately.

2.3 Structure

This report is structured to provide a chain of development to demonstrate the evidence based nature of the review leading to a logical outcome in terms of recommendations going forward.

The report has been drafted based on the following structure:

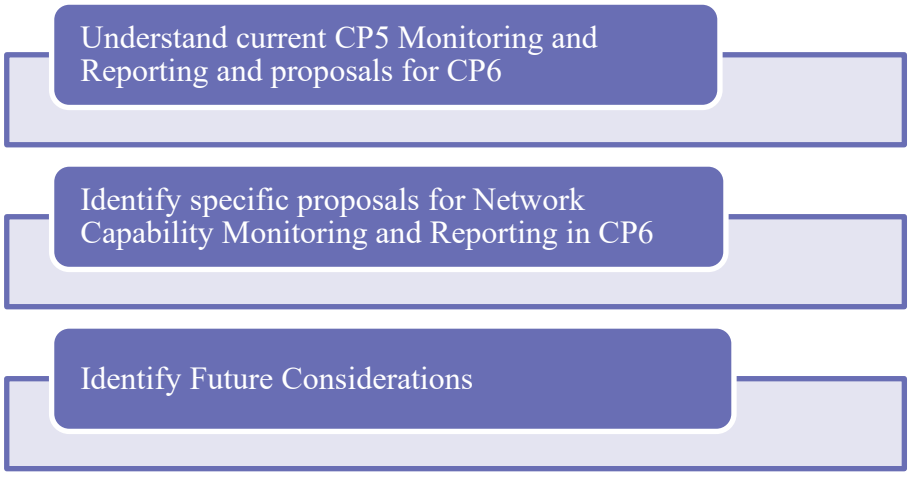


Figure 2-1: Report Structure

The first section looks at the reporting of network capability in CP5 and current proposals for the monitoring and reporting of Network Capability in CP6. This is based on the documentation that has been provided by Network Rail and ORR.

The second part takes an objective view of what the monitoring and review of the measure should take into consideration and look like.

The final section describes elements which could be incorporated into future Network Capability monitoring and reporting, and includes some recommendations.

The principle behind this structure is to provide a line of sight from the current proposals, through an independent review of what the aims of the regime should be, to statements on possible developments going forward.

[7] Network Change - LNE & EM - Audit Report - FINAL - 04.12.2017

3 CP6 Monitoring and Reporting - Overview

3.1 Introduction

The purpose of this part of the report is to provide an overview of the current intentions for the monitoring and reporting of capability as set out in the documentation that has been received from ORR and Network Rail. The aim is to provide a summary to provide a baseline for our recommendations.

3.2 CP6 HLOS Requirements

The requirements for the network in CP6 are defined in the High-Level Output Specification (HLOS) documentation prepared for England and Wales, and separately for Scotland.

3.2.1 England and Wales

The England and Wales HLOS[8] is focused on changes to the network achievable through maintenance and renewal of the network and not on enhancements. In this regard the emphasis is on delivering better operational performance and capacity. There is no explicit requirement in the HLOS with regards to network capability.

3.2.2 Scotland

Scotland produces a separate HLOS[9] based on the devolution of responsibility for Network Rail funding in Scotland to the Scottish Government. There is reference in the Scottish HLOS with regards to network capability, specifically that the Scottish network:

"*will be operated and maintained as a minimum throughout CP6 at a level which will satisfy all of the track access rights of all passenger and freight operators in place at the date of publication of this HLOS and any rights secured … between then and 31 March 2019.*"

"*By the end of Control Period 6 all Scottish routes are maintained to be capable of accommodating the gauge of all locomotives and passenger rolling stock … which have run in Scotland in CP4 and CP5 or are planned to run in Scotland in CP6.*"

"*Freight gauge capability should be maintained to at least the capability in the most recent published issue of the Freight Gauge Database Map, or the Sectional Appendix, or the full suite of RT3793 forms …*"

"*a gauging strategy [is to be developed] by 31 March 2019 [to be delivered commencing] no later than 1 April 2019 and to be completed by the end of CP6*"

[8] Railways Act 2005 Statement High Level Output Specification; Department for Transport, July 2017
[9] The Scottish Ministers' High Level Output Specification for Control Period 6; Transport Scotland, July 2017

The requirements set out in the Scotland HLOS place an obligation on Network Rail, and the ORR, to have in place a regime to monitor and report on delivery of the specific elements identified.

Network Rail has developed a CP6 HLOS Tracker for Scotland this indicates that there is a clear programme plan being prepared for assessing the 'gap' in capability and options for delivery.

3.3 ORR Draft Determination

ORR has set out its proposals for holding Network Rail to account for its obligations in respect of Network Capability in the scorecards and requirements supplementary document[10].

3.3.1 England and Wales Routes

In respect of Network Capability in England and Wales, ORR[11] noted that in CP5, it set a minimum baseline for Network Capability (covering track mileage and layout, line speed, gauge, route availability and electrification type).

The ORR, in its Draft Determination, made specific reference to Network Capability recognising that there were concerns over how Network Rail had managed Network Capability in CP5.

For the Draft Determination ORR has stated that in CP6 they expect Network Rail: "*to protect and maintain the baseline capability of the network and for all changes to go through the recognised industry processes through CP6*".

ORR state that they expect to work with Network Rail to set the baseline for 1 April 2019 at route level, and as part of that work consider whether the baseline requirement should be as set out for CP5 or whether this should be amended.

3.3.2 Scotland Route

In respect of Network Capability in Scotland, ORR[12] has stated that it will continue to work with Network Rail to set the baseline for 1st April 2019 at Route level. As part of this work ORR is considering whether the base requirement should be as the Independent Reporter set out for CP5 (in terms of track mileage and layout, line speed, gauge, route availability, electrification type) or whether this should be amended.

[10] 2018 periodic review draft determination Supplementary document – Scorecards and requirements; Office of Rail and Road, June 2018
[11] 2018 periodic review Draft determination – overview of approach and decisions; Office of Rail and Road, June 2018
[12] 2018 periodic review Draft Determination – Summary of conclusions for Scotland; Office of Rail and Road, June 2018

3.3.3 System Operator

In the Draft Determination and associated documents, ORR sets out principles[13] and some specific measures[14] that could be adopted by Network Rail. In relation to Network Capability the ORR suggests a specific metric around the responsiveness of the System Operator – see below.

Possible System Operator Performance Measure		System Operator Accountable?	Quantitative Metric?
D16	Responsiveness of SO in responding to customer questions regarding network capability	✓	✓

Table 3-1: ORR Suggested Capability Metric

ORR does not propose to set any regulatory minimum floors[15] for the System Operator, as they consider that to do so would potentially create perverse incentives to focus on some aspects of its operational model at the expense of others. ORR will instead take the trajectories defined in the System Operator's strategic plan as the baseline against which it will report the System Operator's performance in CP6.

3.4 Network Rail Proposals for CP6

The following section looks at several features of the Network Rail proposals for CP6 to derive an overall understanding of their approach to Network Capability and its monitoring and reporting in CP6.

The Network Change process is defined in the flow chart in Figure 3-1.

[13] 2018 periodic review draft determination System Operator draft settlement document; Office of Rail and Road, June 2018
[14] Possible measures of the System Operator's performance A consultation to inform industry discussion; Office of Rail and Road, July 2017
[15] Regulatory minimum floors refer to the level of a measure at which ORR would be highly likely to consider a formal investigation against Network Rail – in CP6 ORR are applying a floor to the train performance and asset sustainability measures on the route scorecards.

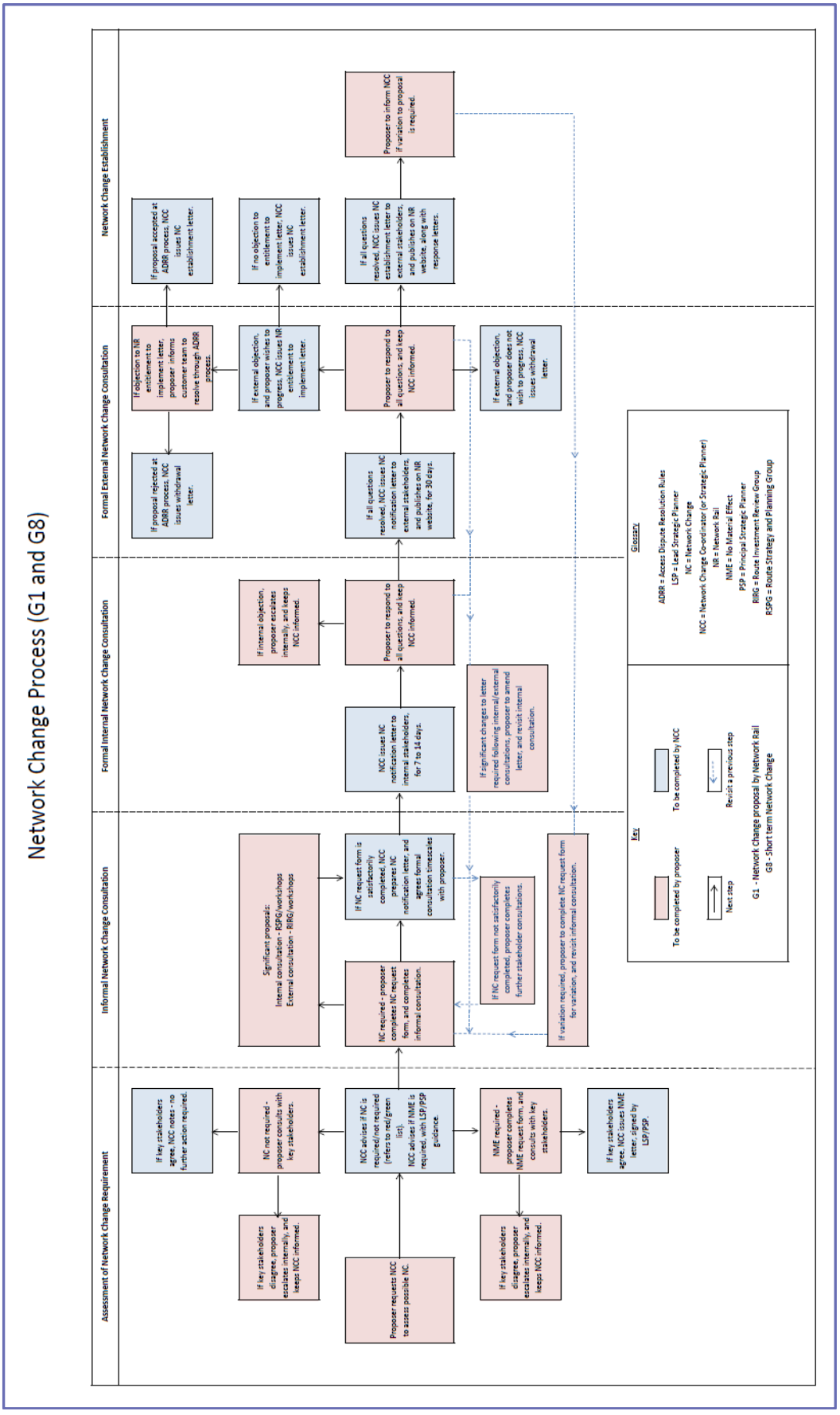


Figure 3-1: Network Change Process Flow Chart

3.4.1 Process Responsibility

Within Network Rail there are various parties that have accountability and responsibility for adherence to the defined process. The document "Summary of Accountabilities Associated with the Network Change Process" sets out the division of roles and responsibilities across Network Rail; an extract of this is shown in Table 3-2.

Individual Role	Network Change Sponsor / Proposer	Network Change Coordinator	Regulatory Reform Manager	Network Capability Standard Owner	Director Route Safety and Asset Management	Head of Strategic Planning
Location of Individual Role	**Likely to be Route based but could be part of IP**	**Part of the System Operator Located in the Route**	**Planning and Regulation at Milton Keynes (Centre)**	**STE in Milton Keynes (Centre)**	**Route Based**	**Part of the System Operator Located in the Route**
Identify need for Network Change	Accountable Responsible	Consulted			Consulted	Consulted
Maintain corporate guidance and review alignment to standard			Responsible	Accountable		
Provide local guidance / training to Network Change proposers	Consulted	Responsible			Informed	Accountable
Lead informal consultation	Accountable Responsible	Consulted			Informed	Informed
Facilitate formal consultation documentation and recording of consultees responses	Consulted	Accountable Responsible			Informed	Informed
Resolution of objections	Accountable Responsible	Consulted	Consulted Informed			
Issue establishment of Network Change	Informed	Accountable Responsible	Informed		Informed	Informed
Requesting update of Sectional Appendix	Accountable Responsible	Informed	Informed		Informed	Informed

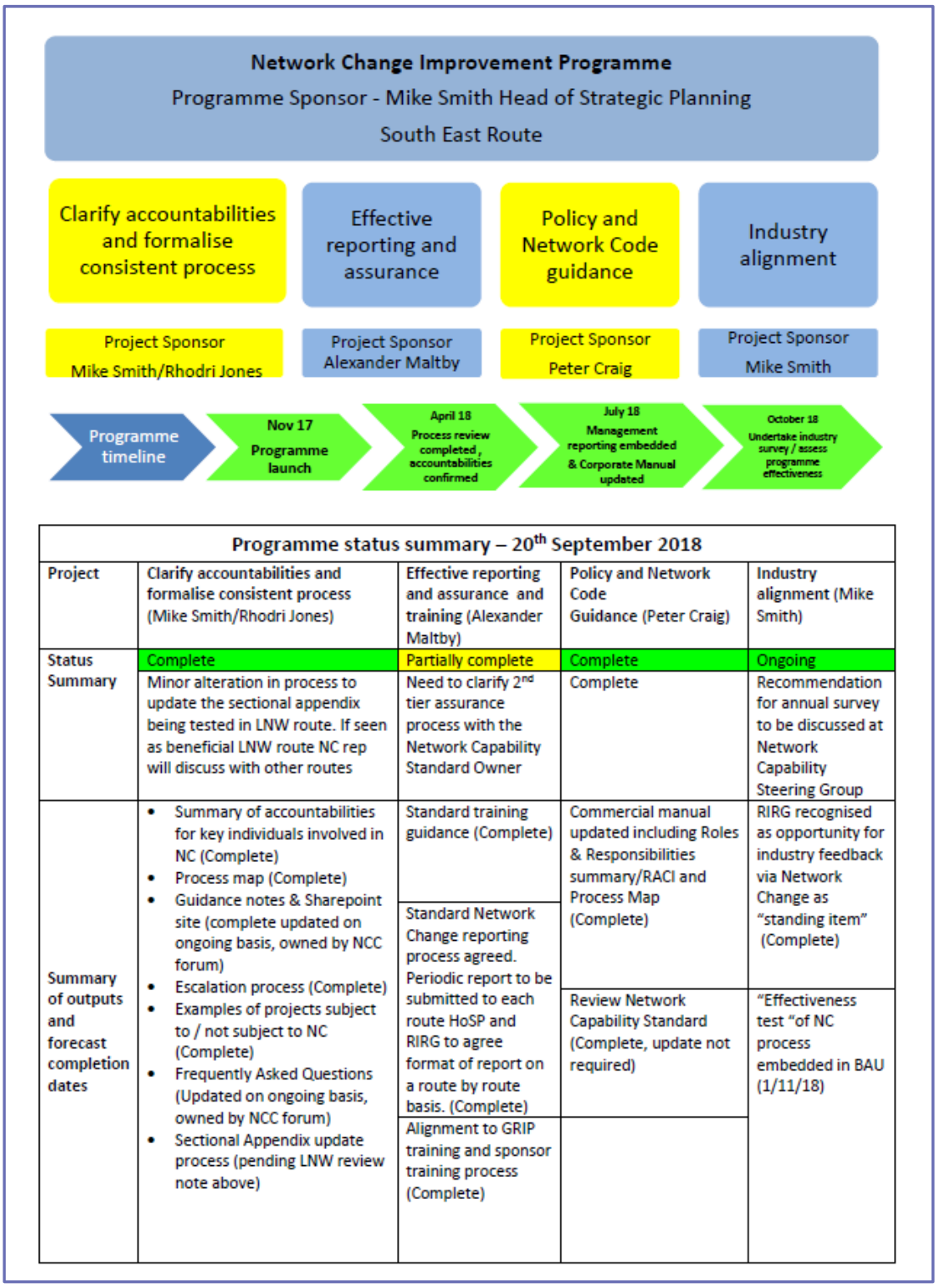
Table 3-2: Network Change RACI Diagram

What is clear from the above is that the day-to-day operation of the process is at Route level. The System Operator is involved in the stages associated with guidance and training associated with Network Change.

Network Rail has confirmed that the System Operator (SO) organisation has overall responsibility for the Network Change process. However, it is the Network Change Sponsor / Proposer (in the Route) that is accountable for identifying the need to initiate a formal Network Change process. It is noted that such a scheme could be an Infrastructure Projects (IP) project where the sponsor would formally sit in IP and the Route would act as client.

The division of responsibilities shown above is representative of the current (September 2018) arrangement. However, Network Rail advised that the source document is currently being reviewed as part of the Network Change Improvement Programme. Figure 3-2 shows progress in the delivery of the NCIP. It is noted that a lot of progress has been made in the stages of the process, and that a test of the embedding of the revised process in 'business as usual' will take place in November 2018. Network Rail

has advised that it does not expect there to be significant changes to the RACI allocations because of this review.



Programme status summary – 20th September 2018

Project	Clarify accountabilities and formalise consistent process (Mike Smith/Rhodri Jones)	Effective reporting and assurance and training (Alexander Maltby)	Policy and Network Code Guidance (Peter Craig)	Industry alignment (Mike Smith)
Status Summary	Complete	Partially complete	Complete	Ongoing
	Minor alteration in process to update the sectional appendix being tested in LNW route. If seen as beneficial LNW route NC rep will discuss with other routes	Need to clarify 2nd tier assurance process with the Network Capability Standard Owner	Complete	Recommendation for annual survey to be discussed at Network Capability Steering Group
Summary of outputs and forecast completion dates	• Summary of accountabilities for key individuals involved in NC (Complete) • Process map (Complete) • Guidance notes & Sharepoint site (complete updated on ongoing basis, owned by NCC forum) • Escalation process (Complete) • Examples of projects subject to / not subject to NC (Complete) • Frequently Asked Questions (Updated on ongoing basis, owned by NCC forum) • Sectional Appendix update process (pending LNW review note above)	Standard training guidance (Complete)	Commercial manual updated including Roles & Responsibilities summary/RACI and Process Map (Complete)	RIRG recognised as opportunity for industry feedback via Network Change as "standing item" (Complete)
		Standard Network Change reporting process agreed. Periodic report to be submitted to each route HoSP and RIRG to agree format of report on a route by route basis. (Complete)	Review Network Capability Standard (Complete, update not required)	"Effectiveness test "of NC process embedded in BAU (1/11/18)
		Alignment to GRIP training and sponsor training process (Complete)		

Figure 3-2: Network Change Improvement Programme Status at 20/09/18

3.4.2 Current Reporting

At the time of writing we have been provided with limited documentation as to how Network Rail propose to monitor and assess Network Capability in CP6. However, it is

anticipated that the output of this review will inform Network Rail's internal monitoring of compliance.

Key documents provided to date are:

- Network Rail Planning, Reporting and Regulatory Framework Strategic Business Plan 9 February 2018;
- Monitoring Network Capability in CP6 (ppt presentation); and
- 2018.07.10_Network Capability Steering Group notes / actions.

The key reporting tool to be used by Network Rail in CP6 is the 'family' of Tier 1, Tier 2 and Tier 3 scorecards.

Network Rail's emerging views on monitoring network capability are summarised in Figure 3-3 below.

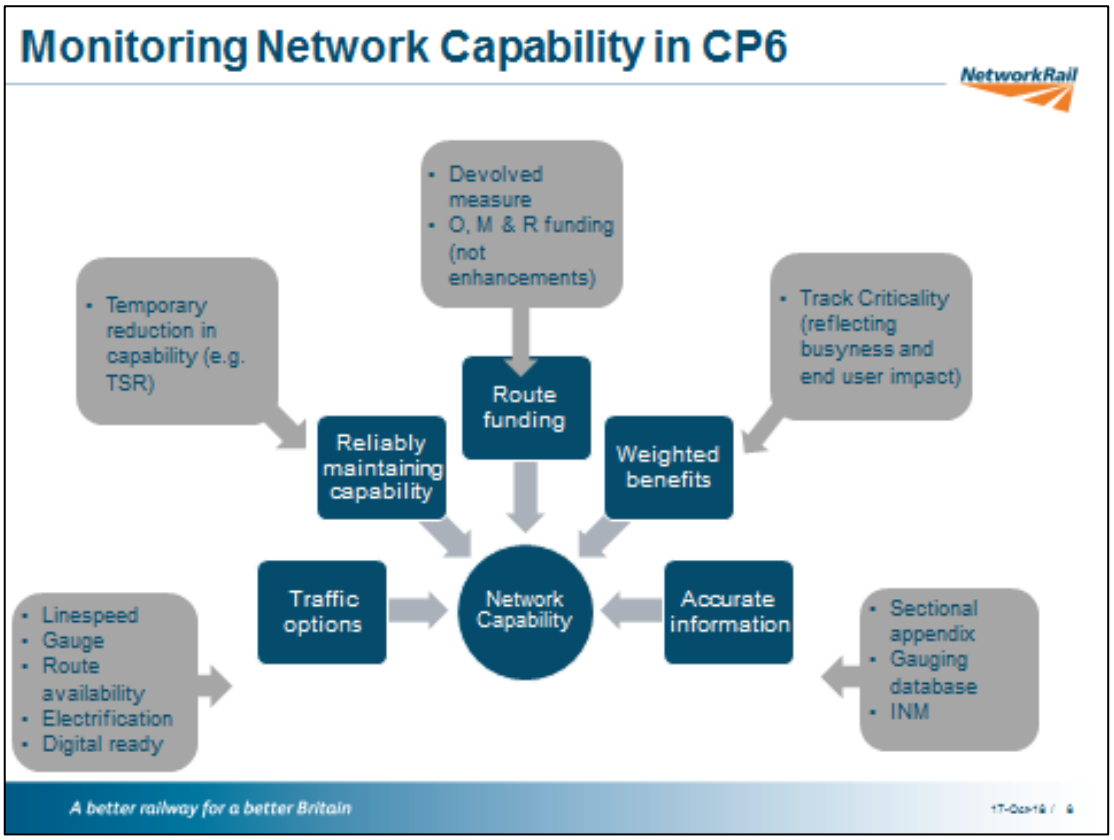


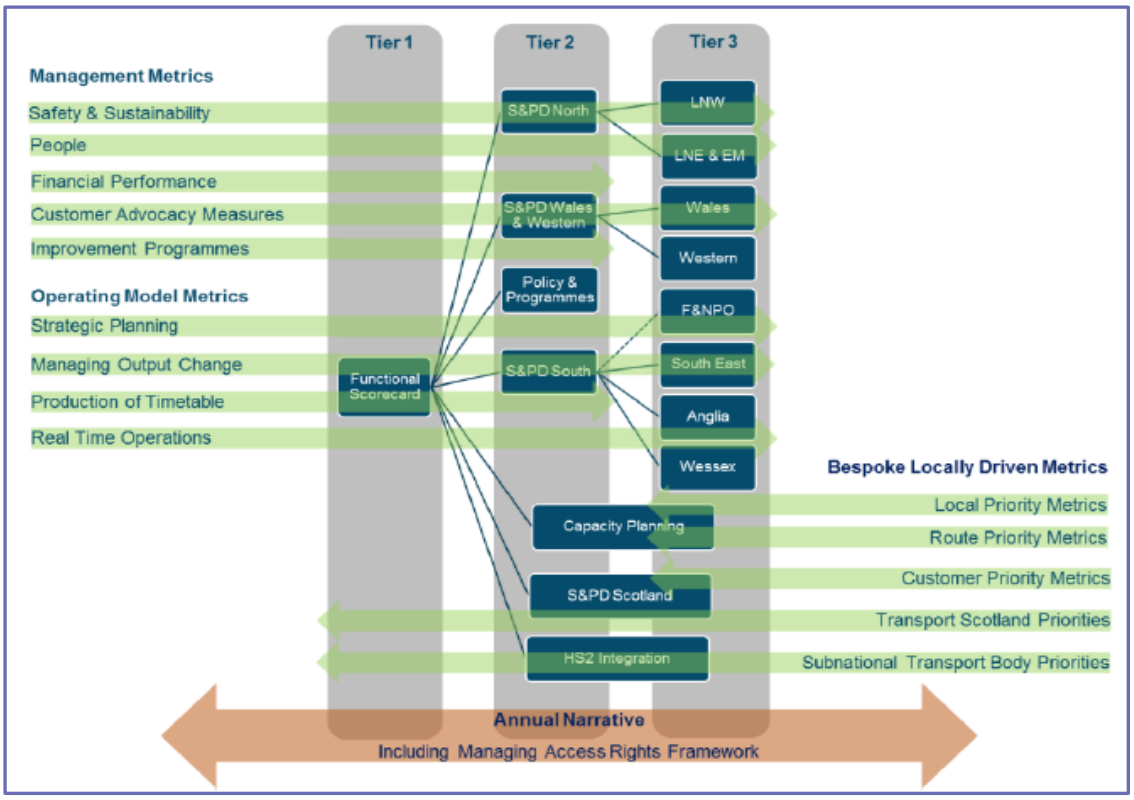
Figure 3-3: Monitoring Network Capability in CP6 (ppt presentation)

3.4.3 Scorecards

Network Rail operate several scorecards which report delivery to different stakeholders (with different interests) and at different levels of detail. The following sub-sections summarise our understanding of the various scorecards proposed by Network Rail for CP6.

3.4.3.1 System Operator Scorecards

The figure below from the System Operator Strategic Business Plan illustrates the 3-tier scorecard structure proposed by Network Rail for CP6.



Source: System Operator Strategic Business Plan[16]

Figure 3-4: Illustration of System Operator Scorecard Structures

At the Tier 3 level the SO has Route scorecards. These are drafted from the perspective of the Route as a customer of the SO and are reflective of the Route's priorities which should in turn reflect the TOC priorities.

Based on the System Operator Strategic Business Plan CP6 Scorecard document the coverage of each Tier scorecard can be identified. Reference to Network Capability does not appear in the scorecards although several Route (Tier 3) cards include measures associated with Network Change (such as TSRs).

3.4.3.2 Route Scorecards

The Route scorecards that Network Rail currently use to report delivery have no metrics relating to Network Capability in England and Wales, or Scotland. Network Rail has stated that this is because Network Capability is perceived to be a 'slow moving' metric and thus not appropriate to be included on Route scorecards which are designed to support management action. Network Rail do not expect Network Capability to feature on Route scorecards for CP6 for England and Wales.

[16] Network Rail System Operator Strategic Business Plan February 2018

However, it is noted that the Scotland HLOS sets out specific requirements around Network Capability, particularly in relation to gauge[17] which it would seem appropriate to monitor on the Route scorecard or accompanying report. This would provide visibility of progress towards delivery of the HLOS requirements.

In addition, if the impact of TSRs were to be included in the measure for line speed this would make the measure more volatile and potentially worthy of inclusion in the Route scorecard.

In terms of any changes of responsibility for the assessment and monitoring of capability planned for CP6 Network Rail has advised that there are plans to review and clarify the responsibilities in this area, which STE is leading. It is intended that that be integrated with the Network Change Improvement Programme.

3.4.3.3 Customer Scorecards

Customer scorecards are generally produced by the lead Routes for any particular operator. The exception to this appears to be TransPennine Express who have scorecards produced by both London North Eastern and London North Western Routes. It is noted that several Routes include customer measures for which they are not the lead Route; as an example, they include CrossCountry which has FNPO as its lead Route.

Customer scorecards are individual to the requirements of that particular operator. The following table summarises the coverage and percentage weighting applied to the scorecards. The weighting highlights the variability in the focus of attention of the individual TOCs.

[17] *The Scottish Ministers require that the capability of the network will be operated and maintained as a minimum throughout CP6 at a level which will satisfy all of the track access rights of all passenger and freight operators in place at the date of the publication of this HLOS and any rights secured, or in course of being secured, between then and the 31 March 2019. In particular, it must be fully consistent with the service level commitments specified in the ScotRail and Caledonian Sleeper franchises.*

Operator	Route	Asset Management / Property	Commercial	Customer	Financial	Investment / Enhancement	Other	Performance	Rolling Stock Introduction	Safety	Transformation
Arriva Rail London	Anglia			15				65		20	
C2C	Anglia				15		25	45		15	
Caledonian Sleeper	FNPO		15				10	40	15	20	
Chiltern Rail	LNW			13				43		44	
Cross Country	LNE							100			
East Midland Trains	LNE	17		33				50			
Govia Thameslink Railway	LNE							100			
Grand Central	LNE	14		57				29			
Great Western Railway	Western			20		25	15	20		20	
Greater Anglia	Anglia			50					50		
Heathrow Express	Western	30		25	10			20		15	
Hull Trains	LNE	13		50				40			
LNER	LNE			50				50			
Merseyrail	LNW	20		20				40		20	
MTR Crossrail	Anglia							100			
Nexus	LNE							100			
Northern Rail	LNW			25		30		30		15	
South Western Railway	Wessex	17		17	16	16		17		17	
TransPennine Express	LNE / LNW	7						30			63
Virgin Trains West Coast	LNW	30	5			5		30		30	
West Midland Trains	LNW	10	25	5				45		15	

Table 3-3: Breakdown of Scorecard Focus by TOC

3.4.4 Annual Return

The Annual Return is the formal reporting document by Network Rail for a range of regulated outputs, indicators and enablers.

The reporting of the Network Capability measures in the 2018 Annual Return is the responsibility of Asset Information Services, which is part of the Digital Railway function, with the supporting narrative gathered from the Routes and STE. The process for assembling the capability data is included in Appendix B.

3.4.4.1 2018 Annual Return

Regarding the 2018 Annual Return ORR advised Network Rail[18] that:

"We note your comments about replacing the reporting system but we expect you to assure yourself of the accuracy of the output from the new system, and that the planned changes do not provide any deterioration in the accessibility, accuracy or provision of information on capability to stakeholders in formats they expect and in a timely manner."

The associated specification for the 2018 Annual Return from the ORR, regarding Network Capability was defined as:

"Network Rail to provide commentary on significant changes including key highlights for each route, where the capability has been altered either through restoration of historic network changes or resolution of those network changes."

Specified Target / Output	Measure	Disaggregation
Linespeed (C1)	Length of running track (km) by speed band; changes to the network	Network-wide; England & Wales; Scotland
Gauge (C2)	Length of route (km) capable of accepting different freight vehicle, by six-gauge bands	
Route availability (C3)	Length of track (km) capable of accepting loaded vehicle types, by RA value	
Electrified track capability (C4)	Length of electrified track (km) by type	
Discrepancies between actual and published capability	Number of outstanding discrepancies, by type and proposed resolution	Network-wide; England & Wales; Scotland
Ongoing short-term network change proposals	Number of ongoing proposals by type of discrepancy, and time remaining before review	Network-wide; England & Wales; Scotland
Permanent network changes	1) Total annual Network Changes (network) 2) Total cancelled (network)	Network-wide; England & Wales; Scotland

This specification rolled forward the 2017 Annual Return submission requirements but provided added text to provide clarification on the measure.

[18] Letter headed "Network licence condition 12.1: form and contents of Annual Return for 2018" December 2017

4 Network Capability Monitoring and Reporting in CP6

4.1 Introduction

This section of the report considers the issues that will need to be addressed in any framework designed to monitor and report capability in CP6. This is followed by a review of the principles of the design of a good regime. It then considers where the focus of the reporting should be, taking account of the aims and objectives of the measures. Finally, there is an assessment of possible measures leading to a potential framework which could be used in CP6.

4.2 Issues and Concerns

4.2.1 Internal Audit

A number of weaknesses in the current system of monitoring and reporting Network Capability were highlighted in an internal audit undertaken in December 2017. The summary findings of the audit are shown in Table 4-1. This led to the Network Change Improvement Programme being initiated by Network Rail. At the time of our review, this improvement programme is still ongoing.

Summary of Findings

Finding	Summary	Rating
Corporate Findings		
1.1 Ineffective governance and unclear accountability	There is a lack of governance of the Network Change process and accountability is unclear.	**Serious**
1.2 Policies and procedures not fit for purpose	There is no up-to-date, end-to-end, embedded Standard and procedures for Network Change.	**Serious**
1.3 Inadequate assurance and monitoring processes	There is no assurance that Network Change is performed efficiently and effectively, or in compliance with the Network Code across the organisation.	**High**
1.4 Lack of competency and training frameworks	There are no centrally defined competencies for key roles and tasks in the Network Change process, and a lack of supporting training and briefing material.	**Medium**
LNE & EM Route Findings		
2.1 Identification of Network Change	Processes for planning minor works (e.g. maintenance, Works Delivery) do not consider Network Change requirements.	**Medium**
2.2 Procedures need updating	Local procedures can be improved and need to be finalised and communicated out to the business.	**Medium**
2.3 Management information needs improvement	The detail and quality of management information needs to be improved to enable better decision making by management.	**Medium**

Table 4-1: Summary of Findings from Network Rail Internal Audit

4.2.2 Operator Concerns

In January 2018 ORR published a summary[19] of the stakeholder responses to ORR's July 2017 consultation for Route requirements and scorecards. This was published alongside ORR's Overall Framework consultation[20].

Key points raised by stakeholders in relation to Network Capability were:

2.90 *Freight operators were particularly interested in gauge capability and wanted measures that allowed for correct measurements in this area to be undertaken consistently across routes. GB Railfreight commented on the accuracy of information which had proved challenging in CP5. It believes that the CP6 baseline may prove to be inaccurate if these issues are not resolved and reiterated that the capability of the network is imperative to its business needs and their delivery to their customers. There was some support for the approach Transport Scotland has taken to gauge in its HLOS.*

2.91 *Arriva Plc wanted … monitoring of capability to take account of ongoing issues on the network, such as Temporary Speed Restrictions (TSR's) that remain in place for prolonged periods of time.*

ORR's response was:

2.92 *Having considered the responses received we want Network Rail to continue to monitor the capability of the network. We propose that capability should be maintained at a minimum level to satisfy all track access rights of passenger and freight operators. We expect Network Rail to protect and maintain the baseline capability of the network and expect all changes to go through the recognised industry processes throughout CP6. We will continue to work with Network Rail to set the baseline for 1 April 2019.*

4.2.3 Transport Scotland

As noted above, the Scottish HLOS[21] contains passages covering Network Capability. Specifically, their requirement is to ensure that "*the capability of the network will be operated and maintained as a minimum throughout CP6 at a level which will satisfy all of the track access rights of all passenger and freight operators in place at the date of publication of this HLOS*"

The HLOS states that "*since devolution of rail powers in 2005, the Scottish Government has fully funded Network Rail to establish and maintain an accurate asset database, including gauge data. The Scottish Government has also fully funded the maintenance of asset capability, including gauge clearance*."

[19] Consultation on the overall framework for regulating Network Rail, Office of Rail and Road, July 2017. This may be accessed at http://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/price-controls/periodic-review-2018/pr18-consultations/consultation-on-the-overall-framework-for-regulating-network-rail.
[20] Consultation on the overall framework for regulating Network Rail, Office of Rail and Road, July 2017. This may be accessed at http://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/price-controls/periodic-review-2018/pr18-consultations/consultation-on-the-overall-framework-for-regulating-network-rail.
[21] The Scottish Ministers' High Level Output Specification for control Period 6: Transport Scotland

The Scottish Government states that the *"current approach to gauging processes has not been satisfactory, adding significant risk, delay and cost to the introduction of new rolling stock"*.

The Scottish Ministers therefore require "*that by the end of control period 6, all Scottish routes are maintained to be capable of accommodating the gauge of all locomotives and passenger rolling stock … which have run in Scotland in CP4 and CP5 or are known to be planned to run in Scotland in CP6.*"

It is noted that there is a suite of documents which define the freight gauge capability. The requirement is therefore to adopt the most onerous capability from:

- Freight gauge database maps;
- Sectional Appendix; and
- Full set of RT3793 forms.

The combination of the passenger and freight requirements as defined above provides the specification for the Scottish Gauge Requirement. Network Rail is required to develop a gauging strategy by 31st March 2019 to deliver the Scottish Gauge Requirement by the end of CP6.

4.2.4 Network Capability Steering Group (NCSG)

The Network Capability Steering Group, with representation from ORR, RDG and Network Rail meet on a quarterly basis. The draft terms of reference for the NCSG are shown in Figure 4-1.

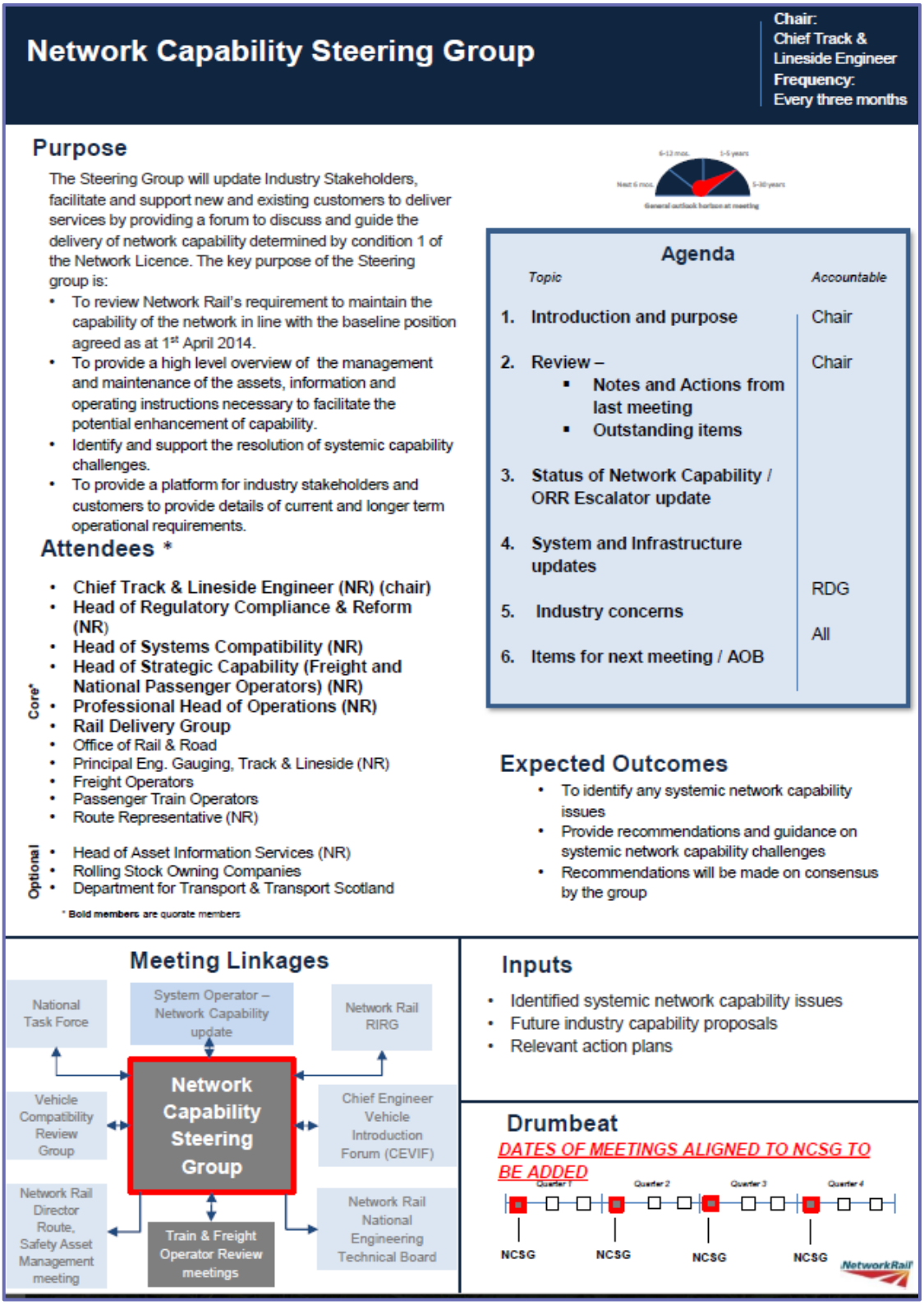


Figure 4-1: Draft Terms of Reference for National Capability Steering Group

Based on a review of recent NCSG minutes[22] concerns raised covered relevant to our review were:

[22] NCSG Meeting minutes from 19th April 2018 and 10th July 2018

Headline Issue	Commentary
Accountabilities and responsibilities since Devolution	Discussion regarding the updating of the Devolution Handbook to take account of revised responsibilities
Submissions from operators for the use of 'new' rolling stock	Looking to understand that the future workload associated with new or cascaded rolling stock gauging requirements
Specific TransPennine Express issues	Commercial agreement with TPE for Network Rail to provide gauging information associated with new rolling stock introduction
Lineside vegetation	Noted 'systemic problem' associated with persistent vegetation despite a new Vegetation Standard
Terms of Reference of the Group	Debate regarding latest draft ToR and need for amendment to include: links to the Vehicle Introduction Forum, to capture systemic issues, improved information flow with the ORR, and the presence of a DRAM at the meetings
Gauging Improvement Programme	Covering three key themes of resources, competence and engagement. This linked to six delivery work packages
ORR Escalator actions	Monitoring of progress on projects in the programme
Current disputes	List of disputes reviewed with two to be selected as case studies at a future meeting
Network Capability definition for CP6	Discussion around three topics of: current reporting methods, Network Change; and how monitoring will be undertaken in CP6
Differential speeds definitions	Discussion around the definition of vehicles assessed as suitable to take advantage of differential restrictions.

Table 4-2: Summary of Topics Discussed at NCSG

4.3 Monitoring and Reporting Principles

In considering how Network Capability should be monitored and reported in CP6 consideration should be given to what principles should be adopted for the process overall.

As part of the Arup review in 2012 a short literature review[23] was undertaken to identify key characteristics of 'best practice' metrics. These are set out below:

- The metric should be objective and easy to measure (this is important for considering alternative measures for CP6);
- It should be relevant to the organisation being measured (it is helpful if the output aligns to what the organisation is managing);
- The metric should provide an immediate and reliable indication of performance;
- It should be cost efficient to collate the information (minimum additional regulatory burden);
- They should be understood and owned by the group being measured (both Network Rail and operators);
- For leading performance indicators[24], there must be a connection to the desired lagging outputs - so that there is reasonable belief that the actions taken to improve

[23] In particular 'Leading Performance Indicators, Guidance for Effective Use', by Step Change in Safety
[24] Indicators provide information about the current situation that may affect future performance are referred to as 'leading' indicators as they measure the inputs to the process that will affect future outcomes.

the leading performance indicator will be followed by an improvement in the associated lagging output indicators[25];

- The reasons for measurement are understood, with a clear link back to HLOS, the Strategic Business Plan, and eventually the CP6 Determination and Delivery Plan; and
- They provide information to guide future management actions.

The above points have been used to guide our recommendations.

4.4 Focus of the Measures

In considering the future direction of the Network Capability measures it is necessary to come to a view on what Network Capability delivers, and for whom.

In this regard it is considered that the underlying focus must be on providing network capacity capable of meeting the requirements of the operators in terms of their physical ability to run the vehicles on the required routes. Line speed and layout characteristics of a route are also inextricably linked to the capacity of a route and have a strong influence on performance.

It is therefore clear that Network Capability should be a system-wide measure and as such needs to be considered in the round and not as elements on individual parts of the route. Delivering Network Capability is not an end but a key enabler of the network's ability to provide and sell train paths.

What has emerged from the stakeholder feedback is that there is a need to focus on the transparency with which capability is measured, managed, monitored and changed. It is also clear from documents we have seen that there are concerns regarding the current data accuracy (hence the gauging work in Scotland).

4.5 Possible Measures

Based on the foregoing assessment the review has identified four areas which it is believed will lead to improvements in the monitoring and reporting of Network Capability in CP6. These are described below:

4.5.1 Overall Dashboard

Having considered the elements of capability and the process for change, and the various parts of Network Rail involved, it is difficult to see where a clear single 'picture' on Network Capability is pulled together that allows an effective oversight role.

The existing Network Capability Steering Group (NCSG) has potential as a good forum for this overview to be monitored through presentation and discussion of a 'Network Capability Dashboard'. Based on the (draft) terms of reference, and notes from the last two meetings such a discussion does not appear to feature at present. Our

[25] Indicators that provide information on the outcomes of our actions are referred to as 'lagging' indicators because they measure the outcomes that have resulted from past actions / inactions.

recommendation is therefore would be that the NCSG, as a regular agenda item, require a dashboard of measures associated with Network Capability to be produced by Network Rail as a basis for discussion. *[Recommendation L4AR007-01]* This has the potential to promote visibility and provide room for debate on the matter allowing RDG / Operators and ORR to have visibility and (if necessary) challenge Network Rail on its performance.

4.5.2 System Wide View

It is clear to us that Network Capability is not an end in itself and that it is inextricably linked to network capacity and ultimately performance yet it does not appear to currently merit the same level of focus that the other two characteristics enjoy. The integrated nature of these elements is considered core to the delivery of train paths which are the ultimate product of the infrastructure. We would therefore recommend work be done towards a better understanding of how the System Operator pulls these components into a single cohesive system wide view. *[Recommendation L4AR007-02]*

4.5.3 Long Term Vision

The current measure is to protect and maintain the CP5 entry level of Network Capability. Our concern in this area is that whilst, according to the Network Code, change can only take place with the agreement of the operators involved, this does not necessarily mean it is beneficial to the network overall since, for example, a passenger operator may not be around in a few years' time. Thus, not all change, even if agreed, may be good for the network as a whole. Our recommendation in this area therefore is to propose that the System Operator develops a long-term vision for capability across the network that provides a touchstone against which to test change. *[Recommendation L4AR007-03]*

4.5.4 Customer Focus

Finally, in line with greater customer focus, and as a particular response to the issues raised by operators regarding the data quality etc, we would recommend a metric reporting on how satisfied the operators are with Network Capability. This would form part of the dashboard reported at NCSG. *[Recommendation L4AR007-04]*

It is noted that this is similar to the D16 measure referred to in Table 3-1 above.

4.6 Recommendations

Our recommendations are made in the context that Network Rail is still in the process of implementing its internal Network Change Improvement Programme (NCIP). We have assumed that in the next year NCIP improvements will be implemented and embedded in the Route operations with suitable internal audit and review by the System Operator function or other Network Rail central team to assure embedment and continuing compliance.

On the above basis the following recommendations are made in relation to Network Capability monitoring and reporting in CP6.

No.	Recommendation	Benefits	Evidence of Implementation	Owner	Target Date for Completion
L4AR007-01	That the Network Capability Steering Group (NCSG) routinely receives a dashboard report on Network Change and Network Capability. This dashboard would comprise a 'basket' of measures selected from Table 2 or similar agreed by the NCSG membership. The dashboard could consider a 360° view on behaviours of the wider industry group. The dashboard would be produced by the System Operator as the basis for discussion at the NCSG.	This will promote visibility of Network Change and Network Capability and form a basis for monitoring and review allowing NCSG members to challenge Network Rail on its performance as appropriate.	Dashboard of measures agreed by all parties to the NCSG; and Minutes of meetings demonstrating the presentation and discussion of the dashboard.	Network Rail to develop draft dashboard based on existing available business information and include in Network Rail Data Protocol.	Develop proposed Dashboard by 31 Jan 2019 ORR agreement of dashboard by 1 April 2019
L4AR007-02	Develop a single cohesive system wide view of the Network linking capability, performance and capacity.	This will create an integrated view of the three key elements that dictate availability of train paths leading to more holistic decision making.	Production of the integrated view; and demonstration of its applicability to decision making	Network Rail System Operator	June 2019
L4AR007-03	Based on the output of recommendation L4AR007-02 develop a long-term vision for Network Capability across the Network that provides a touchstone against which to test change.	This will provide a check on proposed change to ensure that it protects long-term Network Capability	Production of the long-term vision in a format and of such structure that it can be used to 'test' Network Change; and incorporation of this test in the Network Change process possibly via the Network Code.	Network Rail System Operator	June 2019
L4AR007-04	The inclusion of a simple metric to record customer / stakeholder satisfaction regarding Network Capability; this would form one metric on the dashboard reported to NCSG (see L4AR007-01 above)	This will provide an overall customer / stakeholder focused measure to assess the level of engagement with operators and degree of customer concerns.	Design of process to engage with operators to test satisfaction; and inclusion of the measures in the dashboard reported at NCSG	Network Rail System Operator	Develop by 31 Jan 2019 (See L4AR007-01 above)

Table 4-3: Summary of Recommendations for Network Capability Monitoring and Reporting

The following table identifies a range of metrics that could be included in the dashboard reported at the Network Capability Steering Group. A selection of metrics (leading and lagging) should be identified for the dashboard reporting.

The selection of metrics should be based on those that are important to the representation on the Group. A further consideration to their inclusion is the availability of existing business information in Network Rail to limit additional regulatory burden.

Aspect	Possible Metric	Type	Comment
Input	Clear Network Capability baseline	Leading	baseline should be agreed with stakeholders
	Data quality provided by the Routes	Leading	
Process	Defined process with clear RACI	Leading	Assumed as part of NCIP
	Audits of documented process compliance	Leading	
Output	Accuracy of National Electronic Sectional Appendix (NESA)	Lagging	
	Accuracy of the Integrated Network Model (INM)	Lagging	
	Accuracy of national gauging database	Lagging	
	Temporary Speed Restrictions (TSRs)	Lagging	Assumed existing Network Rail data
	Speed Restriction Derogation	Lagging	Specifically, for Charter trains
	Specific metrics for each aspect of Network Capability?	Lagging	
	Delivery of Network Capability projects to time	Lagging	
	Stakeholder satisfaction with Network Capability	Lagging	Consider ORR SO metric D16
	Metrics to reflect Scottish HLOS gauging requirement and in particular the reliance on a single source of 'the truth' (see Section 4.2.2)	Lagging	
Outcome	Enable increased capacity (Network Capability as an enabler of improved train service) This could be defined as the number of increased train paths created	Lagging	
	Resilience (route / network based view of network capability - more of a system wide view …)	Leading	
	Mileage of 'digitally enabled' railway routes	Leading	Definition of 'digitally enabled' required

Table 4-4: Potential Metrics for Network Capability Dashboard

Appendix A

Mandate L4AR007

A1 Mandate

INDEPENDENT REPORTERS: TEMPLATE MANDATE

Mandate for Independent Reporter Lot 4
Title: Review of evidence of Network Rail's performance against the CP5 regulated output target for Network Capability
Unique Mandate Reference Number: L4AR007
Date: June 2018
ORR Lot Lead: Sneha Patel
ORR lead for this inquiry: Dave Chewter
Network Rail Lot Lead: Jonathan Haskins
Network Rail lead for this inquiry: Shona Beattie

Background

An accurate picture of Network Capability is essential for Network Rail's current and future TOC and FOC customers, as well as franchising authorities and rolling stock manufacturers, to assist them in their planning and operating their businesses with a reasonable degree of certainty.

According to condition 1.20 of its Network Licence, Network Rail must maintain appropriate, accurate and readily accessible information about the relevant assets, including their condition, capability and capacity. The capability of the national railway infrastructure, which is owned and operated by Network Rail is described in corporate systems (such as the National Electronic Sectional Appendix (NESA), the Integrated Network Model (INM) and national gauging database). Together these sources must describe the capability of the network (Network Capability) in terms of track length and layout, line speed, gauge, route availability and electrification type.

ORR'S PR13 determination also stated that Network Capability in Great Britain must be maintained at the baseline level as set on 1 April 2014 unless changes are agreed in accordance with the Network Change process in the Network Code (Part G). ORR and Network Rail are currently considering the approach that should be taken to monitor and assess Network Capability in CP6.

In December 2017, a Network Rail Internal Audit of the controls around the Network Change process in the Network Code gave an overall rating of "Unacceptable". The report made many recommendations that have been accepted by Network Rail and which are currently in the process of being implemented.

In addition, Network Rail manages the cross-industry Network Capability Steering Group (NCSG). The NCSG:

- Reviews Network Rail's progress in maintaining the baseline capability of the network
- Provides a high-level overview of the management and maintenance of assets, information and operating instructions necessary to facilitate the potential enhancement of capability
- Identifies and supports the resolution of systemic challenges in the management of network capability obligations
- Provides a platform for industry stakeholders and customers to provide details of current and longer term operational requirements.

Purpose

ORR is seeking assurance of the reporting process that Network Rail follows to provide evidence (which will be provided to the reporter) in its Annual Return alongside evidence provided by ORR from stakeholders for England & Wales and Scotland, that baseline capability in Great Britain is being maintained as per its obligation set out in ORR's Final Determination for CP5. Where capability has changed, ORR is seeking assurance that Network Rail has followed the Network Change process in the Network Code. Additionally, ORR is seeking professional input from the reporter on how Network Rail management of Network Capability in England & Wales and Scotland may be best assessed and monitored in CP6.

ORR therefore requires the Independent Reporter to:

1. Verify the consistency and accuracy of Network Rail's data management and reporting processes, procedures and associated governance from the point of extraction from source systems, to assure ORR if Network Capability in Great Britain is being reported correctly against the CP5 baseline1 and whether Network Rail's assessment of performance against the CP5 regulated output target can be relied upon.

2. At locations where Network Rail or the reporter identifies (through sampling for England & Wales and Scotland) that the capability of the network has changed since 01 April 2014, evaluate Network Rail's compliance with the Network Change element of the Network Code (having regard to the findings of Network Rail's Internal Audit report).

3. Make recommendations as to how Network Capability in England & Wales and Scotland could be better monitored and reported in CP6, considering HLOS requirements, ORR's PR18 consultation responses and Network Rail's proposals in this area.

This work will be split into two phases – phase 1 will cover CP5 (questions 1 and 2 above) and phase 2 will cover CP6 (question 3 above).

The purpose of this work is to assist ORR in forming an assessment of Network Rail's achievement of the CP5 regulated output for network capability.

Scope

This review will focus on the processes applied to report capability data (line speed, route availability, electrification and gauging) from corporate systems and

the process to transform the data from the system to the reporting format provided by Network Rail in the Annual Return.

Methodology

The Independent Reporter is expected to undertake a combination of desk research and route visits. The approach to the questions should be as follows:

Question 1

The CP5 baseline was set in relation to track mileage and layout, line speed, gauge, route availability and electrification type.

Provide an assessment of Network Rail's achievement, to date, of the CP5 regulated output target for Network Capability.

The reporter is expected to carry out a desktop review of the published processes for managing data within corporate systems and data extraction, analysis and reporting. This will require input from the ORR, Network Rail routes and national functions.

Question 2

Provide an assessment of Network Rail's achievement, to date, of the CP5 regulated output target for Network Capability.

Through the desktop review of the evidence supplied by Network Rail and using a sampling methodology agreed with the ORR and NR, identify locations at which the capability of the network has changed since 01 April 2014. The reporter will also, review evidence provided by Network Rail routes to assess whether the Network Change process in the Network Code has been correctly applied, and appropriate downstream processes followed (e.g. update of systems and published documents).

Question 3

Provide recommendations on the monitoring and assessment of Network Capability in CP6.

Considering findings from phase one, carry out a desktop review of any Network Rail proposed metric(s) and reporting method for monitoring and assessing Network Capability in CP6. Consider requirements for CP6 (e.g. Scotland HLOS) and relevant responses to ORR's PR18 consultation.

Timescales and Deliverables

This work is expected to be carried out to the following timescales:

w/c 18 June 2018	Arup, ORR and Network Rail kick off meeting
06 July 2018	Phase 1: Initial findings from the review of the Network Capability data management and reporting processes and provide an assessment of

	whether Network Rail is on track to deliver the CP5 regulated output target.
25 July 2018	Phase 1: Initial findings from the review into Network Rail's compliance with Network Change requirements where capability has changed and provide an assessment of whether Network Rail is on track to deliver the CP5 regulated output target.
15 August 2018	Phase 2: Initial assessment of the proposed approach to monitoring and assessing Network Capability in CP6
07 September 2018	Draft slides/report based on the above
28 September 2018	Final report

The output of this work will inform the publication of the Final Determination for PR18 on 31 October 2018.

Progress updates will be required on a weekly basis considering timescales set out above.

At the end of Phase 1, a review will be held between the ORR and Network Rail whereby a decision will be made to progress to phase 2.

Related Work

Network Rail undertook an Internal Audit in December 2017 as referenced previously. In response to this, it is in the process of establishing a Network Change improvement programme to address the concerns highlighted.

Independent Reporter Proposal

The Reporter shall prepare a proposal for review by ORR and Network Rail based on this mandate. ORR and Network Rail will review the proposal with reference to the criteria for selection – see attached guidance document.

The final approved proposal will form part of the mandate and shall be attached to this document.

The proposal will detail methodology, tasks, programme, deliverables, resources and costs.

Given the importance of this inquiry, the Reporter shall provide qualified personnel with direct experience in the respective disciplines to be approved by the ORR and Network Rail. The contractor is asked to submit details of the previous experience and qualifications of such personnel as part of their proposal.

Appendix 1 – Joint ORR and Network Rail Guidance to Reporters

1. The purpose of this document is to describe the trilateral relationship between ORR, Network Rail and each Reporter. It sets out in a practical context what both ORR and Network Rail expect from Reporters, and seeks to encourage best practice. This will help Reporters to deliver work in a way which meets these expectations and requirements. These requirements will be considered as part of the Reporter Framework (as provided to Reporters).

2. This guidance is owned and updated as necessary jointly by ORR and Network Rail. In the event of any discrepancy between this document and the Reporter contract, the latter will prevail. This guidance does not provide an exhaustive list of responsibilities and should Reporters wish to discuss these guidelines further they should contact the following for a trilateral discussion:

    - Andy Lewis for ORR; and
    - Jonathan Haskins for NR.

The trilateral relationship

3. Licence Condition 13 (LC13) of Network Rail network licence states:

    - "The role of the Reporter is to provide ORR with independent, professional opinions and advice relating to Network Rail's provision or contemplated provision of railway services, with a view to ORR relying on those opinions or advice in the discharge by ORR of its functions under, or in consequence of, the Act. Where appropriate, ORR shall give the licence holder an opportunity to make representations on those opinions or advice before relying on them."

4. Reporters should be familiar with the obligations as set out in LC13 and the terms of the contract.

5. For the avoidance of doubt, in delivering this role, ORR and Network Rail expect that Reporters will also add value to Network Rail in helping it to improve its performance and business as provider of railway services, wherever possible. However, it is recognised that this is not the primary purpose of the Reporter under the Licence and that this may not always be possible to deliver each mandate.

Role & duties of the reporters

6. Reporters must provide an independent view and remain impartial throughout the review.

    For example:

    - information should be shared equally and at the same time with both clients. Any correspondence or clarifications sought by Reporters should also be dealt with in the same way; and
    - communication between all three parties should be open e.g. both ORR and Network Rail should be invited to or made aware of meetings or discussions even if the meeting is more appropriate with only one client.

Identifying Reporter work

7. ORR will identify instances where there is a requirement to engage a Reporter. In practical terms, this is likely to arise from on-going discussions with Network Rail and in most cases (except urgent or exceptional cases) the potential for engagement of Reporters will have been identified in advance.

Mandates – Reporter Proposals

8. Clause 4 of the contract sets out the key requirements around provision of services. Requirements for reporter work normally arise from the day to day discussion of issues between ORR and Network Rail.

9. ORR will prepare a draft mandate for each piece of work and will in most cases agree this with Network Rail.

10. Mandates will be presented in a standard format for consistency and will clearly set out:

    - the purpose;
    - the scope;
    - why the review is necessary;
    - what it will achieve;
    - the expected outputs; and
    - timescales for providing reports.

11. Once agreed with Network Rail, ORR will email the mandate to the relevant Reporter(s), asking for comments and a proposal for the work, which should include costs and CVs for the proposed Reporter team. The Reporter has seven working days to respond with a proposal or such other timescale as determined by ORR. Every proposal must include:

    - costs;
    - resources;
    - CVs of the proposed mandate team – when providing proposals, Reporters should make the most efficient use of their resources including the most appropriate make-up of the review team;
    - methodology for delivering the aims of the mandate;
    - timescales;
    - framework of meetings, including a tripartite findings meeting before issue of the draft report;
    - expected deliverables and a concise explanation of how the aims of the mandate will be met; and
    - for larger scale reporter studies, the project management approach and project plans should be made explicit

12. Where there are multiple Reporters on a Lot, the ORR and Network Rail will use the following criteria to determine which Reporter they will select to conduct the work:

Procedure for Call Off under the Framework Agreements Where more than one Contractor has been selected for any particular lot, ORR and Network Rail will allocate mandates on the basis of the following criteria:

1. The expertise required is only available from one source. This may be due to ownership of exclusive design rights or patents.

2. Where the mandate constitutes follow up work, which is directly related to a recently completed study.

3. The Contractor which demonstrates the greatest expertise in the subject matter of the mandate or the approach required.

4. The Contractor's performance against the performance framework

5. An overall assessment of value for money based on cost and complexity of work.

If the ORR and Network Rail cannot determine the most appropriate Contractor for a mandate using the above criteria, ORR and Network Rail will conduct a mini-tender with the Contractors who have been awarded the relevant lot using the following criteria in order to determine the most economically advantageous proposal:

1. The Contractor demonstrates sufficient knowledge of subject matter and possesses the technical skills, resource and competencies required for the work.

2. Contractor Costs.

3. The Contractor demonstrates innovation and value for money in its proposal.

4. The Contractor's performance against the performance framework.

13. Prior to conducting such a mini-tender, ORR and Network Rail will inform Contractors of the relative weighting of the above criteria and of any additional sub-criteria applicable in the context of a particular mandate.

14. ORR and Network Rail will endeavour to discuss the proposals received and to confirm by e-mail within five working days that the proposal is acceptable (or otherwise). There may be circumstances where ORR and Network Rail need longer to respond.

15. ORR will then formally instruct the reporter to start work, and the reporter will arrange a start-up meeting with key representatives from both ORR and Network Rail.

Mandates – During Delivery

16. The following sets out some key points regarding conduct of any inquiry. Reporters must provide an independent view and remain impartial throughout

the inquiry. They should expect to discuss their progress and findings trilaterally with ORR and Network Rail and for some challenge to be given – particularly in relation to the factual accuracy of the findings.

Costs and expenses

17. If additional funds are required to deliver a mandate beyond those agreed at the outset, a timely proposal and justification must be given to ORR and Network Rail (as soon as the issue arises). The Reporter should notify ORR and Network Rail who will discuss and respond in a reasonable timescale. Additional work (and cost) must not proceed without approval.

18. Any reasonably incurred expenses will be reimbursed by Network Rail. Only expenses that have been incurred in accordance with Network Rail's expenses policy will be paid. It should be specifically noted that reporters must use standard class travel and plan journeys in advance as much as possible.

19. All invoices should be sent to Matthew Blackwell at Network Rail prior to being sent to Network Rail Accounts Payable.

Amendment to mandates

20. For practical reasons it may be necessary for a mandate to be revised once work has commenced or awarded. For the avoidance of doubt this will not lead to the ORR and Network Rail seeking to re-run the award of the mandate unless ORR and Network Rail agree that the revision constitutes a material change to the original mandate.

Meetings

21. Unless otherwise directed, all key meetings must be trilateral and both parties should be made aware of any other meetings taking place.

22. The Reporter should take minutes of meetings, which should be provided to all parties within 7 working days.

Issues or concerns

23. Should a situation arise whereby either ORR or Network Rail is dissatisfied with the quality of a piece of work, we will explain clearly our reasons, gain approval from the other client and then, if we deem appropriate, may request the Reporter to re-do that part of work at no additional cost.

24. Should the Reporter encounter any issues with an inquiry (review) the Reporter should notify:

    - Andy Lewis for ORR
    - Jonathan Haskins for NR

Reports

The report document

25. All Reports must include an 'Executive Summary' which should be written clearly, concisely and highlight key findings and key recommendations.

26. The full reports should also be written concisely in plain English, and should provide a brief 'Introduction' outlining the aims of the mandate and how these have been met. They should provide further detail on what is mentioned in the Executive Summary and there should not be any material points raised in the main report which have not already been mentioned in the Executive Summary.

27. Where there is commercially sensitive information in the report, the Executive Summary will be published on ORR's website, with any necessary redactions, instead of the full report. Otherwise, usually the full report will be published unless any redactions are appropriate due to a Freedom of Information Act exemption.

Recommendations

28. A recommendation is a specific action that the Reporter considers, following its analysis, should be undertaken by either Network Rail, or any other party. While the majority of recommendations are likely to be for Network Rail, not all need to be.

29. Reporters should make all recommendations SMART (Specific, Measureable, Achievable, Realistic and Timebound). The Reporter should:

    - provide a clear description of the recommendation and the benefit that implementation will deliver;
    - outline the evidence which is required in order for the recommendation to be closed out; and
    - discuss and agree a target date for completion of the recommendation with ORR and Network Rail.

30. Recommendations should only be included in the report if they actually add value to either ORR or Network Rail or another industry party and the benefits are sufficient to justify implementation. It is acceptable for a report not to include recommendations, as long as key requirements of the mandate have been met (e.g. if an inquiry finds that Network Rail is fully compliant with its requirements). A smaller number of well-targeted and SMART recommendations which will deliver tangible improvements is preferable to a large number of general recommendations.

31. In order to add further value, the report may also include observations on areas for improvement which do not need to be captured in a formal Recommendation if they are not central to delivery of the mandate requirements.

32. Recommendations will be tracked by the Reporter which generated them.

Payment

33. Reporters must include the purchase order number, and unique mandate reference (UMR) number for work when invoicing Network Rail for payment.

34. The clients can query invoices and have the right to check timesheets (and expenses) and investigate work before payment is agreed.

Post-mandate review

35. The clients will provide feedback on the work carried out, having assessed performance using the Performance Framework on a per mandate basis. This will reflect any issues or concerns raised with the Reporter during delivery of the mandate.

36. The clients will also hold formal feedback sessions with each Reporter every six months to review progress.

Appendix B

Annual Return Completion Process

Annual Return Capability Measures – AIS – WI – 020a

Asset Information Services: to inspire and enable through the power of data

Asset Information Reporting Services

Summary	These instruction details how to extract and process data for the capability measures of the Annual Return document. This process generates the C1 to C4 Capability statistics (i.e. line speed, ORR gauge, route availability and electrification) for the Annual Return
Related documentation	NR/ARM/CO1DF NR/ARM/CO2DF
System Access	**Microsoft Access** **Microsoft Excel**
Folder & File Access	\\NC1V02FDC01\DFSRoot$\Network Rail\HQ\INM Reports V:\HQ\hq12groups\Ar&a
Timescales	This should be completed after the financial year ended. For exact deadline please ask the Corporate & Regulatory Reporting Manager
Distribution List	Send to a member of Regulatory Compliance

Version Control			
Version Number	**Date**	**Author**	**Details of Changes**

1.0	11/05/2018		Re-wrote for INM Changes

1.0 Prepare a new financial year folder and save files

Step 1.0 creates the files and folder for the financial year

- Create new folder for the Annual Return
  - In folder \\RSHQ-SR1-F04\DGroups\HQ12Groups\Ar&a\GEOGIS\Capabilities create a new folder for the reporting year called **20XX Annual Return**
  - From the previous year's folder, copy all files from *20XX AR BACKUP.zip* into the folder just created for the current year
  - From the previous year's folder take a copy of *Capability Measure 20XX.xls* and paste to the current year's folder
  - Rename the file for the current year
  - Copy the file *Track_Category_with_Responsibility_and_Switch.csv* for the end of the financial year from V:\Network Rail\HQ\INM Reports and paste to the current year's folder

2.0 Prepare INM data for Importing

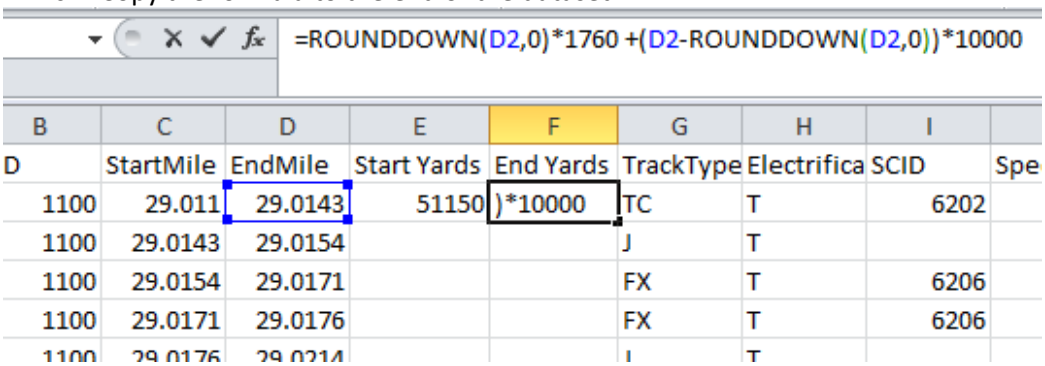
Step 2.0 prepares the INM data for the CAPDEV database

- Open the file *Track_Category_with_Responsibility_and_Switch.csv*
- Save the file as an Excel Workbook (.xlsx) and keep it open
- Delete the following columns
  - 'DESCRIPTION'
  - 'RTE_ORG_CODE', 'RTE_NAME', 'MDU_ORG_CODE', 'MDU_NAME', 'TME_ORG_CODE', 'TME_NAME', 'TSM_NAME'
- Update the headers according to the table below:

Change from	*Change to*
ELR	ELR
REF_TRACKID	TID
ELR_STARTMEASURE	StartMile
ELR_ENDMEASURE	EndMile
TRACK_TYPE	TrackTypeCode
ELECTRIFICATIONTYPE	ElectrificationCode
UNIQUE_ID	SCID
SPEED_LEVEL_REVERSE_DIRECTION	Speed3
SPEED_LEVEL_NORMAL	Speed1
SPEED_LEVEL_RAISED	Speed2
OLD_TRACK_CATEGORY	OLDTRACKCAT
TRACK_PRIORITY	PRIORITY
TSM_ORG_CODE	Maintain

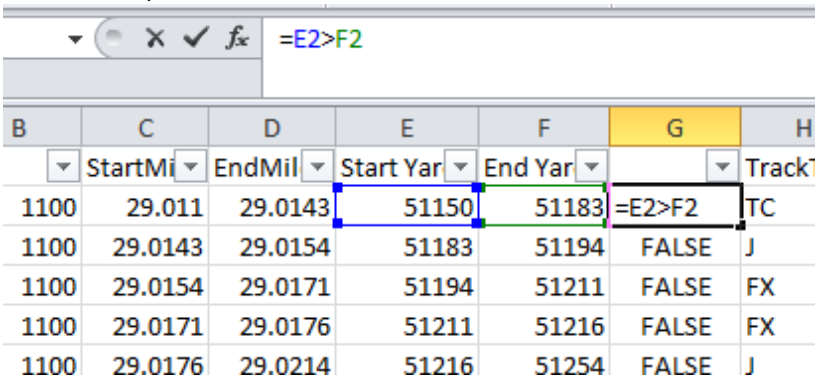
- Drag the 'speed' columns to re-order them to Speed1, Speed2 and then Speed3
  - Format Start and End Miles to 4 decimal places

  - Format TID and Speed1-3 to a Number
  - Format ELR, TrackTypeCode, ElectrificationCode, SCID, OLDTRACKCAT, PRIORITY and Maintain to Text
- Sort the following columns and clear specified details within the cells
  - Sort column 'ElectrificationCode' for 'AoR Rec without value', locate these records and clear these cells so that only blank cells appear and no text is left in the column
  - Sort on each of the Speed columns and 'OLDTRACKCAT' in turn for 'Track Category Without Value' and repeat the step above i.e. clear the cells so no text is present in the columns
- Remove any invalid mileages
  - Insert two columns after column 'EndMile', insert a formula to convert the mileages to yards
    - =ROUNDDOWN(C2,0)*1760 +(C2-ROUNDDOWN(C2,0))*10000
  - Drag the formula to the next column
  - Rename the columns 'Start Yards' and 'End Yards'
  - Copy the formula to the end of the dataset



B	C	D	E	F	G	H	I	
D	StartMile	EndMile	Start Yards	End Yards	TrackType	Electrifica	SCID	Spe
1100	29.011	29.0143	51150	)*10000	TC	T	6202	
1100	29.0143	29.0154			J	T		
1100	29.0154	29.0171			FX	T	6206	
1100	29.0171	29.0176			FX	T	6206	
1100	29.0176	29.0214			J	T		

  - Insert a column after end yards
  - check whether the Start Mile is greater than the End Mile (see image below)



B	C	D	E	F	G	H
	StartMi	EndMil	Start Yar	End Yar		Track
1100	29.011	29.0143	51150	51183	=E2>F2	TC
1100	29.0143	29.0154	51183	51194	FALSE	J
1100	29.0154	29.0171	51194	51211	FALSE	FX
1100	29.0171	29.0176	51211	51216	FALSE	FX
1100	29.0176	29.0214	51216	51254	FALSE	J

  - Ensure to fill the formula to the end of the dataset
  - Filter the column to 'TRUE' and delete these records if present
  - Remove the filter and delete the column with the formula check and the two yardage columns
- Add "000" to the end of the Maintain Code
  - Go to the last column in the sheet, in the next blank column add =M2&"000"
  - Copy the formula to the last row of data
  - Copy the column from row 2 down and paste as values to 'Maintain'

- Delete the column with the formula and to the end of the sheet to ensure no formatting is picked up in the database
- Save and close the file

3.0 Import INM data to CAPDEV database

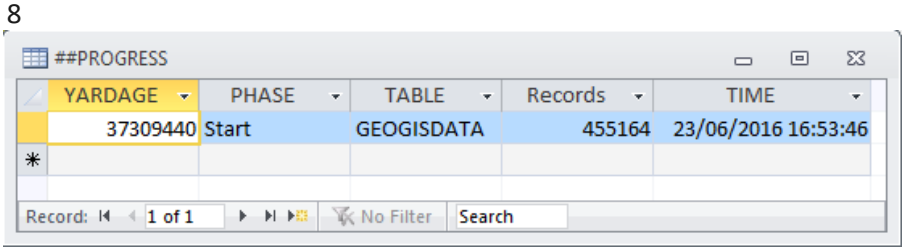
Step 3.0 details how to import the data

- Open *CAPDEV.mdb* from the current year folder at \\RSHQ-SR1-F04\DGroups\HQ12Groups\Ar&a\GEOGIS\Capabilities
- Run the query [101EMPTYGEOGISDATA]
  - Click 'Yes' to all prompts
- Select External Data > Excel
  - Browse for *Track_Category_with_Responsibility_and_Switch.xlsx* in the current year's folder \\RSHQ-SR1-F04\DGroups\HQ12Groups\Ar&a\GEOGIS\Capabilities
  - Click 'Open'
  - Select 'Append a copy to the records to the table:' and select GEOGISDATA from the drop down
  - Click 'OK'
  - When the 'Import Spreadsheet Wizard' opens, click 'Next'
  - Ensure 'First Row Contains Column Headings is ticked' and click 'Next'
  - Click Next
  - Select 'No Primary Key' and 'Next'
  - Click 'Finish' and 'OK' to any prompts
- Database Tools > Compact and Repair Database

4.0 Process INM data in CAPDEV database

Step 4.0 details how to begin processing the data in the database

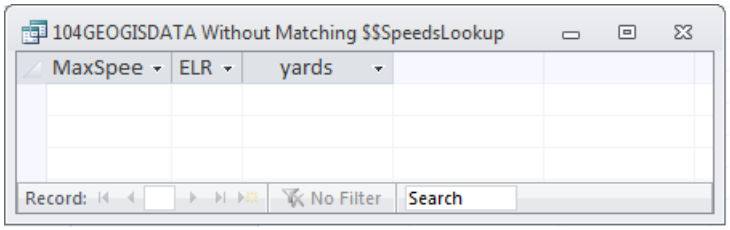
- Open *CAPDEV.mdb* from the current year folder at \\RSHQ-SR1-F04\DGroups\HQ12Groups\Ar&a\GEOGIS\Capabilities
- Open the **Main Form** in the database
- Press PREPARE GEOGIS DATA button (Section A, step 2 on the form)
- Click Yes to the prompts that pop up
- Close any open tables/queries
- Press the GEOGIS extents button (Section A, step 05 on the form)
- Click Yes to the prompts that pop up
- Press Total Yardage button (Section A, step 07 on the form)
- When macro finished [##PROGRESS] table will open, which summarises the total yardage and number of records derived from INM
- Check the yardage figure in [##PROGRESS] table
  - If this is in the region of 37-39 million yards then move to Section A, step 8



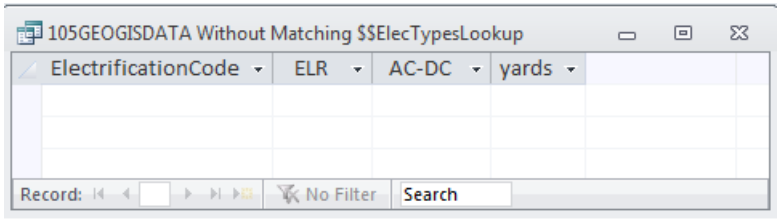
- If the yardage is considerably less close any open tables/queries and return to Section A, step 01 and repeat the process

Note: As a first check, ensure the whole .XLSX file has imported – if the data was saved as an .XLS file then only 65,535 records will have been imported, less than 20% of the full dataset

- Close any open tables/queries
- Press odd Speed button (Section A, step 08 on the form), which checks whether the maximum speeds in [GEOGISRAW] table are in the [$$Speedslookup] table
- When macro finished [#104GEOGISDATA Without Matching $$SpeedsLookup] query will output any records that did not have a match, check the opened query
  - If the contents of the opened query output table are blank (i.e. have no records), then close any open tables/queries and move to Section A, step 10



  - If the opened query output table is NOT blank, you have to add the listed speeds to the [$$Speedslookup] table and then repeat the process from Section A, step 08 (i.e. press the odd Speed button again)
  - Any records with a blank MaxSpeed should be updated to "0" in the [GEOGISDATA] table
- Close any open tables/queries
- Press odd Electrification button (Section A, step 10 on the form), which checks whether the codes in [GEOGISDATA] table are in the [$$ElecTypesLookup] table
- When macro finished [105GEOGISDATA Without Matching $$ElecTypesLookup] query will output any records that did not have a match,
  - If the contents of the opened query output table are blank (i.e. have no records), then close any open tables/queries and move to Section B, step 01



  - If the opened query output table is NOT blank, you have to add the listed electrification codes to the [$$ElecTypesLookup] table and then press the update Electrification button (Section A, step 11 on the form)
  - Close any open tables/queries

5.0 Create table #GEOGIS01

Step 5.0 details how to prepare the data for identification of running lines

- In CAPDEV.mdb copy and paste the structure only of table [#GEOGIS01]
  - Name the table [Copy of #GEOGIS01]
  - Delete table [#GEOGIS01]

- Rename table [Copy of #GEOGIS01] to [#GEOGIS01]
- Run query [801appendGEOGISDATAto#GEOGIS01]

6.0 Update Track Priority to reflect the Track ID

Step 6.0 details how to update the Track Priority using TID in table #GEOGIS01

- In the queries section of *CAPDEV.mdb* run the following queries and click 'Yes' to all prompts
  - [129 Update PRIORITY to 29 for Running Lines]
  - [199 Update PRIORITY to 99 for Non Running Lines]
  - [299 Update PRIORITY to 99 where TID is 9999]

7.0 Processing Gauge data in CAPDEV database

Step 7.0 details how to process section C in CAPDEV

- In the Main Form of *CAPDEV.mdb* run macro [Gauge Extents Issues] which will open query [434gaugePROBLEMS] with any missing ELRs, click Yes to all prompts
- Open tables [$GAUGElookup] and [@GAUGElimits]
- Update both tables according to the ELRs in query [434gaugePROBLEMS]; the 'CurrentStart' and CurrentEnd' columns indicates the current values and 'GAUGErevStart' and 'GaugerevEnd' indicates what they need to be updated to

Note: if 'GAUGErevStart' or 'GaugerevEnd' is blank then the value should remain the same

- If there are any new ELRs in the query i.e. no CurrentStart or End, these need to be added in to both tables also
  - Copy these records from the [$GAUGElookup] table to a blank excel file
  - Send the excel file to the Track & Lineside Team (2018 contact - Mark Ward) and ask them to provide an update

	A	B	C	D	E	F	G
1	ELR	GAleg	GAminY	GAmaxY	Gauge	Ver	Adjusted
2	AAV	1	50721	71654	SPL	14-Apr-16	
3	BSG						
4	HDS						
5	HLL1						
6	HLL2						
7	LEC6						
8	PSP						
9	SEV						
10	TST						

- Upon return from the Track & Lineside Team, update both tables accordingly
- When all ELRs have been updated run query [434gaugeProblems] to confirm all ELRs have now been updated
  - If ELRs still appear, repeat the step above and then run query [434gaugeProblems] again and carry on to the next step

*Note: Do **not** re-run macro 'Gauge Extent Issues'*

- In the main form of *CAPDEV.mdb* press the button Gauge Type Issues, the macro opens table [435GaugeTypesPROBLEM]
  - The table should be blank, however if not, there is a Gauge Type that isn't listed in table [$$GaugeTypesLookup]
  - Copy all of the records to a blank Excel sheet

  - Copy table [$$GaugeTypesLookup] to Excel as guidance for the Track & Lineside Team and ask them to review the Gauge Issue and provide the additional details needed for table [$$GaugeTypesLookup]
  - Upon return from the Track & Lineside Team, update [$$GaugeTypesLookup] accordingly and re-press the button Gauge Type Issues to ensure there are no more issues listed, repeat until there are no more discrepancies
- Run macro [Apply GAUGE], click Yes to all prompts and 'OK' to the 'Enter Parameter Value' boxes – don't enter any values. This produces table [#GEOGIS02]

8.0 Processing Route Availability data in CAPDEV database

Step 8.0 details how to process section D in CAPDEV

- Process the file *VERRAlookup_YYYY_YY.xls* sent from the Structures Team (2018 contact - Julian Staden) for importing into access
  - Open the Excel file and save to the current year's folder
  - Remove filters completely from the Excel worksheet
  - Go to the blank column after the last column of data
  - Delete all blank columns to the end of the worksheet

  Note: this is because the blank columns have formatting in them and access wont import the data properly
  - Save the Excel file
- Open *CAPDEV.mdb* if it's not already open
- Copy and paste table [$VERRAlookup] for backup purposes, rename it for the previous year, e.g. [$VERRAlookup 2016]
- Update table [$VERRAlookup] with the updated version of *VERRAlookup_YYYY_YY.xls*
  - Open table [$VERRAlookup] and delete the data
  - Click Yes to any prompts
  - Switch to the design view of the table
  - Insert a row after *adjustments2012*
  - In Field Name enter *adjustments 2016* and select *Text* for Data Type

  Note: You may need to add another row for the current year, check the Excel file for spellings and insert it in as per above
  - Switch back to the Datasheet View, when prompted click Save
  - From the file *VERRAlookup_YYYY_YY.xls* copy all of the data and paste it into table [$VERRAlookup]
  - Click Yes to any prompts
  - Check the number of pasted records match the number of records in the Excel file, if yes carry on to the next step, if not the re-paste the data
  - Close the table [$VERRAlookup]
- Open [MainForm]
- Run macro [RA Extents Issues] which will open query [454RAPROBLEMS]

  Note: this shows any ELRs that the yardage in table $VERRAlookup does not match GEOGIS
- Copy this query to a blank Excel file
- Send the file to the Structures Team and ask them to update these in their version of *VERRAlookup_YYYY_YY.xls* and send it back as soon as possible

- On return from the Structures Team, repeat section 8.0 of this work instruction (process and paste data, then start section D of CAPDEV.mdb)
- When macro [RA Extents Issues] has run again, ensure no data appears
    - If data appears, check to ensure the Excel file has been updated correctly, and nothing was missed, if so then query this with the Structures Team and start 8.0 again
- Run macro [RA Types Issues] which will open query [455RAtypes PROBLEM], check for any data
  Note: this query looks at PublishedRA in table [$VERRAlookup] and the AvailValue in table [$$AvailTypesLookup]
    - If the query is blank continue to the next step
    - If there are any entries in the query, copy this query to a blank Excel file
    - Send the file to the Structures Team and ask them to update these in their version of *VERRAlookup_YYYY_YY.xls* and send it back as soon as possible
    - On return for the Structures Team start 8.0 again (process and paste data, then start section D of CAPDEV.mdb)
    - When macro [RA Types Issues] has run, ensure no more data appears in query [455RAtypes PROBLEM]
- Run macro [Apply RA], click Yes to all prompts

9.0 Update table #GEOGIS03

Step 9.0 details the exceptions which need review before producing figures

- In CAPDEV.mdb select Create > Query Design from the ribbon
    - Double click on table #GEOGIS03 to add it to the query
    - Close the 'Show Table' box
    - Select 'Update' from the Design ribbon
    - In the 'Field' drop down select PRIORITY
    - In the 'Update' To field enter "66"
    - In the Criteria field enter [ELR]=HLL
    - Run the Query and click 'Yes' to all prompts
    - Replace 'Update To' with "88"
    - Replace [ELR]=HLL to [ELR]=HLL1
    - Run the Query and click 'Yes' to all prompts
    - Replace [ELR]=HLL1 to Replace [ELR]=HLL2
    - Run the Query and click 'Yes' to all prompts
    - Replace 'Update To' with "77"
    - Replace [ELR]=HLL2 to [ELR]=SEV
    - Run the Query and click 'Yes' to all prompts
    - Replace 'Field' to 'DEVMAINT'
    - Replace 'Update To' with HW2
    - Replace 'Criteria' to [ELR]=IOW
    - Run the Query and click 'Yes' to all prompts
- Close the query without saving

10.0 Processing Regulatory Outputs in CAPDEV database

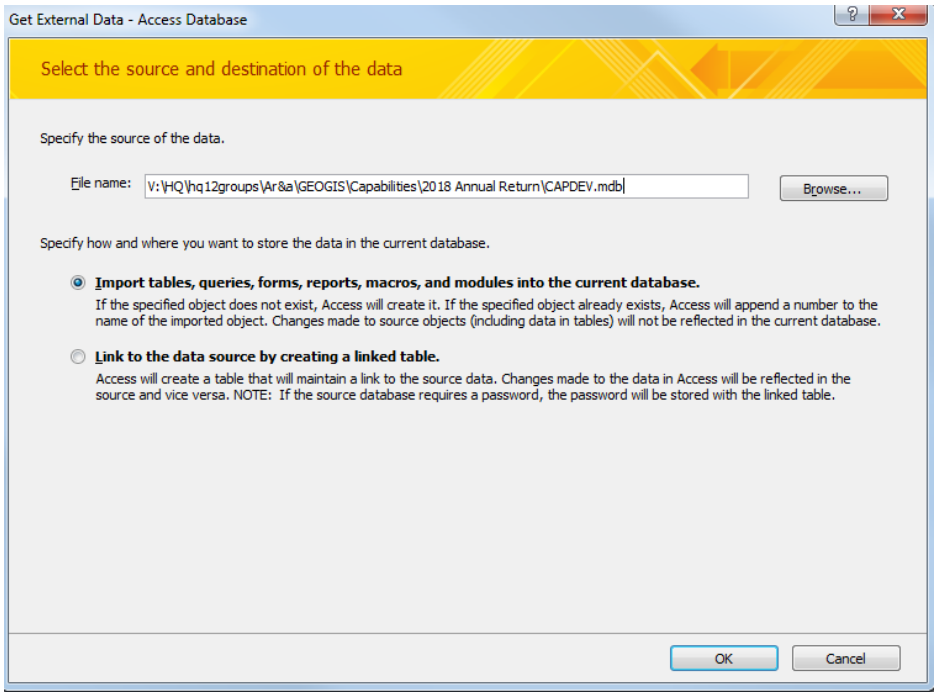
Step 10.0 details how to process the Regulatory Outputs section in CAPDEV

- Open file *Capability Measure 20XX.xls* from the current year's folder in V:\HQ\hq12groups\Ar&a\GEOGIS\Capabilities
- In *CAPDEV.mdb* run the each of the four macros under the Regulatory Outputs section
- When each macro has finished a table will open, copy the data to tab [Capabilities] to the corresponding table:
    - C1 Speed Bands paste to table in A2 in tab [Capabilities]
    - C2 Gauge Bands paste to table in A15 in tab [Capabilities]
    - C3 RA Bands paste to table in A28 in tab [Capabilities]
    - C4 Electrification paste to table in A41 in tab [Capabilities]
- Copy the data to the tables starting in column Q and round these figures so they have no decimals
- Clear the data in the four 'Changes' tabs
- Save the file *Capability Measure 20XX.xls*

11.0 Update the four Change tabs in Capability Measures Excel file

Step 11.0 details how to process the changes from the previous year

- Open *capdevSTORE.mdb* from the current year's folder in V:\HQ\hq12groups\Ar&a\GEOGIS\Capabilities
- Import table [#GEOGIS03] from the **previous** year's database
    - External Data > Access
    - Browse for *CAPDEV.mdb* in the previous year's folder V:\HQ\hq12groups\Ar&a\GEOGIS\Capabilities
    - Ensure 'Import tables, queries, forms, reports, macros, and modules into the current database.' is ticked



    - Click 'OK'
    - Select [#GEOGIS03] from the 'Tables' tab and 'OK'
    - When the table has imported, Close the 'Save Import Steps' window
    - Find the table [#GEOGIS03] and rename *20XXGEOGIS* for the previous financial year

- Link previous #GEOGIS03 to CapdevBANDCHANGE database
    - Open *CAPdevBANDCHANGE.mdb* from the current year's folder in V:\HQ\hq12groups\Ar&a\GEOGIS\Capabilities
    - Delete table [#LINKOLD], Click Yes to any prompts
    - External Data > Access
    - Browse for *capdevSTORE.mdb* in the current year's folder V:\HQ\hq12groups\Ar&a\GEOGIS\Capabilities
    - Ensure 'Link to the data source by creating a linked table.' is ticked
    - Select table [20XXGEOGIS] for the previous year and click 'OK'
    - Rename [20XXGEOGIS] to [#LINKOLD]
- Update linked tables in *CAPdevBANDCHANGE.mdb*
    - External Data > Linked Table Manager
    - In the 'Linked Table Manager' window, select tables [#LINKNEW], [$$AvailTypesLookup], [$$ElecBandsLookup], [$$ElecTypesLookyp], [$$IMDMetcLookup] and [$$SpeedsLookup]
    - Tick 'Always prompt for new location'
    - Click 'OK'
    - In 'Select New Location' window, select the current year's *CAPDEV.mdb* in V:\HQ\hq12groups\Ar&a\GEOGIS\Capabilities
    - Click 'Open'
    - Click 'OK'
    - In the 'Linked Table Manager' window select table [SRSref]
    - Ensure 'Always prompt for new location' is ticked and click 'OK'
    - In 'Select New Location' window, select the updated version of *MasterSRS definitions.xls* in R:\Ar&a\GEOGIS\Capabilities\#REFERENCEDATA\MasterSRS definitions.xls
    - Click 'Open'
    - Click 'OK'
    - Close Linked Table Manager
- In *CAPdevBANDCHANGE.mdb* open the Main Form
    - Process each of the buttons in the **Red** section, click on 'SPEEDS', 'ELECTRIFICATION', 'ROUTE AVAILABILITY' and 'GAUGE'
    - Click Yes to all prompts
    - In the **Green** section press the 'SPEED BAND' button, copy the resulting query to tab [C1 Band Changes] in *Capability Measure 20XX.xls*
    - Press 'ELECTRIFICATION TYPE' button, click 'OK' to the two 'Enter Parameter Value' prompt messages and then copy the resulting query to tab [C4 Elec Changes] and delete the columns with headers 'Expr1' and 'Expr2'
    - Press the 'RA BAND' button and copy the data to tab [C3 RA Change]
    - Press the 'GAUGE BAND' button and copy this to tab [C2 Gauge Changes]
    - Save the file *Capability Measure 20XX.xls*
    - Compact both *CAPdevBANDCHANGE.mdb* and *capdevSTORE.mdb* databases
    - Close Excel and Access

12.0 Backup all files to the shared area ready for next year's Annual Return

Step 12.0 details which files to back up

- Create a zip file of all the files used in the current year's Annual Return and rename it *20XX AR BACKUP.zip*

-END OF PROC