Freight & National Passenger Operators Route Strategic Plan

February 2018

Contents

1. Foreword

I am delighted to introduce the Freight & National Passenger Operators (FNPO) Route Strategic Plan (RSP) for Control Period 6 (CP6).

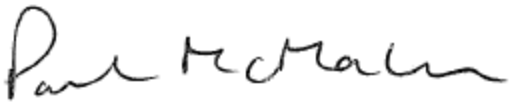
This RSP sets out our five-year plan for CP6, from 1 April 2019 to 31 March 2024. Our plan is centred on a range of objectives that support our freight and national passenger customers' businesses. In particular the plan sets out the first stage of a longer-term vision to facilitate significant rail freight growth over the next fifteen years. Our RSP has been developed with the active collaboration of, and input from, our customers and stakeholders and seeks to deliver what they have told us they want.

FNPO was established in 2016, and in April 2017, as part of Network Rail's Transformation Programme, we implemented the new FNPO organisational structure to strengthen focus and links with our diverse range of customers and stakeholders as well as Network Rail's Routes and the System Operator (SO). We have a central role to support and promote our customers' interests as the Network Rail devolution process develops.

FNPO, as Network Rail's ninth operational route (or "virtual" route), is different to the other Routes: we do not directly manage assets or control train operations, but deliver these working with and through the geographic Routes, System Operator and other parts of Network Rail. Our RSP reflects this unique role and we have structured this plan to be consistent and aligned with other RSPs.

In CP6, FNPO will have its own revenue requirement. This will provide greater transparency on the costs associated with our customers' use of the network and support us to work with the geographical Routes and the System Operator to establish new internal relationships. These will more clearly define customer inputs and specifications and will result in an opportunity to jointly review outputs, costs and outcomes to drive infrastructure cost efficiency, value-for-money and alignment to customer requirements. It also gives an opportunity to create different funding models for the network enhancements and developments necessary to drive continued rail freight growth. In other words, we will function more fully as an independent route business.

I am really grateful for the support and input provided by our customers and stakeholders in developing this RSP. The plans and objectives in this document will continue to develop and will become more refined and detailed as we move towards and into CP6 and continually engage with our customers and stakeholders.



Paul McMahon
Managing Director, Freight & National Passenger Operators
February 2018

2. Summary

2.1 Route Overview

In April 2017, Freight and National Passenger Operators (FNPO) was established as Network Rail's ninth operational (or "virtual") route. Our customers operate nationally across multiple routes, making FNPO the "multi-route" route.

FNPO is different: Our customer base is uniquely varied, with freight operating companies (FOCs), CrossCountry, Caledonian Sleeper, charter operators and aspirant open access passenger operators, who together operate c1000 trains per day.

Our stakeholder base is equally varied. Our external stakeholders range from train and freight operators, through industry third parties (such as ports, shippers and manufacturers) to Governments, the regulator and other public bodies. Our internal stakeholders include all the geographic routes and the System Operator.

FNPO does not physically manage infrastructure or train operations. We deliver performance and other outputs for our customers in conjunction with and through the geographical routes, the System Operator and other Network Rail functions.

Passenger and freight volumes across the network are forecast to grow in CP6. New freight forecasts provided by MDS Transmodal for this plan suggest that freight moved could increase from 2016/17 to 2023/24 by up to 50% depending on market headwinds and assuming unconstrained network capacity. For planning purposes, assuming existing funded capacity and capability, we are estimating growth of 15.6% over the seven year time horizon. Given the inherent uncertainties in forecasting freight traffic and the importance of a robust estimate for CP6 we have consulted publicly on the MDS Transmodal study and will be updating our forecast at the end of 2017/18.

The new rail freight strategies of both the UK and Scottish Governments both support additional rail freight growth and modal switching from road to deliver benefits including easing road congestion, reducing pollution and generating productivity and financial benefits for the economy.

2.2 Vision and Purpose

Our vision is to:

Exceed the expectations of our customers and stakeholders across the rail network in providing a safe, reliable, affordable and growing railway.

Our purpose is to:

Deliver growth and provide excellent service for our customers and stakeholders, through improving safety and performance, and enhancing capacity and capability, at an efficient cost.

Our vision goes beyond the boundaries of CP6, especially for freight. Growth levels as forecast by MDS Transmodal, and desired by the Governments' rail freight strategies, can be achieved – but only if an appropriate framework and infrastructure is put in place.

FNPO is in a unique and pivotal position in the rail freight sector to provide leadership and advocacy for the sector, not least because of Network Rail's ownership of the national network and substantial property portfolio. This RSP sets out Network Rail FNPO's vision and plan to lead the

development of a framework for rail freight growth and in particular to:

- Provide for stable and sustainable access charges for CP6
- Support the development and delivery of new services being developed and offered by FOCs, such that new end-customers will be attracted to rail and help existing end-users expand
- Put in place relationships and governance arrangements with the System Operator and the eight geographic routes to support the framework and its objectives
- Support the vision set out in the DfT's rail freight strategy for the continued growth of rail freight, in order to help relieve pressures on the road network
- Lead the production of the industry plan required by the Scottish Government but – as applicable – applying the key principles to the whole of the UK

In addition, we also see a need to develop a 15-year plan to deliver volume growth and modal shift from road, setting out clearly:

- The likely benefits streams and beneficiaries
- The infrastructure changes needed
- The changes in culture and behaviour that will be needed
- The likely scale of costs and how they might be funded
- How our customers link into and can benefit from Digital Railway

2.3 Route Objectives

Delivering excellent service and successful outcomes can only be achieved by working in close and positive collaboration with all of our customers and stakeholders. Customer scorecards are at the heart of our collaborative relationships. The key objectives we plan to achieve in CP6 are set out in our long term Route Scorecard and are summarised on this and the following pages.

- **Safety**

We will continue to work with customers and stakeholders to drive safety improvement. During 2017/18 we have started to drive greater collaboration with the freight sector through the National Freight Safety Group, following the freight safety charter that has been agreed between all FOCs and Network Rail. We see this as the basis for further collaboration and safety improvement. In particular, we want to develop an ambitious programme to target freight derailments (reducing from 10 in 2018/19 to 5 by 2023/24) and SPADs (reducing from 40 to 35 over the same timeframe). To deliver this we will require expenditure of some £22m over the control period.

We will also increase our focus on reducing hazards and injuries to our FNPO customer workforce on Network Rail's infrastructure. This is a new measure that we introduced on our scorecard in 2016/17 and we want to continue a focus on this so that our customers' staff are as safe as possible on our infrastructure.

- **Train performance**

We will retain the Freight Delivery Metric (FDM) as the key regulatory measure for freight performance. FDM measures the number of trains on time (to 15 minutes) in relation to Network Rail caused delays. We are continuing to outperform our CP5 target of 92.5% (achieving an outturn of 94.3% in 2016/17) and for CP6 our objective is 94.0%, recognising the decline of coal traffic (which saw better performance) and that anticipated traffic growth will predominantly be on the busier parts of the network.

The concept of corridors is critically important to both our passenger and freight customers, where the end to end journey is of greater significance in many cases, than the performance on individual geographic routes. For freight customers we will continue to develop the Strategic Freight Corridor's (SFCs) for managing performance to support future rail freight growth.

Average speed is a key aspect of freight performance and FOCs and freight end-users are keen to see the average speed of freight services on the network increase from c25mph, in order to provide for better asset utilisation, lower cost and improved freight-end customer service. We will develop appropriate plans and metrics for this. As average passenger train speeds are increasing due to the many Journey Time Improvement (JTI) schemes, it is vital that average freight speeds also increase at least to maintain efficient network usage.

We will work with Scotland Route and Transport Scotland to develop plans to address the Scottish High Level Output Specification (HLOS) freight performance and average speed metrics.

For passenger operators, we will discuss with DfT the performance targets and assumptions for CrossCountry given that the franchise ends in October 2019. The Caledonian Sleeper franchise runs for 15 years (2015 – 2030), spanning CP6, and we will continue to work with them to deliver their franchise performance commitment, which is planned to step up from 75% to 80% right time arrival from April 2018.

Charter performance will be targeted at continuing high levels consistent with their operations on the rail network.

– **Achieving rail freight growth**

Our planning and scoping work to date indicates that around £2bn will be needed over a 15 year horizon to fund the infrastructure necessary to underpin step changes in rail freight growth. We will work with the UK and Scottish governments and with prospective third-party investors to develop and establish funding mechanisms for this investment, which will be an urgent priority ahead of and going into CP6. Investing in the network to support modal shift and the growth of rail freight has considerable socio-economic and environmental benefits. The Benefit Cost Ratios for freight enhancement schemes are very strong typically in the range of 4:1 to 8:1. We will work with Scotland Route, Transport Scotland and the wider sector in Scotland to deliver Transport Scotland's HLOS rail freight growth target.

– **Capacity and capability**

Maintaining the published operational capability of the network is critical for our customers, particularly freight and charters. We will work with the geographical routes to develop and set out clear statements of freight capacity and capability.

Given the freight growth forecast in CP6 we will work with the System Operator to plan how capacity can be made available to accommodate this. A proportion will be through the continued drive to optimise use of the existing network. However, on certain routes in order to deliver a step-change in growth, enhancements to network infrastructure will be required.

We will work with both the UK and Scottish Governments to make the case for continued funding to develop the Strategic Freight Network to build on the successes (and tangible benefits) of the CP4 and CP5 Strategic Freight Network funds.

In the longer term, the freight capacity and capability requirements necessary to achieve continued freight growth will form a key element of the 15-year Freight Plan with the anticipated focus being on five key strategic corridors:

– Felixstowe to the Midlands/North/Scotland
– Solent to the Midlands/North/Scotland
– Cross London
– Northern Ports and Trans Pennine capacity
– Development of additional Nodal Yards (to support train regulation and capacity management)

We will work with the System Operator to develop the outline thinking on freight capacity and capability enhancement set out in the Freight Network Study and the Route Studies.

For national passenger operators, we will work with our customers and geographical routes to identify plans to improve reliability, journey times and look to remove bottlenecks.

– **Access and Train planning**

Building on the annual scorecards we have developed with customers, and reflecting the criticality of train planning and minimal levels of disruption for them, we anticipate including access planning and train planning objectives.

– **Access charges**

We are proposing that freight track access charges remain stable beyond the end of CP5 and across CP6. This is important to provide sustainability and affordability for the freight sector and confidence for end-users to support the continued growth in key markets.

– **Customer satisfaction**

We will monitor our business performance and customer satisfaction using Scorecards, but recognising there are also wider strategic objectives that are more qualitative and subjective. Measures will be agreed each year with our customers. We want to align more closely the KPIs on our scorecards with our customers' own objectives to enable closer, more coordinated and productive working.

In delivering these outcomes we will need to continue to develop our processes, our people, our customer service approach and to deliver efficiently, within the funding levels that will be agreed for CP6. This plan outlines these areas and further engagement and development of these areas is necessary.

– **Finance**

FNPO will have its own revenue requirement which will provide greater transparency on the costs associated with our customers' use of the network. As well as directly incurred and traffic related costs, all Network Rail ("common") costs are being allocated to customers as part of the revenue requirements for all routes. We are presenting freight costs with / without all the allocated costs to avoid misleading interpretations of the actual costs that freight operations impose on the network.

The greater transparency on costs will allow us to work with the geographical routes and the System Operator to establish new internal relationships. We will manage these internal relationships in a structured way. The aim is to more clearly define customer inputs and specifications and will result in an opportunity to jointly review outputs, costs and outcomes to drive infrastructure cost reduction, efficiency, value-for-money and alignment to customer requirements. It also gives an opportunity to create different funding models for the network enhancements and developments necessary to drive continued rail freight growth both in CP6 and subsequent control periods leveraging or otherwise recognising the value and income from the freight property estate. In this way, FNPO will be able to function more fully as an independent route business.

– **Railway Ombudsman**

The Rail Minister is supporting the introduction of voluntary binding Alternative Dispute Resolution (ADR)/Rail Ombudsman in the rail sector as per the Government manifesto. This will change the way that the rail industry deals with complaints relating to service provision within a defined scope. Customer services that Network Rail delivers at its Managed stations are eligible under the scheme criteria. The cost of the scheme for Network Rail (running costs and compensation payments), including a risk and uncertainty provision, is estimated at around £150k pa. Government is very supportive of Network Rail joining the scheme. Further details in Section 6.9.

3. FNPO Overview

3.1 Route Overview

In April 2017, Freight and National Passenger Operators (FNPO) route was established as Network Rail' ninth operational route. Our customers operate nationally across multiple routes making FNPO the "multi-route" route.

FNPO's purpose is to deliver growth and excellent service for both our customers and our stakeholders, through improving safety and performance, and enhancing capacity and capability, at an efficient cost.

FNPO is different to the geographical Routes: Access Operators and variety of third parties:

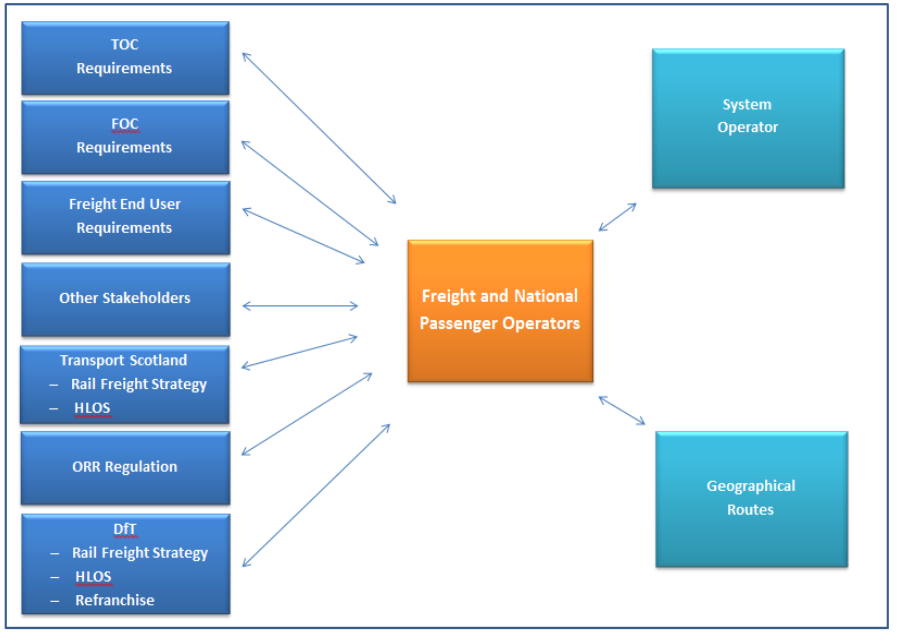
- An equally varied stakeholder base, both external and internal
- We need to have regard to the policies and strategies of both the UK and the Scottish government
- FNPO does not physically manage infrastructure or train operations. We deliver performance and other outputs for our customers in conjunction with and through the geographical routes, the System Operator and other Network Rail functions.

Passenger and freight volumes across the network are forecast to grow in CP6. In addition to this, our customers, passengers, freight end-users and other stakeholders have increasing expectations from Network Rail in terms of safety, train performance and other areas of customer service.

The new rail freight strategies of both the UK and Scottish Governments both support additional rail freight growth and modal switch from road. This will deliver significant benefits including easing road congestion, reducing pollution and generating productivity and financial benefits for the economy

3.2 Our Stakeholders

FNPO's stakeholders are numerous and diverse. Our external stakeholders range from passengers and freight end-users, via Train and Freight operators and other rail third parties to Governments and other public bodies. Our internal stakeholder relationships with the geographic routes and the System Operator are critical. FNPO must look, and manage, both within and outside Network Rail simultaneously. The schematic below shows our relationship framework with our stakeholders



3.2.1 Engagement with our stakeholders

Our CP6 plan is far-reaching, ambitious and is subject to appropriate funding being available. To achieve this we will need and to work closely and collaboratively with all our stakeholders. Transparency, honesty and positive engagement has been, and will continue to be our approach. Our stakeholder engagement approach is summarised in the table below.

External Stakeholders	Internal Stakeholders
Customer engagement processes including regular meetings covering safety, performance, commercial and wider strategic and business development issues	Network Rail governance and reporting structure
Cross-Industry Groups, e.g. RDG Freight Group, Freight Joint Board, Freight Network Study Board	Organisational alignment with Route Freight teams physically based in the geographic routes and in a matrix arrangement. Freight Service Delivery Managers are based in the National Operations Centre
We are planning for the creation of an FNPO Route Supervisory Board during 2017/18	FNPO will establish an internal “Level 1" quarterly review process between FNPO, the System Operator and each geographic route
Network Rail Customer & Freight End User Satisfaction Survey and FNPO team quarterly “pulse check”	
CP6 Stakeholder engagement workshops	

3.2.2 Stakeholder needs and prioritisation

We have engaged extensively in the development of our RSP. We are grateful for the support and positive input our customers and stakeholders have provided. The width and breadth of our stakeholder base meant that a number of workshops were needed to cover our passenger and freight customers and stakeholder so we could establish / review views and priorities. We have held six CP6 customer focused events, with over 60 different customers, end users and stakeholders represented. The outcome of this has identified the following stakeholder priorities,

Stakeholder Priorities	
Safety	Maintaining a safe rail network
Performance	Deliver train service performance that meets customer expectations and regulatory targets
Cross-route challenges	Access, best practice sharing, consistency and joined-up planning and delivery
Efficiency/value for money	Network Rail needs to be more efficient and provide value for money
Growth	Developing and growing passenger and freight services
System Operator (SO)	How this new function will operate and work with customers
Capacity	The need to increase and protect capacity
Capability	Maintain and improve the capability of the network including diversionary routes
Journey Time Improvements	Developing journey time improvements for freight and passenger services

We will continue to monitor and record the views of our customers and stakeholders through CP6 to ensure we meet their requirements as part of our ongoing and evolving customer and stakeholder engagement.

3.2.3 Prioritisation linkage with short and long term route objectives

Each of the themes listed in this section have been discussed and developed as part of the ongoing scorecard process and for the purposes of developing this RSP. The next section details our objectives and KPIs that will measure our performance in addressing our stakeholder and customer priorities.

4. Route Objectives

This plan is predicated on the assumptions listed in Appendix A. Our CP6 objectives our listed below and form the basis of the FNPO Route Scorecard.

	18/19		
Safety	**WORSE THAN TARGET**	**TARGET**	**BETTER THAN TARGET**
Work related absence	40	20	0
Close calls raised	160	180	200
Close calls closed within 90 days	80%	90%	100%
Derailments	13	10	7
SPADs	48	40	32
Operator staff lost time incidents on NR infrastructure	16	12	8
Financial Performance			
Financial Performance Measure	-10%	0%	10%
Investment & Asset Management			
CP5 SFN schemes - Current year GRIP 6 completion vs baseline	80%	90%	100%
Train Performance			
Freight Delivery Metric (FDM) - National	92.5%	94%	94.5%
Right time departures - Freight	78%	81%	84%
FOC on TOC delay (Delay Minutes/100 train km)	1.25	1.18	1.16
Delay per incident – Freight	26.3	27.1	28.0
CrossCountry - PPM	89.2%	90.0%	90.8%
CrossCountry - CaSL	4.0	3.9	3.8
CrossCountry – Time to 3 minutes	64%	66%	68%
Cross Country – Cancellations	2.95%	2.85%	2.75%
Caledonian Sleeper - Right time	75%	80%	85%
Charter Trains - PPM	86%	88%	90%
Locally Driven Customer Measures			
Net tonne miles moved - Freight – (billions)	9.4	10.4	11.4
Freight service plan reviews- delivery against agreed milestones	80%	90%	100%
Strategic Capacity - Freight	5%	10%	15%
CrossCountry - Average minutes lateness	4.40	4.35	4.30
CrossCountry - Access planning agreed milestones met	75%	80%	85%
Caledonian Sleeper - Roll up of customer scorecard	0%	50%	100%
Charter planning compliance	0%	50%	100%
Freight End User (FEU) satisfaction	68%	73%	78%
People Measures			
Your Voice Action Plans – delivery against milestones	80%	90%	100%

*Measures shown as TBC will be developed in CP5 and go live in CP6

Long Term Route Scorecard

Safety	Definitions		19/20	20/21	21/22	22/23	23/24	24/25	Achievability
Work related absence	The number of FNPO Route absences where the cause is classified as work related (e.g. work related stress).	WORSE THAN TARGET	40	40	40	40	40	40	
		TARGET	20	20	20	20	20	20	
		BETTER THAN TARGET	0	0	0	0	0	0	
Derailments	Derailment of commercial Freight services on NR network infrastructure	WORSE THAN TARGET	12	11	10	9	8	7	
		TARGET	9	8	7	6	5	4	
		BETTER THAN TARGET	6	5	4	3	2	1	
SPADs	SPADs involving FNPO customer services	WORSE THAN TARGET	47	46	45	44	43	42	
		TARGET	39	38	37	36	35	34	
		BETTER THAN TARGET	31	30	29	28	27	26	
Close calls closed within 90 days	Close calls closed within 90 days	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	
		TARGET	90%	90%	90%	90%	90%	90%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	
RM3 *	To be defined once the metric and target has been developed and agreed with key stakeholders	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
Precursor Indicator Model – Freight *	To be defined once the metric and target has been developed and agreed with key stakeholders	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
Operator Lost Time Incidents on NR infrastructure	FOC/TOC customer reported lost time injuries occurring on NR infrastructure	WORSE THAN TARGET	15	14	13	12	11	10	
		TARGET	11	10	9	8	7	6	
		BETTER THAN TARGET	7	6	5	4	3	2	

Train Performance Measures	Definitions		19/20	20/21	21/22	22/23	23/24	24/25	Achievability
Freight Delivery Measure (FDM) – National	Regulatory measure of Network Rail's ability to deliver freight trains to destination within 15 mins of booked time	WORSE THAN TARGET	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	
		TARGET	94.0%	94.0%	94.0%	94.0%	94.0%	94.0%	
		BETTER THAN TARGET	94.5%	94.5%	94.5%	94.5%	94.5%	94.5%	
Freight Delivery Measure (FDM) – Scotland	Regulatory measure of Network Rail's ability to deliver freight trains to destination within 15 mins of booked time in Scotland	WORSE THAN TARGET	93.5%	93.5%	93.5%	93.5%	93.5%	93.5%	
		TARGET	94.5%	94.5%	94.5%	94.5%	94.5%	94.5%	
		BETTER THAN TARGET	95.0%	95.0	95.0%	95.0%	95.0%	95.0%	
Right time departures – Freight	All freight trains that depart origin right time	WORSE THAN TARGET	78%	78%	79%	79%	79%	79%	
		TARGET	81%	81%	82%	82%	82%	82%	
		BETTER THAN TARGET	84%	84%	85%	85%	85%	85%	
FOC on TOC (DM/ 100 train km)	The portion of delay to Passenger operators caused by commercial freight services (normalised)	WORSE THAN TARGET	1.24	1.23	1.22	1.22	1.22	1.22	
		TARGET	1.17	1.16	1.15	1.15	1.15	1.15	
		BETTER THAN TARGET	1.15	1.14	1.13	1.13	1.13	1.13	
Delay per incident – Freight	The average number of attributed delay minutes to third parties caused by FOC incidents	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
CrossCountry - PPM	XC PPM delivery (time to 10)	WORSE THAN TARGET	89.2%	89.2%	89.3%	89.4%	89.5%	89.5%	
		TARGET	90.0%	90.0%	90.1%	90.2%	90.3%	90.3%	
		BETTER THAN TARGET	90.8%	90.8%	90.9%	91.0%	91.1%	91.1%	
CrossCountry - CaSL	XC cancellation and significant lateness delivery	WORSE THAN TARGET	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
		TARGET	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	
		BETTER THAN TARGET	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	
CrossCountry – Time to 3 minutes	%of all train that arrive at all stations on time to 3 minutes	WORSE THAN TARGET	64%	65%	65%	66%	67%	68%	
		TARGET	66%	67%	67%	68%	69%	70%	
		BETTER THAN TARGET	68%	69%	69%	70%	71%	72%	
CrossCountry – Cancellations	% of all passenger train journeys that are cancelled	WORSE THAN TARGET	2.95%	2.95%	2.95%	2.95%	2.95%	2.95%	
		TARGET	2.85%	2.85%	2.85%	2.85%	2.85%	2.85%	
		BETTER THAN TARGET	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	
Caledonian Sleeper – Right Time	% of all passenger train journeys that arrive on time.	WORSE THAN TARGET	75%	75%	75%	75%	75%	75%	
		TARGET	80%	80%	80%	80%	80%	80%	
		BETTER THAN TARGET	85%	85%	85%	85%	85%	85%	
Charter Trains - PPM	% of all charter train journeys that arrive within 10 minutes at termination.	WORSE THAN TARGET	86%	86%	86%	86%	86%	86%	
		TARGET	88%	88%	88%	88%	88%	88%	
		BETTER THAN TARGET	90%	90%	90%	90%	90%	90%	

*Measures shown as TBC will be developed in CP5 and go live in CP6

Locally Driven Customer Measures	Definitions		19/20	20/21	21/22	22/23	23/24	24/25	Achievability
Net tonne miles moved – Freight (billions)	Net tonne miles moved – Freight (Great Britain)	WORSE THAN TARGET	9.3	9.6	10.0	10.7	11.8	11.8	
		TARGET	10.4	10.6	11.2	11.9	13.1	13.1	
		BETTER THAN TARGET	11.4	11.7	12.3	13.1	14.5	14.5	
Average speed- Freight *	To be agreed once the metric and target have been defined.	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
Freight service plan reviews- delivery against agreed milestones	% achievement of agreed milestones	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	
		TARGET	90%	90%	90%	90%	90%	90%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	
Strategic capacity - Freight*	'The % of the gap between the number of required paths and the number of actual paths, that is filled each timetable period	WORSE THAN TARGET	5%	5%	5%	5%	5%	5%	
		TARGET	10%	10%	10%	10%	10%	10%	
		BETTER THAN TARGET	15%	15%	15%	15%	15%	15%	
Scottish freight growth on baseline	Scottish freight growth against an agreed baseline	WORSE THAN TARGET	1.5%	3.0%	4.5%	6.0%	7.5%	7.5%	
		TARGET	1.5%	3.0%	4.5%	6.0%	7.5%	7.5%	
		BETTER THAN TARGET	3.5%	5.0%	6.5%	8.0%	9.5%	9.5%	
Scottish new freight traffic share	Scottish new freight traffic share	WORSE THAN TARGET	1.5%	3.0%	4.5%	6.0%	7.5%	7.5%	
		TARGET	1.5%	3.0%	4.5%	6.0%	7.5%	7.5%	
		BETTER THAN TARGET	3.5%	5.0%	6.5%	8.0%	9.5%	9.5%	
Average speed improvement on baseline (Freight, Scotland)*	Average speed improvement on baseline -(Freight, Scotland)	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	

*Measures shown as TBC will be developed in CP5 and go live in CP6

Locally Driven Customer Measures	Definitions		19/20	20/21	21/22	22/23	23/24	24/25	Achievability
CrossCountry – Average minutes lateness*	CrossCountry Average Minutes Lateness	WORSE THAN TARGET	4.39	4.38	4.37	4.36	4.35	4.35	
		TARGET	4.34	4.33	4.32	4.31	4.30	4.30	
		BETTER THAN TARGET	4.29	4.28	4.27	4.26	4.25	4.25	
CrossCountry – Access planning agreed milestones met	Key planning milestones met	WORSE THAN TARGET	75%	75%	75%	75%	75%	75%	
		TARGET	80%	80%	80%	80%	80%	80%	
		BETTER THAN TARGET	85%	85%	85%	85%	85%	85%	
Caledonian Sleeper – Roll up of customer scorecard	% achievement of 'better than target' level of total Customer Scorecard	WORSE THAN TARGET	0%	0%	0%	0%	0%	0%	
		TARGET	50%	50%	50%	50%	50%	50%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	
Charter planning compliance	Roll up of Charters 'Planning and Delivery' metrics	WORSE THAN TARGET	0%	0%	0%	0%	0%	0%	
		TARGET	50%	50%	50%	50%	50%	50%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	
Freight End User (FEU) satisfaction	Quarterly customer satisfaction survey with freight end users	WORSE THAN TARGET	69%	70%	71%	72%	73%	73%	
		TARGET	74%	75%	76%	77%	78%	78%	
		BETTER THAN TARGET	79%	80%	81%	82%	83%	83%	

Investment & Asset Management	Definitions		19/20	20/21	21/22	22/23	23/24	24/25	Achievability
CP6 SFN schemes - Current year GRIP 3 completion vs baseline	Measures against a baseline SFN plan and tracks the number of schemes completed to GRIP 3	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	
		TARGET	90%	90%	90%	90%	90%	90%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	
CP6 SFN schemes - Current year GRIP 6 completion vs baseline	Measures against a baseline SFN plan and tracks the number of schemes completed to GRIP 6	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	
		TARGET	90%	90%	90%	90%	90%	90%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	
Freight asset reliability*	To be agreed once the metric and target have been defined.	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		TARGET	TBC	TBC	TBC	TBC	TBC	TBC	
		BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	

*Measures shown as TBC will be developed in CP5 and go live in CP6

Financial Performance	Definition		19/20	20/21	21/22	22/23	23/24	24/25	Achievability
Financial Performance Measure (FPM)	Measures how we are performing against our Income, Opex and Renewals budget.	WORSE THAN TARGET	-£10m	-£10m	-£10m	-£10m	-£10m	-£10m	
		TARGET	0	0	0	0	0	0	
		BETTER THAN TARGET	+£10m	+£10m	+£10m	+£10m	+£10m	+£10m	
Cash Compliance	This is a measure of how well we have remained within our funding envelope in total	WORSE THAN TARGET	-10%	-10%	-10%	-10%	-10%	-10%	
		TARGET	0%	0%	0%	0%	0%	0%	
		BETTER THAN TARGET	10%	10%	10%	10%	10%	10%	

People			19/20	20/21	21/22	22/23	23/24	24/25	Achievability
Your Voice Action Plans - delivery against milestones	% achievement of agreed milestones	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	
		TARGET	90%	90%	90%	90%	90%	90%	
		BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	

4.1 Scorecards

In 2016/17, Network Rail established route scorecards, which included specific agreed customer KPIs. In 2017/18, building on this, we have, developed with each of our customer specific scorecards for each of customer that underpin the Route scorecards. These customer scorecards cover a range of measures including safety, performance, business development, commercial, train planning and project delivery. Each customer scorecard is bespoke to that particular customer, and the customer has the choice whether to "roll up" all of that scorecard, or just certain measures from it, to the FNPO Route scorecard. We believe that Route and Customer scorecards are an important and powerful addition to our customer focused approach. The scorecards are designed to incentivise Network Rail to focus on what is really important to the customer and by extension, the passenger and freight end-users.

We are looking at ways to enhance the scorecard process in order to give recognition to a number of jointly agreed route customer measures across all the FOCs rather than a roll up of the entire customer scorecard for each scorecard. This will enable the weighting of these measures to be greater on the Route scorecard, so helping to improve focus on delivery. For CP6 we intend to develop our annual scorecards from the overall CP6 scorecard that is at the heart of our CP6 Route Strategic Plan.

The intention for the freight sector is to agree a number of specific objectives between all FOCs that would contribute the most to their businesses. FNPO would be focussed on delivering these key objectives which would help support and grow rail freight. For CrossCountry and Caledonian Sleeper we recognise that On Time metrics become increasingly important as we move towards CP6. We have developed a suite of Right Time/On Time measures for both CrossCountry and Caledonian Sleeper that are currently included on the scorecards which are early steps towards On Time metrics and reporting of these.

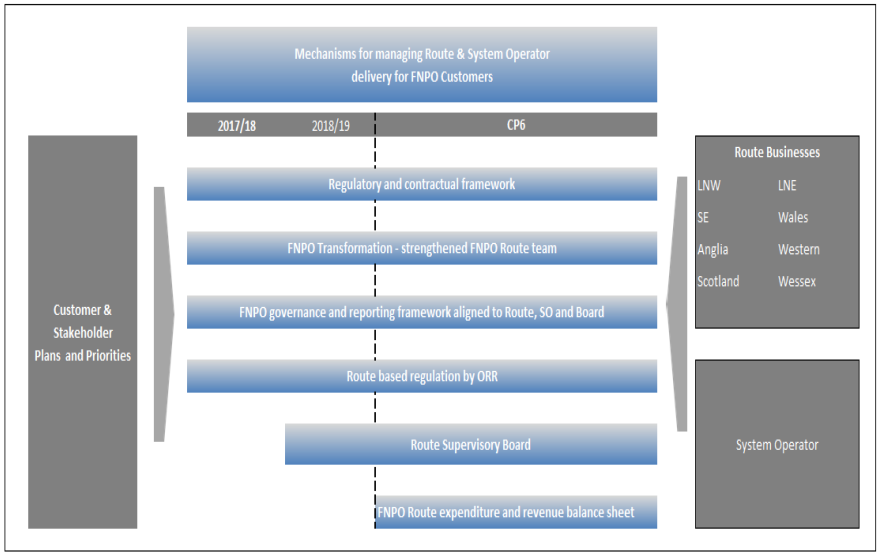
This focused approach has driven improvements across some of the metrics and with more understanding of the measures generated through the various specific work-streams setup around these measures, there should be further improvement throughout the remainder of CP5 to give a firm footing as we head into CP6. With the introduction of Customer scorecards across all Routes in 2017/18, the opportunity for further alignment has arisen. An example is at Birmingham New Street, where both London Midland and Virgin Trains West Coast as well as Cross Country all have right time arrivals at Birmingham New Street on their scorecards.

There are some metrics which still have 'to be confirmed' targets against them. These require more detailed stakeholder discussion and are typically more complex to both understand the detail and also require data and evidence that isn't naturally captured in that way already. We aim to have the TBCs in the Scorecard properly defined and with agreed targets by December 2018.

In addition, there are further discussions required on route scorecard metrics for freight customers, Other collective metrics, that provide a more balanced scorecard are an area of joint collaboration, with that process due to continue in February 2018.

4.2 Route Delivery for FNPO Customers

As Network Rail continues to transform, devolving greater accountability and responsibility to Route Businesses, FNPO will continue to work collaboratively with each geographical route to ensure continued delivery to our customers. The mechanisms already in place to give our customer the necessary assurance include the following:



– **Regulatory and contractual framework to ensure fair treatment of all customers operating on the rail network**

Network Licence, Condition 1 requires that Network Rail meets the reasonable requirements of its customers in respect of managing the network. ORR can, and does, highlight issues and puts them on the "regulatory escalator" in respect of individual Routes as well as the company as a whole.

Each operator has a Track Access Contract which sets out the rights and obligations, including making reference to the Network Code (and Railway Operational Code) which is the common set of rules that apply to all TOCs and FOCs to run their trains on Network Rail infrastructure.

– **Route Supervisory Boards**

Network Rail has been piloting a Route Supervisory Board for Western Route, which includes TOC and passenger representation. The intention is, following the pilot, to establish Supervisory Boards across all Routes, including FNPO.

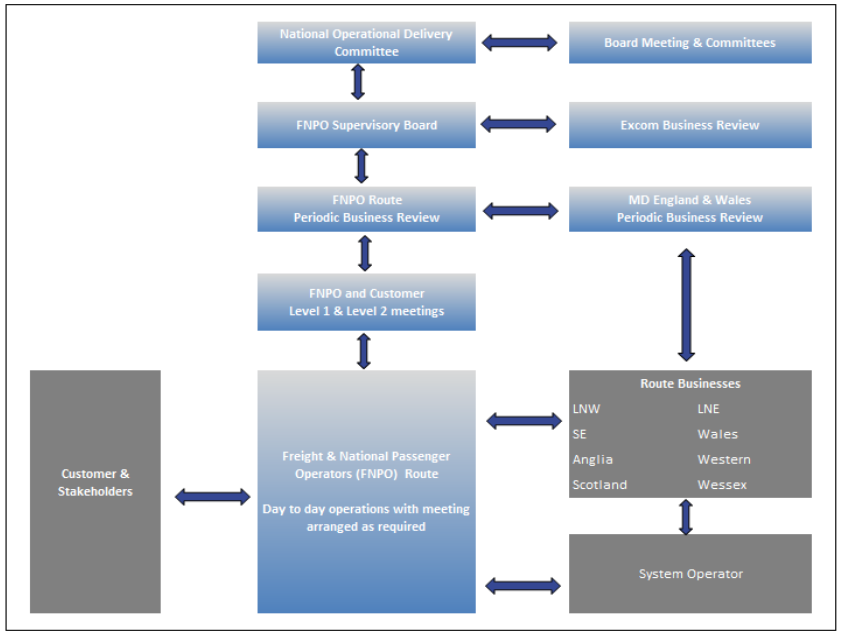
The objective of the Route Supervisory Boards is to bring "track and train" closer together in respect of oversight of day-to-day operations as well as longer term planning.

The Terms of Reference for the Western Board state that the Board must have regard to all users of the Route. This is the template for other routes.

– **FNPO governance and reporting structure aligned to geographical routes**

FNPO is subject to the same governance within Network Rail as geographical routes. Executive Committee and Board reporting packs include FNPO reports alongside Routes. The FNPO scorecards have equivalent status as Route scorecards and are a key part of the Network Rail reporting/governance framework.

The key meeting structure and associated escalation process is summarised below:



– **Strengthened FNPO Route team building stronger links with geographical routes and customers**

We have implemented the new FNPO organisational structure to strengthen our customer focus and governance of the Routes and SO.

Senior Route Freight Managers and Lead/Route Freight Managers are physically based in the Routes and work closely with geographical Route colleagues in a matrix arrangement.

Freight Service Delivery Managers work closely with route controls on real-time freight train performance and regulation – in particular in relation to service recovery following perturbation.

For CP6, further governance processes will be put in place:

– **FNPO Route expenditure and revenue balance sheet supporting great transparency and control**

FNPO will have its own revenue requirement, similar to the eight geographical routes and the system operator. This will provide greater transparency on all income and costs associated with our customers' use of the network; provide a basis for FNPO to better work with geographical routes to ensure that expenditure supports FNPO customer outputs; and will allow FNPO to function more fully as an independent route business.

Geographical Route summaries (see Appendix B). These set out how each Route and FNPO will work together to deliver the Route Strategic Plan. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

– **Route based regulation by ORR**

Over the last year ORR have started to meet twice a year with each route (RMD and Exec team) to understand progress and issues. This provides both a basis for its existing regulation and CP6.

4.3 System Operator Delivery for FNPO Customers

The role of the System Operator (SO) and its engagement with FNPO customers is crucial to our business performance. With FNPO being the principal point of contact with national operators, accountable for the delivery of their performance and other outputs and working closely with the geographic routes, an effective SO function will help FNPO and its customers deliver both freight and passengers, safely and efficiently. The SO has established teams to align to each Route, including FNPO. These teams encompass network strategy & planning and capacity planning. This is an important and positive development for FNPO and its customers.

The relationship between FNPO and SO will be carried out at different levels of the organisation, with Managing Director, FNPO Executive and other key roles, having in some cases, day to day interaction with SO. As part of FNPO transformation, the creation of a Head of Strategic Capability post will maintain alignment between the two functions. In addition, FNPO will work closely with SO during the remainder of 2017/18 and 2018/19 following feedback from the respective stakeholder workshops to understand better how we can help collectively focus on the freight and national operators priorities in the short and medium term into CP6.

The SO brings the needs of different parties together to ensure that the enhancements to the network are planned and capacity is allocated effectively. This is divested through different parts of SO and these are:

– **Network Strategy and Planning**

The Long-Term Planning Process (LTPP) is led by teams under the Strategy & Planning Directors in SO. This part of SO seeks the views of stakeholders and the roles within these teams align with devolved funders and other customers. There is a direct alignment with FNPO, as a Principal Strategic Planner (PSP) has been appointed to link directly with FNPO. The PSP will work closely with FNPO to understand, influence and inform the LTPP and other strategic planning matters relating to national operators.

– **Capacity Planning**

The SO organisation is structured to provide a strategic focus for planning activities, capability and capacity analysis, the working timetable (WTT) development process, including the delivery of industry steering groups to support timetable change, management of the timetable planning rules and delivery of permanent alteration for operator requirements. Capacity Planning also leads on the weekly adjustment of the timetable for engineering works, short term operator requirements and the network wide leadership for Access Planning.

SO will set the policy for the way Network Rail manages Access Planning with the activity and process devolved out to the geographic routes in April 2017. Capacity Planning will support the delivery of the Access Planning process and provide a national framework in which to plan and prioritise engineering work. The delivery of many of the Capacity Planning activities is influenced by European Legislation. A focus area for the European Commission has been the harmonisation of timetabling and engineering access planning activities across Europe. The scope of any legislation changes may adjust the process and systems used by Capacity Planning in this area during CP6.

– **Programmes and Policy**

This team provides a central resource to undertake a range of central (non-geographic) cross-functional activities and also provides support to the geographically based teams in specific disciplines. The SO team has portfolio and programme management, client portfolio services, analysis and forecasting as some of the key roles and responsibilities within this part of SO.

FNPO will interface with these teams in such instance linked to the Strategic Freight Network and other freight and national passenger operator related schemes and initiatives.

– **HS2**

The scale and complexity of HS2 requires both SO and FNPO to be heavily involved at different levels. FNPO and its customers need to understand the full impact of HS2 on the day to day freight operations, before, during construction and after delivery of HS2. FNPO will work with HS2 Ltd and our customers to ensure national operators are considered throughout the whole lifespan of the HS2 project. FNPO interest includes the impact on the performance and network capacity available to our customers, particularly, freight following the opening of the first section of HS2 planned for 2026.

Freight & National Passenger Operators Route Strategic Plan

5. Freight

5.1 The role of rail freight

The freight and logistics sector is critically important to the competitiveness and growth of the UK economy with rail freight playing an important role within many sectors of the economy. The transportation of bulk goods remains a key strength while the burgeoning consumer goods market has driven significant growth in intermodal rail freight and modal shift from road.

Rail transported 17.8 billion tonne kilometres of freight in 2016/17, equating to 12% of freight surface transport. Rail's market share has grown 50% from 8% to 12% since 1998.

Examples of how rail freight supports the UK economy include:

- 40% of construction sector traffic into London moves by rail
- Between 30-40% of the containers that arrive or depart from the key deep-sea ports of Felixstowe, London Gateway and Southampton travel by rail
- Rail now has a 10% market share of finished automotive export traffic
- Rail freight provides considerable benefits through reduced CO2 emissions, road congestion and safety. Each tonne transported by rail rather than by road cuts CO2 emissions by 76%
- Rail freight delivers some £1.6bn per annum of economic benefit

5.2 Nature and dynamics of rail freight

The UK freight market is fiercely competitive, both with road (which remains the price and service benchmark for most categories of rail freight) and within rail, with the five main Freight Operating Companies (FOC's) competing across the UK in all markets.

Each year the FOCs transport goods worth over £30bn – from groceries which keep UK supermarkets stocked, fuel to generate electricity, steel and cement, to high-value export goods such as whiskies and cars. The key rail freight market sectors and their relative scale are summarised in the following table.

Market Sector	%	Rail Freight Activity
Intermodal	38	Movement of containers from ports and between inland terminals
Construction	25	Movement of aggregates, cement and spoil for the Construction industry
Metals	9	Movement semi-finished steel between works and finished steel to consuming manufacturing or fabricating industries.
Coal	8	Movement to power stations for electricity generation and steel works for steel production
Oil & Petroleum	7	Movement of oil, petroleum and diesel to distribution terminals
International	3	Movements via the Channel Tunnel
Other (includes biomass)	10	e.g. Movements of biomass ,cars, military equipment, spent nuclear fuel

Source - ORR Freight Rail Usage – 2016/17 Q4 - June 2017

The market itself continues to undergo fundamental change, with the rail freight sector simultaneously managing sustained growth in sectors such as intermodal and construction whilst continuing to manage the reduction in coal volumes since 2014/15.

An example of the changing nature of rail freight is that in recent years most of the major supermarkets have started to utilise rail for trunk haul movements of goods from their national distribution centres to regional centres and even to store. The service and reliability standards required by the UK's major retailers have become the standard for rail freight to achieve and exceed.

Rail freight's use of the network is also changing, reflecting the new economic geography of the UK and the increasing importance of the retail sector. Rail freight is increasingly focussed on serving major cities and areas of population rather than traditional "heavy industrial" areas. This means increasing activity south and east of an imaginary "line" from the Humber to Liverpool, and means that rail freight services increasingly share key (and often constrained) infrastructure with intensive passenger services, which themselves are forecast to grow strongly over the next decade.

5.3 Benefits of rail freight

Rail freight is increasingly recognised by the UK and Scottish Governments, customers and society in general as an economically attractive and environmentally efficient form of transport.

– **Environmental:**

The 2016 DfT Rail Freight Strategy made clear the value Government sets on the role rail freight can play in achieving objectives such as the Fifth Carbon Budget, which aims to see a 57% reduction in emissions by 2032, As HGVs are responsible for some 17% of total UK transport emissions, the potential is clear.

There may also be opportunities to further de-carbonise rail freight as only a small percentage of rail freight (around 5 per cent) is currently powered by electric traction. Increased use of electric traction for freight will be crucially dependent on the extent of electrification of the rail network.

– **Economic:**

Analysis by KPMG in 2015 estimated the benefits of rail freight to the UK economy at £1.6bn per year, including productivity gains for UK businesses, reduced road congestion and environmental benefits. Each tonne of freight transported by rail reduces carbon emissions by 7 per cent compared to road, and each freight train removes between 43 and 76 HGVs from the roads.

Freight related rail infrastructure enhancements facilitate significant socio-economic and environmental benefits. As illustrated by the Benefit Cost Ratios (BCRs) calculated using DfT's WebTAG transport appraisal methodology, the following table sets out a representative sample of freight related network enhancement schemes currently being delivered via the ring-fenced Strategic Freight Network (SFN) fund and their respective BCRs. Against a threshold BCR of c1.7, the strong "value for money" of freight enhancement schemes compared to other rail schemes is clear.

Scheme Title	Output	BCR
Southampton – WCML freight train lengthening	Enabling operation of 775m trains	2.73
ECML North	Loading gauge enhancement	7.2
ECML South	Loading gauge enhancement	6.2
Doncaster to Water Orton	Loading gauge enhancement	7.7
Buxton to Peak Forest	Enable operation of 2600t trains	4.0
Yorkshire Terminals Gauge Clearance (Route 1)	Loading gauge enhancement to Selby, Wakefield and Leeds terminals	>4
GWML Gauge (Chipping Sodbury Tunnel)	Loading gauge enhancements	2.7
Oxford 3 Minute Headways	Capacity enhancement	4.1
F2N2: Felixstowe Branch	Capacity enhancement	>4
Northern Ports & Trans Pennine Capacity	Port of Liverpool related capacity enhancement	>4
GWML Gauge Enhancement	Loading gauge enhancement.	2.7
Doncaster Immingham W12 Gauge	Loading gauge enhancement	>4

5.4 Government strategies

The importance of rail freight's role for the UK is reflected in the recent strategies set out by the Scottish Government in 2015 ("Delivering the Goods – Scotland's rail freight strategy") and the UK Government in 2016[1]

Both strategies are very clear that changing pattern of consumption (e.g. as driven by the rise of internet shopping and next-day / same-day deliveries) present challenges for the traditional operating model of rail freight and set out clearly that "the rail freight industry will need to innovate and respond to these challenges". These challenges are being actively addressed by the sector.

The DfT's strategy sets out both the economic and environmental benefits and the increasing contribution rail freight could make to the UK. Crucially, the strategy recognises the importance of a stable public policy framework. The 2016 strategy sees the UK Government's main contributions being:

- Helping to foster the necessary innovation and skills
- Ensuring suitable network capacity and capability is available, through means such as digitalisation, better use of existing capacity and enhancements
- Supporting a stable and affordable track access charging regime
- Ensuring the benefits of rail freight are more widely understood

Transport Scotland's strategy places rail freight in the overarching Scottish National Freight Strategy as well as the wider Scottish Economic and National Transport strategies. Whilst designed to support the Scottish economy and competitiveness, and to address environmental benefits and rural accessibility, the strategy also seeks to address the market issues following the decline of the coal sector.

This RSP sets out Network Rail's approach in response to the challenges set by the Governments in those documents with a vision and plan to lead the sector's response

5.5 Freight growth forecasts

As summarised in the table below, since 2013 there have been four main rail freight market studies addressing growth potential for the sector:

Review	Date	Author	Purpose	Comment
Freight Market Study	October 2013	MDS Transmodal	Support the rail industry Long Term Planning Process including Route Studies and Freight Network Study.	3% growth pa until 2043; Intermodal 5% growth pa; 1% pa Construction growth understated; Based on assumptions re price of oil/drivers wages and, crucially, unconstrained capacity.
DfT Rail Freight Strategy	September 2016	Arup	Understand volume growth potential, constraints and potential for carbon emissions reduction.	Different methodology than MDS
Transport Scotland Rail Freight Strategy	March 2016	Industry	Detailed commodity studies	Published and work in progress
FNPO Strategic Business Plan	December 2017	MDS Transmodal	Update the 2013 Freight Market Study forecasts	Improved construction sector assessment methodology, revised network capacity constraint sensitivity analysis.

[1] "Rail Freight Strategy – Moving Britain Ahead" – September 2016.

Although the various studies had different purposes and different methodologies, the results are broadly consistent in terms of direction, varying mainly on the trajectory and timing of growth; common themes throughout being:

– **Decline in coal**

This has been predicted for years, but the rate and scale of change arising from the Government's April 2015 Carbon Tax changes was not anticipated; sector witnessed a far greater and faster decline in coal volumes than forecast. This is not surprising given that the severity of the impact was unforeseen (even at the time) by the market.

– **Growth in intermodal**

Import and export of containerised goods through the major ports, between UK strategic rail freight interchanges/terminals and through the Channel Tunnel.

Although these sub sectors of the intermodal have market differences, for forecasting purposes they have sufficient similarity once on the rail network to be treated together. There is a common view that further intermodal growth is likely, achievable and desirable – there is less consensus on the form that growth will take, the rate of growth for each segment and the nature and scale of constraints, and how to address these.

– **Growth in Construction, especially bulk aggregates**

The Freight Market Study anticipated growth of c1% pa in this sector whereas since 2012 volumes have grown by over 3.5% per annum.

This is significant given the importance of London, the South East and East Anglia for aggregates traffic meaning that fast growing rail freight volumes need to use the same rail infrastructure as passenger operators who are addressing similar levels of growth.

5.6 Freight market study – 2017 forecast

As part of our assurance work to ensure our CP6 forecast aligns with the freight sectors outlook, MDS have undertaken a market study. The methodology adopted is broadly consistent with that previously employed with the 2013 Freight Market Study forecasting, the major exception being that constraints have now been applied to modelled traffic growth.

The 2013 Freight Market Study projected significant potential rail freight growth between 2011 and 2043. However, there have been various exogenous developments since 2013 that were not foreseen in the Freight Market Study forecast, such as:-

– Government energy and environmental policy changes led to a far sharper decline of ESI coal than previously assumed
– there were lower fuel and wage price levels which are more beneficial for road transport compared to rail and removed one of the main incentives for non-rail users (especially in the retail sector) to consider)
– the extent of rail served warehouse construction has been less than expected
– capacity constraints on the network have persisted, which has constrained the rate of growth of certain traffic flows

The combined effect has been significantly lower overall traffic growth than expected; although Construction traffic has been one market segment that has gone against this trend, seeing growth far in excess of the assumptions in 2013.

MDS Transmodal has based its analysis on four scenarios for 2023/24 growth compared to the 2016/17 base, to reflect the inherent uncertainty in forecasting rail freight traffic and the dependency on factors outside of the control of the freight operating companies or Network Rail.

The scenarios are:
A2: factors which favour rail relative to road, with low market growth;
B2: factors which favour rail relative to road, with high market growth;
C2: factors which disfavour rail relative to road, with low market growth;
D2: factors which disfavour rail relative to road, with high market growth.

The approach used by MDS Transmodel is generally the same as it used in its previous work to produce the forecasts that were used by Network Rail in our 2013 Freight Market Study. There is one major exception being that MDS Transmodal has now applied capacity constraints to modelled traffic growth in the new forecasts whereas the 2013 modelling was based on unconstrained growth. This has given two additional scenarios:

A3: factors which favour rail relative to road, with low and constrained market growth. As per scenario A2 but with network constraints;
B3: factors which favour rail relative to road, with high and constrained market growth. As per scenario B2 but with network constraints.

The table below summarises the results for freight lifted in 2023/24 for the four unconstrained (A2 – D2) and two constrained scenarios (A3 and B3).

Million tonnes	2016/17	A2	A3	B2	B3	C2	D2
Total freight	85.8	104.6	101.5	128.2	119.7	78.4	97.1
Change on base	-	22%	18%	49%	40%	(9%)	13%

Freight lifted in 2023/24 (million tonnes)

We consider that MDS Transmodal has produced a robust analysis and that setting out the analysis in terms of separate scenarios for future traffic levels is appropriate given the inherent uncertainty in forecasting rail freight growth. We recognise that other scenarios could of course be described but we consider the scenarios modelled by MDS Transmodal appropriate, given the uncertainty of UK and Scottish government policies out to 2023/24, the wider macro-economic environment, and the specifics of the rail freight market.

5.7 Traffic forecasts employed in our CP6 plan

For the purposes of this RSP we need to adopt a single traffic forecast from which we may derive the baseline income levels and so too inform our asset management plans and maintenance costs at more granular level across our Routes.

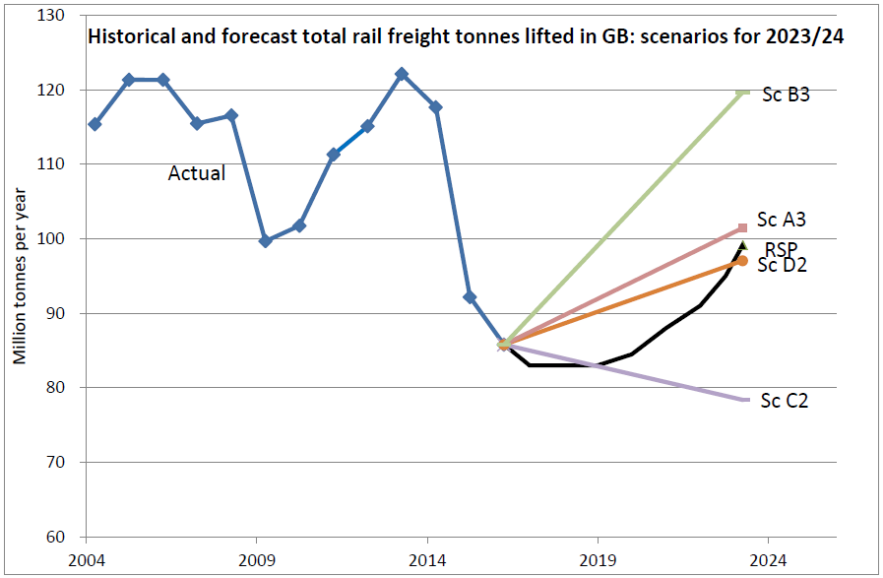
Our current view is that whilst there remain a number of key uncertainties there will be a broadly benign rail policy environment for CP6. In particular, both the UK and the Scottish governments have clearly expressed their support for rail freight, its benefits and continued growth. Moreover, our CP6 plan includes proposals for stable and sustainable track access charges and other initiatives to support rail freight growth. Funding to support freight enhancements in CP6 is very important, albeit any investment would most likely only support growth in the latter part of CP6 and into CP7.

Notably our forecasts recognise the timeframe associated with completion of those network capacity enhancements that will unlock forecast growth in rail freight volumes on certain key corridors. For instance; whilst the CP5/early CP6 Trimley Loop scheme enables +10tpd over the Felixstowe Branch, until the completion of capacity works further along the corridor at Haughley Junction, Soham and Ely, only a fraction of this traffic frequency uplift can be realised.

Finally, given some of the uncertainties around the UK's economic growth prospects, in part due to Brexit, and that ORR, DfT and Transport Scotland have not yet confirmed the position on freight track access charges or other elements of possible support, we are not able to finalise our CP6 forecast.

For the purposes of this version of the CP6 plan, as shown in the graph below, we are assuming the average of the two pro-rail constrained

scenarios (A3 and B3) and the two pro-road scenarios (C2 and D2). This is equal to 15.6% total growth in freight lifted between 2016/17 and 2023/24. It is equivalent to 2.1% growth per annum.



5.7.1 Capacity constraints

Forecasting unconstrained growth as part of our CP6 planning is not appropriate. As part of their scenario analysis MDS Transmodal has assumed capacity constraints on a number of key nodes around the network. This has had the effect of reducing the forecast growth in the two 'pro-rail' scenarios by 3% and 7%, for the low growth and high growth scenarios respectively.

Applying capacity constraints very accurately would be a complex exercise, requiring extensive analysis of the network, future passenger demand, network enhancements, timetabling optimisation options and possible alternative routing possibilities. In this study, a comparatively high-level approach has been undertaken, by limiting the number of freight paths at key points on the network facing capacity constraints. Ahead of further work and finalisation of our CP6 forecast we will undertake further consideration of how capacity constraints are applied in the forecasting.

What is notable, based on the lost growth from the pro-rail scenarios, is that there are corresponding lost economic benefits from modal shift. Using approximate values of mode shift benefits (reflecting the environmental and social costs of HGV journeys) gives a lost value of up to £89 million per annum. Using WebTAG assumptions, this reveals lost mode shift benefits of between £1.7bn and £4.7bn (depending on chosen constrained growth scenario). This provides further justification for the case for freight network enhancements set out elsewhere in this plan.

We intend to update and finalise our forecasting during 2018 as part of our response to ORR's draft determination. This will provide us with the opportunity to undertake a wider consultation on the current MDS Transmodal study and the assumptions used. In addition, when we update the forecast we expect to have further clarity on key CP6 policy parameters and other exogenous factors which will allow us to set out a CP6 forecast with more confidence.

5.8 Rail freight - a framework for growth

The rail freight strategies of the UK and Scottish Governments, supported by both our traffic forecast for CP6 and wider sector opinion, suggests that there are:

- *Immediate* opportunities for rail freight volume growth, particularly across the intermodal, construction and automotive sectors
- *Longer term* opportunities in emerging new markets such as retail logistics, express freight and urban logistics

FNPO considers that rail freight growth levels as envisaged by MDS Transmodal, and desired by the Governments' rail freight strategies, can be achieved – but only if an appropriate framework is put in place to develop infrastructure capability and capacity, and to fairly charge for access to it. Such a framework would then serve to create the operating conditions for an economically sustainable rail freight sector and so a rail freight offer that is both attractive to potential end-users and provides the maximum socio economic gain at lowest cost to funders.

FNPO proposes to lead the development of such a framework for rail freight growth that will variously:

- Underpin continued high levels of safe and reliable operational freight performance on the network
- Respect the open, fair and competitive freight market
- Require as stable a public policy framework as possible, including sustainable charges for access to the network
- Ensure that private sector investors retain the confidence to invest – over £2bn has already been invested in privately held rail freight assets
- Make the case for public sector investment in necessary network infrastructure
- Create conditions for further third-party investment in the network and terminals
- Facilitate freight end-users and FOCs driving efficiencies in their businesses
- Ensure industry processes and procedures are easy to understand.
- Give confidence that freight will be treated fairly in NR's devolved organisational structure
- Facilitate and support advocacy of the benefits of rail freight

The provision of services to rail freight end-users can involve numerous industry parties who necessarily work together in an integrated manner. For each end-user this will include Network Rail and at least one (and often more than one) FOC - and potentially rolling stock providers, rolling stock maintainers, product suppliers, terminal operators, property developers, 3PLs and providers of specialist services such as un/loading and product handling.

The lead party in each instance may differ, but Network Rail remains the only constant owing to the need to access, and use, the national rail network. In addition, Network Rail:

- Owns the majority of the property sites adjacent to, and in many cases connected to, the national network potentially suitable for freight use
- Possesses a unique combination of rail operational and property development knowledge
- Has in-house capability to design and deliver infrastructure works to facilitate new / enhanced railhead facilities
- Has responsibility for the long term strategic planning of the national network to provide for future freight related capacity and capability
- Has an established facilitation and advisory position across the rail freight sector, with unrivalled access to market information

This places Network Rail and FNPO in a unique and pivotal position in the rail freight supply chain and means that within such a framework focused on sector growth, Network Rail is ideally placed to provide leadership and advocacy for the sector.

5.9 CP6 – initial focus and plan

In line with our framework for growth agenda and in support of the sector in delivery of their aspirations, CP6 will see the continuation of preparatory work already underway wherein FNPO are working collaboratively with customers and key stakeholders to*:*

- Facilitate an acceptable access charging solution for CP6
- This will be achieved by working with ORR, DfT, Transport Scotland, FOCs and others to demonstrate the benefits of, and risks to, rail freight volumes to allow an acceptable series of trade-offs that will provide for stable and sustainable track access charging levels
- Put in place relationships with the System Operator and the eight geographic routes to support the framework and its objectives
- This will be achieved through the use of scorecards and establishment of an internal “Level 1" quarterly process between FNPO, the System Operator and each geographic route
- Work with the NR geographic routes to:
    - Ensure freight inputs (e.g. forecasts and specifications) are considered
    - Ensure each route has an appropriate regime for the management and maintenance of freight only infrastructure and yards & sidings
    - Review freight performance to ensure the train plan is robust and to ensure customer requirements and targets are being achieved
    - Review other outputs (e.g. number of TSRs) and freight costs.
- Lead the production of the industry plan required by the Scottish Government

The intention of the Scottish Government is to help drive rail freight growth into new market segments following the decline in Scottish coal production and use. The key focus of the plan will be on what is needed to persuade customers in the target market sectors (e.g. retail, forestry) to use rail and hence for the Scottish Government’s growth target for rail freight to be achieved by the end of CP6.

This plan to facilitate new rail freight growth in Scotland will need to address:

- How to overcome the legacy of the limitations of Scottish rail infrastructure north of the Central Belt which currently inhibit freight capacity and capability
- How to develop an innovative new rail freight offer that reflects the dispersed nature of the population and economic activity across much of Scotland
- The role of rail freight in the new Scotland Rail Enhancements & Capital Investment Strategy
- The specification for freight gauge capacity which will form part of the Scottish Gauge Requirement (SGR)
- The development of a potential freight journey time metric, for assessment over CP6 as to how deliverable it might be
- How performance will achieve 94.5% Freight Delivery Metric (FDM) by the end of CP6

The plan will fulfil the requirement that Network Rail ‘‘clearly demonstrates throughout CP6 that it is using all levers at its disposal to make the use of rail freight attractive across Scotland, including the simplicity of processes and a flexible approach to accommodating new rail freight traffic’’.

5.10 The 15-year horizon

Building on the foundations to be laid in CP6, a framework for growth demands a longer term perspective, indeed the realisation of many of the physical network and terminal interventions required to facilitate sector growth necessarily span multiple control periods.

To this end the following sections consider the specific areas of intervention and action that will collectively constitute the framework for growth over the 15 years beyond the current control period (so through to end of CP8 / 2034), a timeframe that nests within that of the FNS.

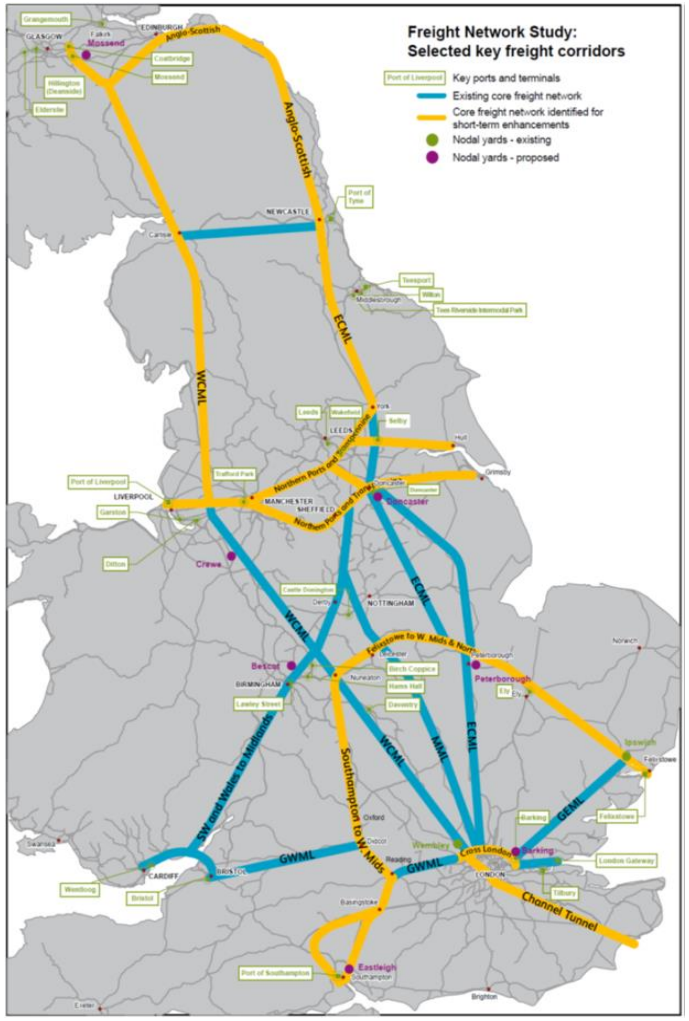
5.11 Realising a Strategic Freight Network

The concept of a Strategic Freight Network was originally enshrined in the Department for Transport's 2009 vision for rail freight "Strategic Rail Freight Network: The Longer Term Vision" which formed the centrepiece of DfT's rail freight strategy between 2009-16 and was supported by the CP4 and CP5 "Strategic Freight Network" ring-fenced enhancement funds.

This promoted the progressive realisation of a core network of freight-capable rail corridors linking the nation's key deep sea, short sea and bulk ports with the terminals and railheads serving centres of production, distribution and consumption – a strategic freight network.
The corridors forming would conform to a consistent set of operational benchmarks; namely:

- W10/W12 loading gauge
- 775m length functionality (650m minima & 1500m aspiration)
- RA10 without infrastructure driven speed restriction
- Electrified (25kV AC, though noting the DfT's current position set out in 2016 by the Secretary of State).
- 24/7 availability (through core & diversionary routes)

Such corridors would be augmented by a network of Nodal Yards, located at key corridor intersections, optimising freight path capacity over adjacent corridors on an increasingly heavily-utilised network.



The map above illustrates the envisaged Strategic Freight Network.

The preparation of the 2017 Freight Network Study entailed significant sector input in identifying a consensus around key capacity and capability constraints. As a result, the rail freight sector already has a large measure of agreement on the key capacity and capability gaps beyond the end of CP5 by rail freight corridor.

The FNS referenced 11 key rail freight corridors and flagged the freight capacity and/or capability gaps for each as summarised in the table below:

Table 6.1: Summary of Capacity Gaps

Corridor	Driver of Gap						
	Capacity Constraints	Diversionary Route Capability	Operational and Timetable Constraints	Line Speed Constraints	Insufficient Gauge Clearance		Electrification of Route section
					W10	W12	
1. West Coast Main Line	■	■	■	■		■	
2. East Midlands and Yorkshire		■	■		■	■	■
3. Felixstowe to the West Midlands and the North	■		■			■	■
4. Southampton to the West Midlands and the WCML	■	■	■	■	■	■	■
5. Channel Tunnel freight		■	■		■	■	
6. Cross London freight flows	■	■	■				
7. South West & Wales to the Midlands	■	■	■				■
8. Northern Ports & Transpennine	■	■	■	■	■	■	■
9. Midland Main Line	■		■	■	■	■	
10. Great Western Main Line	■		■				■
11. Anglo-Scottish & Northern regional traffic	■	■	■		■	■	■

To address these constraints the FNS put forward an array of suggested infrastructure enhancement options, from grade separation at key junctions to additional regulation loops or additional running lines.

Achievement of such an expanded Strategic Freight Network requires a long-term approach and FNPO will work to lead the sector in translating the FNS intervention options into a prioritised programme of works that will progressively realise the core components of the envisaged Strategic Freight Network over the 15 year horizon referenced earlier.

Based on this gap analysis, the table in Appendix C illustrates a proposed sequential ordering of the development and delivery of interventions across all 11 key corridors over a 15 year horizon to deliver the core features of a Strategic Freight Network. It should be noted that Appendix C is a list of investment options and none of the schemes are committed.

The investment options identified in Appendix C also clearly illustrate that realisation of such a programme requires a commensurate long-range funding envelope, cumulatively in the order of £2bn.

Recognising that the CP4 & 5 model of ring-fenced central government funding for SFN enhancements may not apply in future control periods and that the case for any such central government funding is strengthened not only by compelling BCR's but also the attraction of other contributory funding sources, FNPO will seek to leverage contributory funding opportunities from a range of parties and sources such as:

- Regional development bodies or Local Enterprise Partnerships – where such enhancements align with regional economic development agendas
- Principal beneficiaries – where such enhancements deliver demonstrable business benefits to rail using businesses (e.g. ports, quarries, manufacturers)
- Ring-fencing (or otherwise recognising) the value generated by the Network Rail freight estate, if appropriate. The freight estate has the potential to become a "prime mover" supporting future freight network enhancements – offering a direct, incentivised, linkage between further development in the scale of freight estate activity and the resultant incomes then supporting freight network enhancements

5.12 Terminals

Critical to facilitating rail freight growth are the terminals that provide the origins and destinations of freight traffic; ranging from a simple single customer facility with hard standing adjacent to one siding to multi-acre facilities encompassing sophisticated rail linked warehousing.

Network capacity and capability enhancements are ineffective if there is insufficient terminal capacity to accommodate the traffic they enable, such capacity being a function of both the number of terminals and their respective individual capability.

Set out below are the terminal-related demands of the two sectors offering the most immediate growth prospects:

– **Intermodal:**

Additional inland terminal facilities are required and this need is primarily addressed by Strategic Rail Freight Interchange (SRFI) developments.

SRFI's are typically 60Ha plus in size. As the Network Rail freight estate lacks locations of this scale in the UK's distribution heartland, such facilities are typically privately developed on third party land.
They feature extensive on-site commercial warehousing. This is necessary to attract retail customers given their business models and to generate returns sufficient to justify the rail infrastructure investment costs.

In these cases, FNPO's role varies from advocacy for planning consent through facilitation of physical connections to the provision of suitable capacity to run trains.

– **Bulk / Construction:**

These sectors are dependent on developing an appropriate network of railhead facilities (such as aggregates distribution points, asphalt plants, concrete facilities, batching plants etc.) in and around Britain's principal population centres where commercial construction activity is focused.

The location and scale of sites in Network Rail's freight estate often coincides with the needs of these sectors. Increasing the availability of additional such rail-connected sites within Network Rail's freight estate will be key for FNPO.

In these cases FNPOs role includes helping to identify suitable Network Rail sites for use, putting in place suitable commercial lease and connection agreements and ensuring there is suitable capacity available to run trains.

FNPO also has a key role in helping develop innovative solutions to provide cost-effective loading and unloading solutions in cases where a permanent solution is either not feasible or unaffordable. These may include lineside loading under licence (either from a network siding or a running line), which avoids the cost of new connections and sidings. It is ideally suited to lower frequency traffics (i.e. weekly or less) or for campaign / sporadic traffic flows.

Its application is inevitably subject to consideration of timetabling and infrastructure limitations but the FNPO team will draw on recent successes to develop a Loading on the Line (LoTL) template and promote wider application of this technique.

5.13 The Network Rail freight estate

The Network Rail freight estate currently generates some £20m p.a. rental income and can be divided into four categories:

- Sites in active rail freight use by rail using tenants
- Sites under long lease to FOC's (yards, TMDs etc.)
- Strategic freight sites and Supplemental Strategic freight sites (SFS and SSFS) as defined under the 1994 Agreement held pending freight traffic development and potentially under short term lease to non-rail users
- Other land let or vacant currently within the freight estate portfolio

At privatisation, much of the active freight estate was vested with the FOCs by way of long, peppercorn head leases; the FOCs in turn sublet sites to rail freight end users on commercial terms. Under the freight estate acquisition programme in 2014 (also known as "*Project Mountfield"*), Network Rail took a controlling position in the freight estate - through a self-funding commercial arrangement whereby the FOCs surrendered their head leases. One effect of this was to separate the landlord and haulier relationship for end user tenants.

The effective utilisation of the freight estate plays a significant role in facilitating traffic development in the key growth sectors and CP5 has seen the Network Rail freight and property teams working closely to develop and pilot new models of freight estate development.

These models are founded on gaining an understanding of the rail freight user's needs and then seeking to identify, promote and exploit latent capacity in the freight estate to host additional rail freight activity – where possible harnessing resultant lease value to support initial site development, for instance:

- Intensification of tenure on existing active tenanted sites
- Development of new marketable freight sites, development costs funded through part disposal for non-freight or non-rail development
- Identification of new sites capable of multiple tenure; multiple tenants sharing site rail development costs under a rental concession

With rail-using tenants investing in such sites to create facilities that serve their business needs the NR freight estate is the focus of significant private sector investment – circa £1.5m since 2014 alone, with a pipeline of a further £2m by the end of CP5 and potentially in the order of £10m through the course of CP6. Such transformative private investment see's the NR freight estate become an integral part both of the rail freight service offer and our tenant's production infrastructure.

5.14 Strategic Freight Sites

During CP5, Network Rail FNPO, Network Rail Property and the FOCs have worked together to reinvigorate the composition of the strategic freight site portfolio held by Network Rail.

This exercise objectively:

- Identified those sites lacking demonstrable future freight utility (for subsequent release for other non-freight or non-rail development, with a number being released for residential development in support of national governmental housing supply policy)
- Added previously unrecognised sites with demonstrable freight potential to the list and so protecting them for future rail freight use

Network Rail now holds a market-relevant portfolio of sites with genuine potential freight utility that can now be actively promoted for freight-tenure and traffic development. The process of site list review remains ongoing in the light of emerging market trends and needs.

Going forward, the FNPO and Network Rail property team will begin to consider the portfolio strategically on a regional basis, focused on the nations principle population centres. This approach will seek to ensure that NR has the freight estate availability to accommodate emerging rail freight demands – from bulk construction sites today to urban logistics hubs tomorrow.

5.15 Freight Estate Disposals

The 2015 review undertaken by Sir Peter Hendy into the planning of Network Rail's CP5 enhancement programme identified the scope of raising some £1.8bn of capital receipts to support the railway upgrade plan. This potentially includes the sale of freight property. Network Rail is still exploring whether there are means acceptable to Network Rail, the freight sector and government to release value from the freight estate.

Currently, work is underway by Network Rail's property team and FNPO to secure sector buy-in for, and conclude, the freehold disposal of a discrete portfolio of freight sites. This action will see value from the freight estate supporting the delivery of Network Rail's CP5 enhancement programme.

The programme (Project Falcon) will be subject to detailed input from sector stakeholders to ensure that the sale portfolio and deal structure does not have a detrimental impact on existing freight traffic activity and future development.

Most importantly any such disposal approach must not serve to adversely impact confidence amongst those very end users currently investing in and developing traffic from the NR freight estate.

5.16 Planning protection for freight site usage

Against a nationwide trend of increasing re-urbanisation there are increasing instances of residential development on land adjacent or very near to established or potential urban freight sites. Unchallenged, such adjacent development can subsequently see the imposition of environmental restrictions (noise, hours of activity) that can fundamentally undermine the utility of the sites.

Paradoxically, the normal times of planning restrictions of operating hours are frequently at odds with the operational realities of rail freight pathing on the adjacent network.

As a statutory consultee for town planning purposes, Network Rail therefore has a critical leadership role to play in making positive representations about rail freight to planning authorities to protect the long term operational viability of key rail freight sites.

FNPO will continue to work with Network Rail's property and town planning teams to better coordinate the company's response in such instances and will also provide factual input to key sector bodies (e.g. the Rail Freight Group and the Minerals Planning Association) articulating the socio-economic and environmental benefits of rail freight to inform their input in such cases.

5.17 The CP5 SFN programme

For CP5 Government built on the success of the CP4 SFN programme by making a further £235m of ring-fenced funding available for freight specific network enhancements overseen by the SFN steering group.

The table below notes the key schemes being delivered through the SFN programme in CP5 (*Felixstowe capacity starts in CP5, delivered in CP6):

Key schemes to be delivered for the Strategic Freight Network in CP5

Scheme	Expected cost	Target Completion	Outputs	BCR
Felixstowe branch capacity*	£52m,	Late 2019	Additional 10+ trains per day	>4
Southampton to West Midlands train lengthening	£48m	March 2019	Works to enable operation of 775m trains	2.73
Great Western Main Line gauge	£13.2m,	March 2019	Gauge clearance gauge (inc. Chipping Sodbury, Alderton and Severn Tunnels)	2.7
ECML Gauge clearance works	£4.5m,	July 2017	W12 gauge	6.2-7.2
Doncaster – Water Orton	£5.4m	March 2019	W12 gauge	7.7
Buxton to Peak forest train lengthening	£17m,	March 2019	Works to enable 2600t trains	4.0
Yorkshire Terminals W12 gauge	£10m,	Dec 2018	W12 gauge to Selby, Wakefield, Leeds	>4
Oxford 3 minute headways	£5.1m,	March 2018	Capacity enhancement	4.1
Northern Ports & Trans Pennine Capacity	£8m,	TBC	Port of Liverpool capacity enhancement works package	>4
Thames Gateway Level Crossings	£0.5m	March 2019	Train length increase, quantum study	>3

5.18 Other CP5 enhancement schemes with freight benefit

Recognising that on a mixed traffic railway the value of certain network enhancements accrues to both passenger and freight traffic operations; the table below illustrates the notable non-SFN funded schemes due for delivery during CP5 (or by end 2019) that will yield demonstrable freight benefits.

Scheme	Outputs
Stafford Area Improvement Scheme	Additional freight path per hour
Reading Station Area Redevelopment	Increased freight capacity
Crossrail W12 Gauge Clearance (Reading / Acton)	W12 Gauge
Gospel Oak to Barking Electrification	Electrification
North of England Programme (LNW)	Freight Capacity
Oxford Corridor Capacity Improvements	Train Lengthening
East Coast Connectivity Fund	Freight Loops (Northallerton - Newcastle)

5.19 CP6 candidate freight schemes

Through work undertaken with the sector in the derivation of the PR18 process and latterly within the SFN Steering Group forum; a broad consensus has emerged identifying that of the 11 freight corridors referenced in the FNS, 5 in particular warrant the most urgent intervention so as to address currently frustrated potential traffic growth.

The table below highlights some key interventions that are investment options, for each of these 5 high priority corridors. None of the schemes below have funds committed, as this document was submitted:

Key Freight Corridor	CP6 Candidate Freight Schemes	Estimated cost range
Felixstowe to West Midlands & the North	– Doubling of Haugley Jn – Signalling Headways Bury – Ely area (level crossings / bridge speeds) – Ely to Soham doubling – Peterborough - Syston signalling/level crossings – Syston – Sheet Stores gauge (W10/W12) – Further refine layout at Ipswich Yard	£10m – £15m £50m – £70m £100m – £250m £120m – £150m £50m - £60m £5m - £10m £1m - £5m
Southampton to West Midlands & WCML	– Kenilworth doubling	£100m - £170m
Channel Tunnel classic route	– Gauge enhancement (up to W12)	£50m - £80m
Cross-London, and Essex Thameside	– Ripple Lane Nodal Yard – Thameside Level Crossings (capacity)	£10m - £15m £30m – £40m
Northern Ports & Trans Pennine	– Trans Pennine gauge enhancement (up to W12) – New loop between Up Decoy and South Yorkshire Joint Line – Trans Pennine freight capacity	£100 - £200m £5m-£10m tbc
	Total	*c.£0.6bn - £1bn*

5.20 CP6 Other Schemes that could benefit freight

Examples of longer term (CP6 and beyond) schemes that have the potential to positively impact freight capacity and capability include:

– Grade separation of Werrington Junction, near Peterborough
– East-West Rail scheme linking Oxford with the West Coast and Midland Main lines
– HS2

With all such programmes, FNPO will work with the geographical routes and SO to be alert to the potential to realise freight capacity and capability benefits.

5.21 Capability and capacity

The baseline for freight network capability for CP6 will be:

– That which applies, or should apply according to the Sectional Appendices in terms of gauge (including Locomotive gauge), axle weight, route availability, train length, train speed and capability
– That which is currently provided through published heavy axle weight or gauging dispensation documents (i.e. RT3973HAW and RT3973CON forms)
– In respect of Scotland, Transport Scotland's HLOS requirement to achieve and maintain the Scottish Gauge Requirement

The FNPO approach to capacity and capability planning and funding is, wherever possible, for FNPO to work with the System Operator, Routes, customers and freight-end users to provide additional incremental capacity as efficiently as possible, obviating the need for significant capital expenditure, by:

– Developing and using Strategic Capacity & Strategic Freight Capacity
– Flexing existing train paths and reviewing train plans
– Supporting Service Plan Reviews to enable normalisation of longer and heavier services

The enhancement of the capability of existing rail freight services not only enables a more efficient and competitive rail freight sector (more payload for a given traction & traincrew resource), it can also reduce the need for investment in network capacity by making more efficient use of existing paths.

The Capacity Management Review Group (CMRG), is formed of FOC representatives, including timetable practitioners, who understand the detail of access contracts and rights, as well as Network Rail individuals who produce strategic paths, which go into the Strategic Capacity Statement.

Considering passenger and freight requirements jointly remains the preferred approach to larger scale capacity development and FNPO will work with the System Operator to identify and develop such proposals to ensure realisation of the full potential benefits.

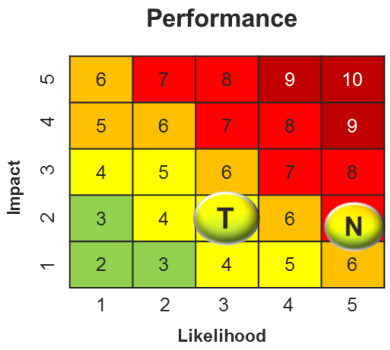
Where optimised use of the current network cannot support further traffic development the case for enhancement will be made, freight related enhancement on the network comprises four main categories:

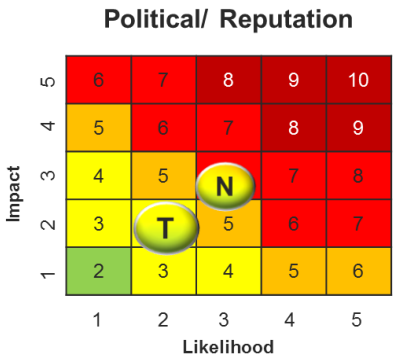
– Schemes planned, authorised and funded by the Strategic Freight Network ring-fenced fund and historically only progressed when endorsed by the SFN Steering Group
– Specific freight-only freight-focussed schemes planned, authorised and funded by routes or other programmes within Network Rail
– Freight schemes planned, authorised and funded either in whole or in part by other parties, including the Scottish Government and third parties such as ports
– Network enhancements which contain either direct or indirect freight benefits – e.g. re-signalling or electrification programmes

FNPO will be relentlessly focused on driving the best use of any enhancement funding; informing the scope of enhancements, driving out cost by design and maintaining oversight of efficient delivery.

Our activity plan to deliver our plan is summarised in the table below:

Summary of CP6 objectives		Strategic Capacity and Capability are two key areas for FNPO customers. The objectives and metrics associated with these areas are being developed for April 2018 and will be included in the annual review of the RSP		
No.	**Key Constraints, Risks and Opportunities**	**What we plan to do**	**Owner**	**Timescale**
1	O: Strategic Capacity receiving a timetable offer in the same way an operator does	From the December 2017 Working Timetable, a bid and an offer will be undertaken for Strategic Capacity. This process will continue for the remainder of CP6 and into CP6	Head of Strategic Capability	On-going through the next 7 years
2	R: Strategic Capacity paths for freight use are not protected 100%	Continue discussions with DfT and the wider rail freight industry to ensure a mechanism is in place to protect Strategic Capacity for freight use in a robust manner	Head of Strategic Capability	April 2019
3	O: Newly developed Strategic Freight Capacity paths for operator use	New paths to be developed on the key routes highlighted in the Strategy for Strategic Freight Capacity document based on the gap between existing freight paths and future requirement.	Head of Strategic Capability	On-going through the next 7 years
4	R: Lack of funding for freight capacity & capability improvement in CP6	Work with DfT and rail freight industry to articulate the issues and challenges if no funding is available to unlock capacity and capability in the next control period	Head of Strategic Capability	October 2018
5	O: End to end review of gauging process within the rail industry	FNPO will participate in an end to end process review of how we undertake and manage gauge and capability on the UK Rail Network. It is a complex process, with a number of parties involved both internal to Network Rail and external through TOC and FOC customers.	Head of Strategic Capability	Initial review by April 2018 and delivery by April 2019
6	O: Review and update of freight related publications and loads data	Undertake a review and update of RT3973 forms, Freight Loads Book, Specially Authorised Loads and Heavy Axle Weight permissions. These are key publications for freight customers and we will work with colleagues in the routes for asset information	Head of Strategic Capability	April 2019
7	O: Develop and deliver an interactive digital map showing rail network capability	Aligned to the review and update of gauge & capability and the freight related publications, development of a digital map that enables the user to click on a line of route and see what details on RA, axle weight information, capability of the network and permitted wagon/container combinations	Head of Strategic Capability	April 2020





Summary of risk outcome:
There is a risk that current capacity and capability constraints of the Network, is impacting train service performance and future business development opportunities, due to limitations in existing processes and funding availability. As part of FNPO transformation we have strengthened our team, by creating a new Strategic Capability team who will work closely with all stakeholders , SO and Route to identify process improvements that will mitigate the risk to allow us to achieve target risk profile

5.22 Freight access charges and policy

In 2013/4, ORR proposals as part of PR13 to significantly increase certain freight track access variable charges were mitigated when a “cap” was applied to bridge the difference between the assessed level of costs directly incurred (the minimum permissible under UK and EU law) and an affordable level of charges that would keep freight on rail rather than risk modal shift to road. As part of PR18, a similar debate is again underway.

In almost all markets, rail freight competes with road and other modes – the freight market in the UK is exceptionally competitive. Freight access charges cannot be viewed in isolation but must be seen in the context of their modal equivalents.

Throughout CP5, government policy has seen road fuel duty frozen, whilst freight track access charges have continued to increase in line with RPI.

Network Rail’s increasing Operations, Maintenance & Renewals (OM&R) cost base throughout CP5 now means that projected CP6 freight costs, if directly translated to freight access charges, would result in variable charges at a level that would be unaffordable and would risk modal shift from rail to road in most commodities.

5.22.1 Freight sustainable charging proposal

FNPO is proposing that, together with the FOCs and the wider freight community, we work with the ORR to:

– Assess and articulate the risk to rail freight volumes
– Articulate the economic and wider benefits of rail freight, and what the impact of any loss of rail freight volume would be
– Bring together a proposal to help the ORR to agree to a CP6 track access charge regime for rail freight that is affordable, if necessary by retaining caps on some variable access charges

It is recognised that the benefits of rail freight to the economy and the environment, are crucial and the proposal set out below, provides the justification for retaining sustainable charges.

The components of a proposal for sustainable charges that articulates the benefits of rail freight could include the following:

– **Commitment to the removal of unused paths that are not needed**

To date, circa 5000 freight paths have been removed from the timetable, and the regular review of any unused paths has become “business as usual”. FOCs have committed to continue this collaborative work throughout CP6 through regular reviews.

– **Freight Network Optimisation Plan**

A review is underway of freight only lines and infrastructure, to ascertain any parts of the network with no current or foreseeable use, that could be removed from the network in order to reduce OM&R costs. A proportion of associated cost savings could then be reinvested in order to improve the performance and capability of priority locations and routes on the remaining freight network, as agreed with the FOCs. The process and detail associated with reinvesting any costs saved, had not been agreed when this document was submitted in early 2018.

– **Removal of FOCs’ ‘Right to Roam’, resulting in lower OM&R costs of lines that become passenger only.**

FNPO and FOCs are reviewing sections or lines of route that have no current or foreseeable freight use. These would then be assessed to quantify potential OM&R savings. If it is agreed to proceed, these would then be removed from FOCs ‘right to roam’ within the Track Access Contract.

– **Bilateral Performance Strategies with each FOC**

FNPO has commenced establishment of joint performance strategies with each FOC. These have previously only existed with TOCs. FOCs would sign up to a strategy that includes FOC on TOC reduction targets, wagon and locomotive reliability improvement strategies and incident response strategies, as well as improvements in FDM.

– **Review of Schedule 8 incident caps**

FNPO and FOCs are examining ways both parties can be incentivised to reduce DPI (Delay Per Incident) for all incidents. Changes to the Schedule 8 regime around incident caps might improve this, although we recognise that Schedule 8 is not the only incentive on FOCs regarding performance, with customer impact generally a more significant consideration.

– **Further work**

FNPO will continue to work with the FOCs to further develop and expand the elements above and articulate into a formal draft proposition. This is an important piece of work, as without it, there is a risk that the DfT and ORR wouldn't have the justification to agree to sustainable charges, despite being supportive of doing so in principle.

5.22.2 Schedule 4

FNPO route has taken full ownership of the management of Schedule 4 claims from the previous position where this was managed by a central processing team. This allows for more rigorous management of the claims process, and links that process more closely to the requirements of Schedule 4 of the Track Access Contract.

FNPO will continue to work with FOCs and ORR to ensure that Schedule 4 is clear transparent and predictable, in order that FOCs are appropriately compensated for any costs associated with engineering access. The new Capability and Planning Manager in FNPO will work closely with Capacity Planning and the geographic routes to ensure that engineering access that impacts FOCs, is managed in the most efficient way.

5.22.3 Schedule 8

FNPO is leading discussions with the FOCs over the recalibration of Schedule 8 for CP6.

Our principle is that all parties are incentivised to improve performance so that overall delay to all train services reduces. This is being achieved through the setting of benchmarks that promote continuous improvement and the setting of incident caps and access charge supplements that encourage all parties to minimise all the delay that they cause.

FNPO will take responsibility for the impact of FOC-caused delay, and the geographic routes will take responsibility for the impact of Network Rail-caused delay. This will ensure that responsibility for management and driving change, sits with those who are more able to influence improvement.

These initiatives will help drive a reduction in overall delay and Delay Per Incident (DPI). We continue to work with our customers and geographical routes to agree our DPI target by December 2018.

5.23 Access planning

The planning and timing of engineering possessions on the rail network is critical for national passenger and freight operators and their customers, and one of their main areas of concern about the impact of route devolution. Ensuring assumptions, plans and delivery are coordinated across the national network, and fully take account of all operators business needs, is critical.

Freight is particularly sensitive to engineering access on midweek nights, as some 65% of services operate overnight. This is partly a requirement of market demand and partly a response to the need to avoid passenger services on busy routes during the day.

Co-ordination across routes to allow effective corridor operation, the availability of diversionary routes with the necessary capacity and capability and the forward planning of major possessions are key as both passenger and freight trains can be more readily diverted if access and diversions are appropriately planned.

There have been good examples of collaborative working which we intend to build on:

– Over time the provision and availability of diversionary routes (e.g Southampton to Didcot) has improved; and
– Aligning engineering access with customer needs – e.g. on the Oxford corridor when work was scheduled for the same time as the BMW Mini plant's annual shutdown

Network Rail devolved its Access Planning function from the centre to geographic routes during Spring 2017. The System Operator (SO) function will continue to support the Access Planning process and both FNPO and the System Operator will support route consideration of whole industry needs and value in engineering access planning and decisions. A national framework is being developed for the planning and prioritisation of engineering work and this will provide clear accountabilities between the System Operator, FNPO and the geographic routes.

Transparency of the approach to, and how, engineering access plans and decisions have been made will be critical to developing greater customer and stakeholder confidence in the process.

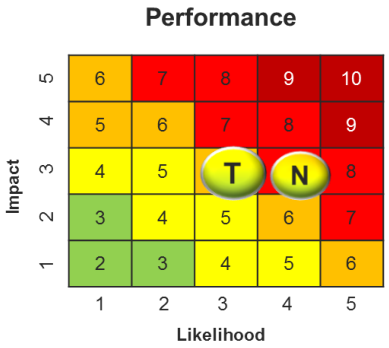
FNPO appointed a Capability & Planning Manager during June 2017, part of whose role is to work closely with FNPO customers and with the geographic route Access Planning Managers, to ensure that the requirements of national operators are fully taken into account.

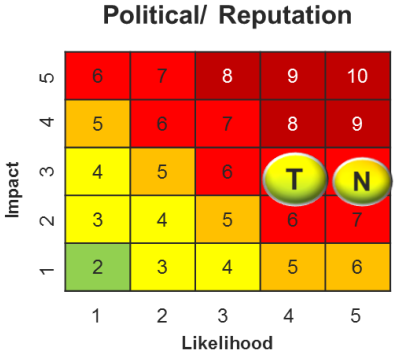
A key element of the rail freight "framework for growth" will be how increasing traffic volumes are handled when engineering access is needed. The provision of suitable gauge cleared diversionary capacity is a central element of the Strategic Freight Network concept and critical to offering customers in sensitive markets such as retail the 24/7 product they require.

FOCs support Network Rail with the provision to Supply Chain Operations of engineering trains for the maintenance and renewal of the network. These need to be fully planned to ensure efficient deployment of often scarce plant resource, as well as operational robustness and effective FOC resourcing in respect of locomotives, crews and wagons.

Our activity plan to deliver our plan is summarised in the table below:

Summary of objectives	Access Planning became an area FNPO become more involved in from April 2017, so the metrics and CP6 objectives are not as developed as others parts of the Route Plan. This will be addressed as part of the 18/19 scorecard process as we understand the issues and the options in more detail			
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Timescale (start/ finish)**
1	O: More robust end to end process for national operators & planning access	Undertake a review working with both internal access planning teams and national operators to identify how the processes and arrangements with planning access can be improved for cross route operations	Head of Strategic Capability	December 2018
2	R: Geographic Routes developing Access Plans/Strategies in isolation	Through the work of the FNPO Capability & Planning Manager, develop relationships with all routes to ensure an understanding and alignment with FNPO customers is known and taken account of.	Head of Strategic Capability	April 2018
3	O: Reduction in Disputes between geographic routes and FNPO customers	Categorise freight and national passenger operator services on key lines of route to give visibility to Access Planning teams to help improve the dialogue, access proposals and reduce disputes	Head of Strategic Capability	April 2019
4	R: Access Optimisation	As Network Rail explores ways of being more efficient, access optimisation is likely to be required. This could offer opportunities for wider industry cost reduction, but is also a challenge for national operators	Head of Strategic Capability	April 2020
5	R: Capacity studies not being completed	Work with train planning and access planning to identify where operators will require more detailed evidence of available capacity on diversionary routes and allocating this work to an appropriate Network Rail team at an earlier stage in the Engineering Access Statement process	Head of Strategic Capability	December 2018
6	R: Late changes to major projects	Previous major projects have made late changes to previously agreed access plans. The Capability & Planning Manager will work with project teams to improve their understanding of the problems this can cause for FNPO customers. Developing processes that enable better tracking of late change access proposals	Head of Strategic Capability	December 2018
7	O: Access Frameworks	There is an opportunity to revisit the access frameworks developed by Industry Access Planning (IAP) and by working with FNPO operators to update and improve these documents and where they can add value to the access planning process.	Head of Strategic Capability	December 2018





Summary of risk outcome:
With deeper devolution of geographic routes, there is risk that access planning overlooks the need of national operators due to lack of planning alignment across multiple routes. The newly created Strategic Capability team will work with route access planning teams in conjunction with customers, to improve the communication between parties and allowing joint early planning of the options and solutions. This will mitigate the risk to allow us to achieve target risk profile.

5.24 Asset Management and Sustainability

Historically, FNPO and, before it, Network Rail's National Freight Team, involvement in asset management has been limited and linked mainly to:

– Some aspects of consideration of Freight-Only infrastructure in the context of regulatory Periodic Reviews, freight costs and freight access charges
– Specific individual issues, often linked to either failures, incidents or an impact on performance

Network Rail's transformation programme and devolution offers the opportunity, and the need, for FNPO to engage more pro-actively to help drive accurate asset specifications for freight aimed at helping reduce cost and improving performance and efficiency in the geographic routes.

For CP6 a key issue linked to maintenance is ensuring the current operational capability of the network for freight and national passenger operators is retained and where possible enhanced.

5.24.1 Freight-only-lines

There are 116 Freight Only Lines (FOLs) across all commodities, which have a total length of 571 km. The annual cost of maintenance for all FOLs is approximately £16m (CP5 post-efficient).

In CP5 we can only charge a mark-up for FOL for usage by ESI coal, iron ore and spent nuclear fuel traffic (assessed by ORR to be able to bear a mark-up on the variable charge). In CP5 these mark-up charges totalled £4.39m p.a. at the beginning of CP5 but fell to £1.6m in 2015/16 and £0.8m in 2016/17 due to the decline in ESI coal volumes.

In the immediate term, a review of all FOLs and sites previously used for coal traffic will be undertaken during 2017/18 intended to highlight locations, where OM&R can be reduced and a more efficient use of assets identified.

5.24.2 CP6 Proposals

FNPO's working assumption for the purposes of this plan is that the ORR is unlikely to conclude during PR18, that any freight sectors other than ESI coal, spent nuclear fuel and iron ore can bear a mark-up over the variable access charge. This means that there will be very little direct linkage between CP6 access charges and Network Rail freight costs other than the assessment of "cost directly occurred by trains" that underpin variable access charges.

A significant proportion of Network Rail's assessed freight costs will then be funded via Network Grant (or any subsequent mechanism introduced). This flow of funds will form an important part of the basis for the relationship between FNPO and the geographic routes.

FNPO proposes that:

Taking the flow of funds as the starting point for the redefinition of the relationship, FNPO works with the routes to set out clearly and transparently the specification that has resulted in this allocation of cost to freight, including:

- Modelling of volumes by route
- Vehicle Track Interaction Strategy Model (VTISM) inputs and outputs
- Inputs and outputs from other work streams, including the work carried out for Planning & Regulation by Brockley Consulting

In parallel, for each route there is a clear and agreed capability baseline as of April 2019 that covers that is published in the Sectional Appendices and associated documents, but specifically also covers:

- Gauge, including Locomotive Gauge
- Running loop lengths and entry/exit speeds
- RT3973 and HAW restrictions
- An inventory of freight yards and siding capacity and capability
- Connections to third party infrastructure and clear mutual understanding of who maintains / renews and who pays the associated cost

Asset management is a standing agenda item on the "Level 1" FNPO/SO/Route proposed meeting held quarterly to address:

- Current issues
- Progress with initiatives
- Review emerging freight-specific and freight-allocated costs and outputs
- Assist business and budget planning

FNPO wants to develop the relationship with the routes to:

- Improve the knowledge base/specification for FNPO traffics to assist the efficient management of OM&R
- Ensure appropriate and cost-effective standards are being applied, especially to freight-only yards and sidings
- Help drive OM& R cost reductions within the routes
- Improve higher level freight infrastructure cost allocation to facilitate "whole-industry" discussions with stakeholders

5.25 Sustainable Development

Network Rail needs to meet industry good business practice in managing sustainability and work to improve its environmental and social impacts.

In July 2017, the Scottish High Level Output Specification (HLOS 6.28 page 9) stated that it required Network Rail to work with the industry to develop and deliver a metric for continuous carbon emissions reductions which is normalised to cover passenger and freight volumes and set against the baseline at the 31 March 2019. It went on to confirm, that a metric needs to be produced for measurement in CP6 which drives behaviours to reduce overall traction and non-traction energy use by the end of CP6.The aim is to monitor and reduce the overall environmental impact of rail. In addition, Transport Scotland requires Network Rail to work with the rail industry to develop KPIs for monitoring the impact and mitigation of climate change upon network disruption.

Our activity plan to deliver our plan is summarised in the table below:
During CP6, FNPO will work very closely both internally and with customers and stakeholders to develop strategies and plans to manage sustainable development. This will cover key areas such as air quality, weather resilience and promoting and helping to develop initiatives on the wider socio-economic and environmental benefits of rail.

No.	Key constraints, risks and opportunities	What we plan to do	Timescales
1	O: Waste minimisation	Undertake an annual review on how FNPO can reduce waste across the team	Annually through to 2024
2	O: Energy and carbon efficiency	Work closely with our customers to understand how they are developing initiatives to become more efficient with energy and carbon. Add agenda item as part of Level 1 meeting	Annual overview
3	O: Increase socio-economic benefits	Develop key messages on the socio economic benefits of rail working closely with customers and stakeholders	April 2019
4	R: Air Quality	This is a key issue for Governments in England & Wales and Scotland, for air quality limits and emissions reductions. FNPO will work with customers and stakeholders to understand how the sector is tackling this and build on its already low contributor to emissions	April 2020
5	R: Weather resilience	Work with geographic routes, customers and stakeholders to understand more on the impact of weather on the network and FNPO customer operations in particular.	December 2018
6	R: Managing environmental and community risk	Review and work with the Network Rail central team to develop the strategy	April 2019

5.26 Safety

The safe operation of trains, both on and off the network, is fundamental to the continued success of Network Rail and all our customers. Although our network is becoming busier, we are committed to continuous improvement in safety delivery and performance.

This CP6 strategy includes commitments to reduce customer lost time incidents (LTI's) on the network and freight derailments in yards and sidings infrastructure. We have proposed a CP6 programme for safer yard infrastructure and walking routes, which, if funded, will deliver a step change in conditions at many of the busiest freight sites.

Freight-only Infrastructure and freight & third party connections convey some of the heaviest trains on the network and the stewardship of these assets will be a particular focus for CP6.

Delivery of our planned CP6 objectives and action plan are, in part, subject to funding of £22m safety improvements across CP6 being agreed.

FNPO works collaboratively with all customers and the geographic Routes to:

– Build on existing levels of safety engagement and mutual understanding of safety risks
– Maintain high levels of network safety
– Identify and drive opportunities for further safety improvements

FNPO and Network Rail safety representatives attend the industry National Freight Safety Group (NFSG) – a freight-community specialist safety risk group that drives greater collaboration and understanding on safety issues aligned to risk areas identified in 'Leading Health and Safety on Britain's Railway'.

The Rail Delivery Group (RDG) Freight Group Duty Holders (consisting of FOC Managing Directors / Chief Executives and FNPO Route Managing Director) co-signed the Rail Freight Project Charter in 2017. This sets out a framework for greater co-operation between Duty Holders during the remainder of CP5 and into CP6 to identify the greatest risk areas impacting the sector and work together to agree effective risk control measures to mitigate these.

RDG Freight Group – signing of Safety Charter April 2017

Each FOC and TOC also has an established Level 1 strategic safety meeting structure with Network Rail FNPO Route and where necessary a supporting Level 2 tactical meeting structure. These meetings discuss safety performance, lessons learnt from investigations as well as areas for further co-operation to improve safe operations.

Within FNPO, safety metrics are monitored on a weekly and periodic basis through the Visualisation process. Our primary safety metrics on each of our customer scorecards are:

– Commercial Freight SPADs (16/17 total figure was 40 SPADs)
– Commercial Freight Derailments (16/17 total figure was 13 derailments)

These provide the base for future improvement. Our CP6 route objectives shows a substantial targeted improvement in derailments from 13 to 5, based on funding improvements to yards & sidings in CP6. In addition, freight SPADs are targeted to improve from 40 to 35.This is based on the individual efforts of Freight Operators and the collaborative commitment of the freight industry through National Freight Safety Group. This SPAD improvement is set against a background expectation of increased volume of trains, operating on the busiest parts of the rail network.

FNPO has worked with one FOC to develop a Customer Lost Time Injuries (LTI's) metric and Hazard Reporting protocol which has given greater and earlier visibility of hazards enabling these to be resolved before causing customer employee LTIs. This protocol will be offered to all other FOCs before the end of CP5.

FNPO are also measured on (i) the completion of Safety Hours each week and (ii) the reporting of Close Calls relating to safety conditions or observed behaviour.

With effect from August 2017 FNPO has a specialist Operations and Safety Manager. This will;

– Increase our team safety capability
– Help identify and drive specific safety improvements and initiatives within the route
– Building further collaboration opportunities with internal and external stakeholders

5.26.1 CP6 challenges and opportunities

FNPO recognises that the on-going process of devolution and the new relationship between FNPO and the geographic routes has the potential to increase (or change the nature of) risk. Safety will be a standard agenda item for the proposed quarterly "Level 1" meeting between FNPO and each geographic route.

To maintain and improve our safety performance through these changes will require;

– A determined and consistent focus
– A joint industry commitment to ongoing engagement to identify and reduce the shared risks of rail freight operation

In addition to National Freight Safety Group, and the Level 1 and 2 meeting structure with freight customers, this engagement is proposed to include a new regular forum with connected third parties to share best practice and understand the shared risks at connection points.

Both freight and passenger traffic levels on the network during CP6 are expected to increase from current levels with much of this traffic growth likely to be on the busier parts of the rail network. The main safety challenge from traffic growth is at the busier yards and terminals where maintaining safe access and methods of working, is paramount. To mitigate this, we propose a CP6 initiative to maintain and improve common methods of work for sidings and terminals and to investigate how these can be maintained digitally.

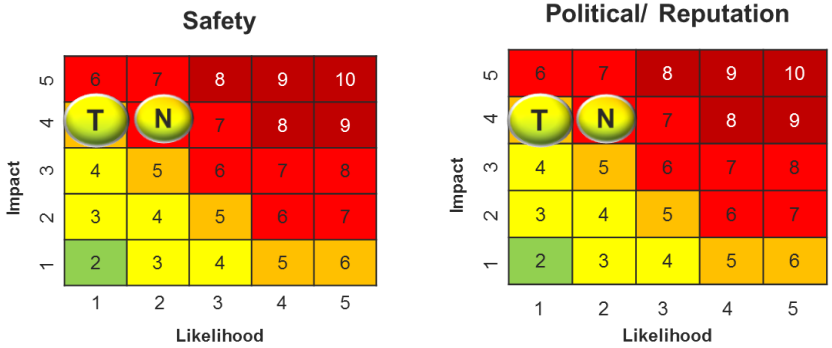
We are strengthening the FNPO team to help prepare for the challenges and opportunities associated with traffic growth:

– Intermodal - We will review and improve the current gauging and RT3973 processes
– Aggregates – We will make greater use of the latent capability of lineside equipment such as GOTCHA devices to manage the risks of traffic requiring a higher level of Route Availability by identifying offset loading and assisting operators with wagon maintenance through provision of dynamic wagon condition data
– Connections – With over 300 connected sites to the rail network, one of the key challenges remains the maintenance of yard and siding connections as well as the associated walking routes and underfoot conditions. To address this:
    - Joint Safety Tours with customers will be further developed with customers in CP6
    - A CP6 programme for safer yard infrastructure and safer walking routes is proposed, targeted at a step change in safety conditions at the busiest freight sites across the network. Subject to funding of £22m across CP6 being agreed, this programme is linked to substantial targeted improvement to Derailments and Operator LTI's on the network through CP6

Our activity plan to deliver our plan is summarised in the table below:

Summary of objectives	A programme that aims to reduce derailments, SPADs and injuries to Network Rail and customer workforce, in order to deliver a higher and sustainable improvement to our business safety maturity by 2024.			
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Timescales**
1	R: Safety risk when walking in network yard and siding infrastructure	Progress improvements to conditions in network yards and sidings to reduce Lost Time Incidents for our customers	Head of Network Management	Delivery of Programme from April 2019 onwards.
2	R: Safety and security risk from unauthorised third party access to yards and sidings	Identify highest risk sites for unauthorised access in network yards and sidings. Assess site risks and agree improvement initiatives to reduce risk.	Head of Network Management	Develop action plan with industry parties by April 2018
3	R: Derailment risk and incidents in yard and siding infrastructure	Investigate enhanced infrastructure solutions in yards and sidings that better supports fail safe operations. Create a prioritised CP6 programme for investment in yards and sidings, subject to funding	Head of Network Management	Delivery of Programme from April 2019 onwards.
4	R: Risk to Train Drivers safety when using walking routes for train crew relief	Define train drivers walking routes used. Instigate regular 'Go Look See' checks on drivers walking routes to identify hazards and reduce Lost Time Incidents for our customers	Head of Network Management	Delivery of Programme from April 2019 onwards.
5	O: FOC LTI and Hazard Reporting on NR infrastructure process	Build improved consistency with all customers for reporting FOC staff accidents, hazard identification and resolution. This follows the processes trialled with Freightliner during 2017 and being offered to all FOCs .	Head of Network Management	Share at regular L1 Safety Meetings from April 2018 and into CP6
6	O: SPAD Improvement Strategy	Work with NFSG to use available SPAD precursor research to understand and develop plan to reduce the number of SPADs. Work with FOCs to create a forum to review SPAD incidents, share learning and best practice to add depth to industry SPAD improvement plans	Head of Network Management	Annual plan to be agreed with FOCs May 2018
7	O: Train Loading and Wheel/Rail interfaces	Build understanding within the freight sector of asset management issues especially between fixed rail infrastructure and rolling stock. Focus of Cross Industry Freight Derailment Working Group – support action plan	Head of Network Management	On-going workstream for remainder of CP5 and into CP6.

8	O: Industry Joint Safety Tours	Extension of Joint Safety Tours initiative started during CP5 to target 30 key sites per annum during CP6 agreed with customers for Safety Tours	Head of Network Management	Safety Tours schedule agreed each March from March 2018 then annually
9	O: Improved Safety Critical Communications	Work with Freight Industry to review existing communications protocols and agree improvements in line with Communications Review Group	Head of Network Management	Review outputs of CRG through 2018.



Summary of risk outcome

. Throughout the remainder of CP5 and intoCP6, we will reduce the likelihood of a safety incident occurring on Network Rail managed infrastructure by implementing a number of initiatives benefiting workforce and passenger & public safety, including improvements to walk routes in yards and sidings and as well improvements to the safety and security of our sites. This will mitigate the risk to allow us to achieve target risk profile.

5.27 Train Performance

A new customer-focussed performance framework was introduced for CP5 with two primary metrics:

– Freight Delivery Metric (FDM) - measuring Network Rail's ability to provide a reliable infrastructure and train paths by measuring whether a commercial freight train has arrived at destination within fifteen minutes due to Network Rail reasons
– Arrivals to Fifteen (A2F) – measuring whether a commercial freight train has arrived at destination within fifteen minutes. This metric reflects the ability of Network Rail and freight operators to deliver a train to destination within the required timescale

These changes drove two key strategic performance initiatives:

Managing freight performance by Strategic Freight Corridors (SFCs) which allowed stakeholders of trains on specific flows to look at the holistic (usually cross-route) journey, understand problems, and put in place performance improvement initiatives. Examples include:

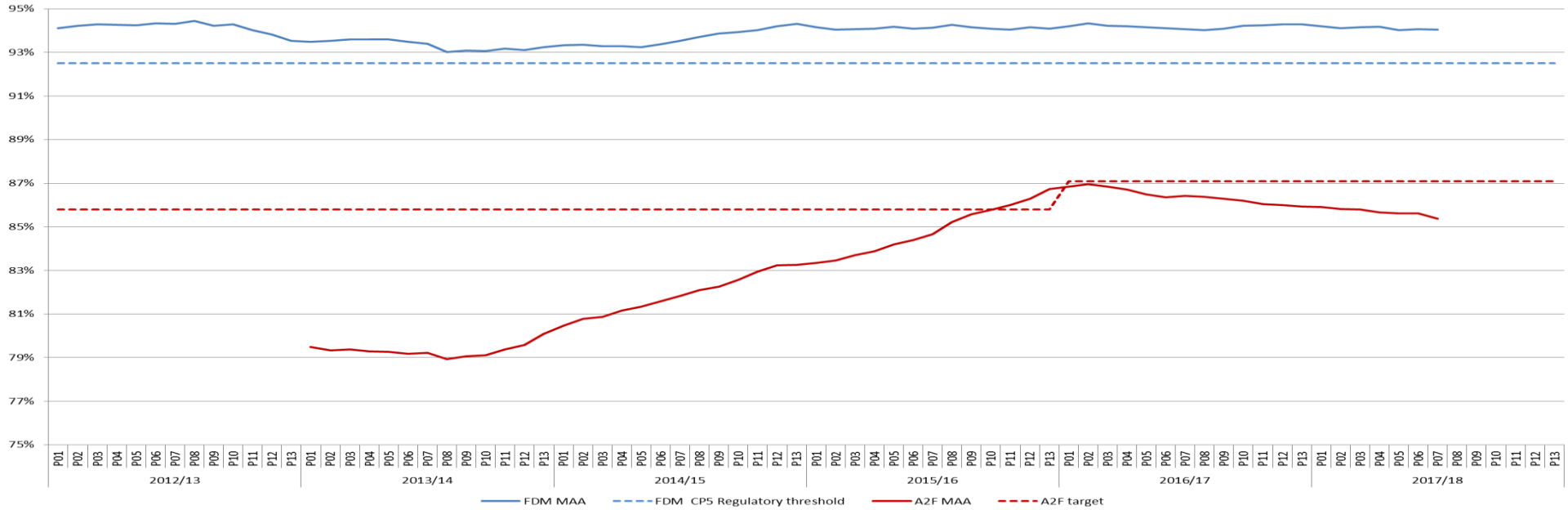
– The introduction of a control room at Felixstowe to improve overall performance on the Felixstowe to Midlands/Northwest freight corridor
– Initiatives at Acton to improve the performance from Somerset to London and the South East
– The introduction of a terminal plan at Daventry, which enabled changes to the occupancy plan
– Improvements to the right time performance of the Immingham Iron Ore flows
– Review and improvement to the train plan at Southampton to improve reliability

The introduction of Freight Service Delivery Managers (FSDMs), who are part of FNPO but are based in Network Rail's National Operations Centre.

The sector has made large improvements in performance with all the key performance metrics at, or close to, their highest-ever points across CP5 to date. These include

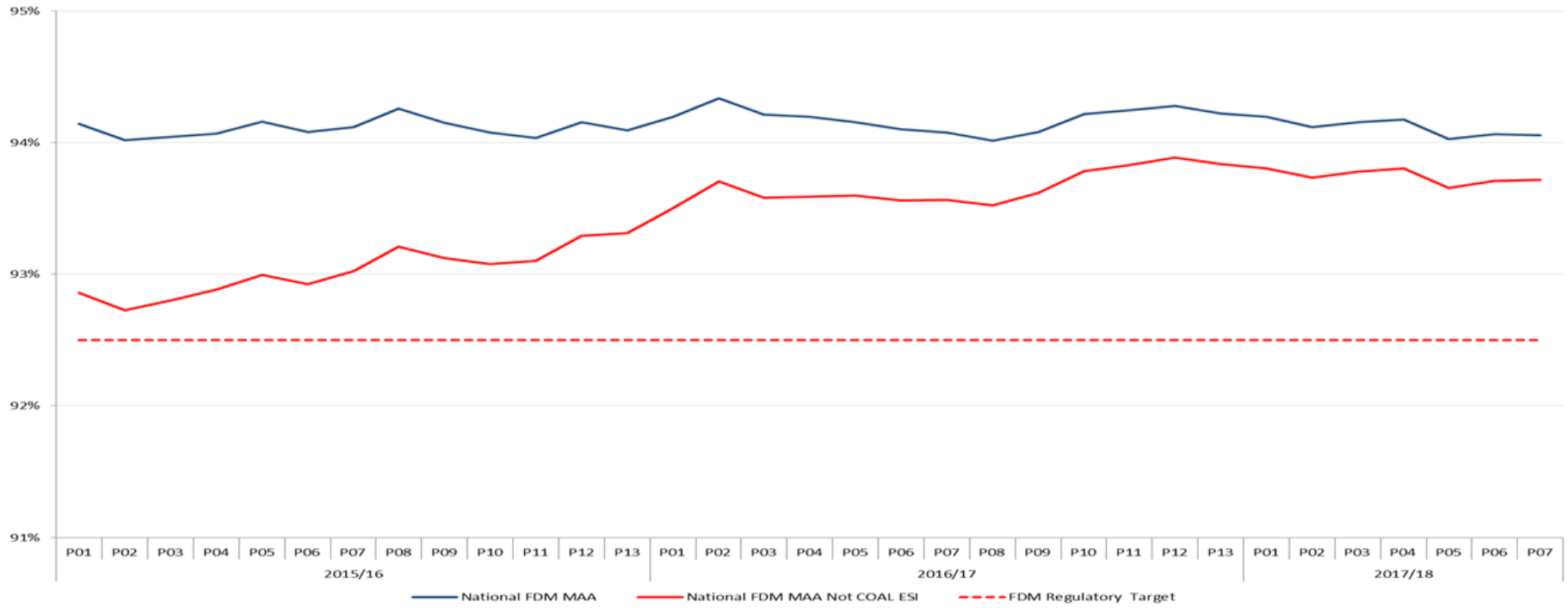
– FDM improved from 93.3% to 94.3% (at end of 2016/17)
– A2F improved from 80.4% to a high of 87% towards the middle of 2016/17
– The impact of freight delay on passenger services dropped from 1.43 delay minutes per 100km to a low point of 1.07 half way through 2016/17

This is evidenced in the graph below:-



This improvement in performance was achieved in a context of challenging sector dynamics.

– The decline in coal traffic was important as traditionally coal traffic performed well against the FDM measure, and tended to pass on less intensively utilised sections of the network. FDM for coal, which made up roughly a third of rail traffic at the start of CP5, tended to track at around 97%. Losing this traffic creates a pressure on FDM. This can be seen in the graph below. The blue line shows the FDM moving annual average over the last three years. The red line is the moving annual average excluding 'coal ESI'. The graph shows that coal had a positive impact on FDM. This is clearest in period 1 of 2015/16 – where FDM drops by 1.15% when excluding coal. Before the big drop off of coal at the end of 2015/16 the difference in FDM and FDM excluding coal ESI was still 0.79%. Put simply, to continue to deliver FDM at a consistent level Network Rail has had to improve overall performance to mitigate the loss of coal traffic.



As a result, it has become more difficult to continue to perform at the high levels achieved in the first two years of CP5. This can be seen in the performance of our key metrics in the graph above:

– FDM has plateaued between 94.3% and 94.4%
– A2F has seen more than a 1% decline since the start of 2016/17
– FOC on TOC delay, whilst still historically very low, worsened in the last year (noting that a number of large incidents remain in dispute)

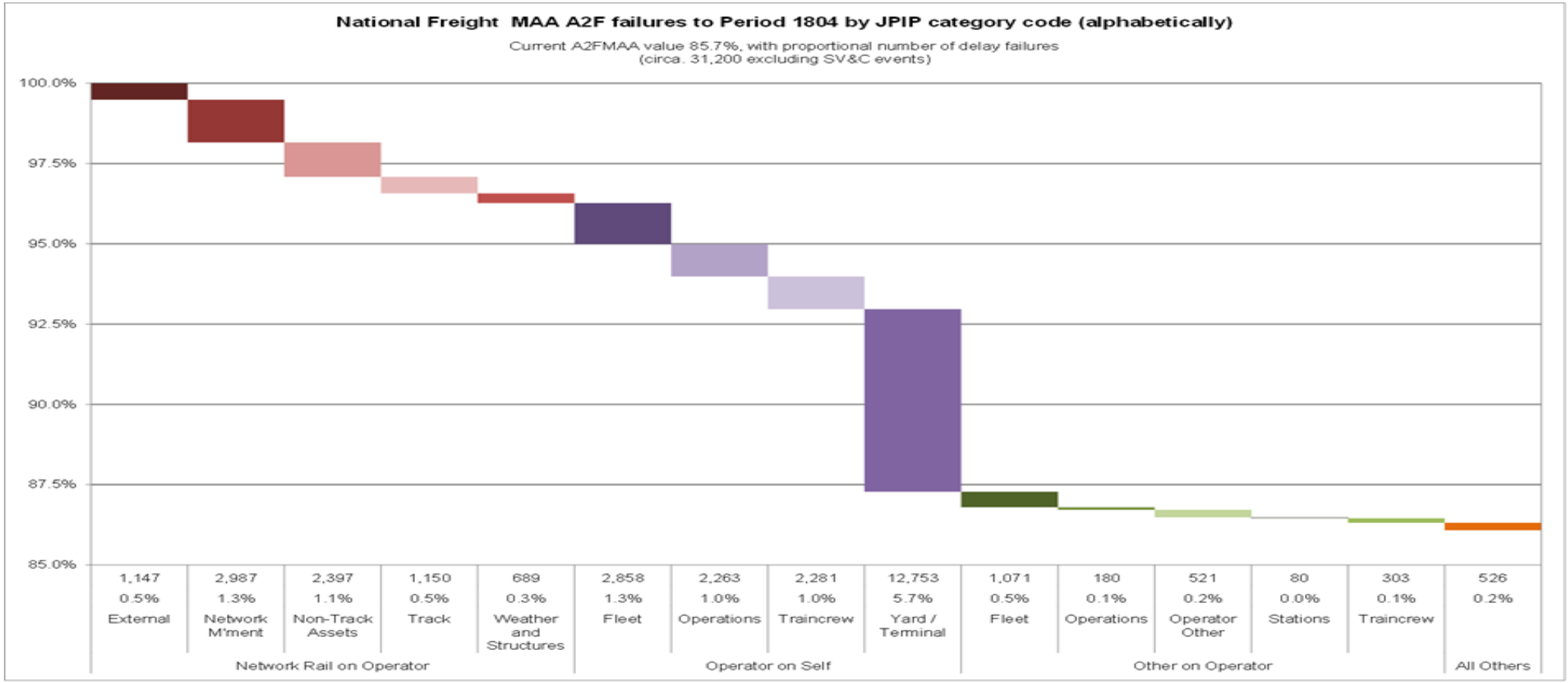
These changes in performance trends have been driven by different factors which provide the focus for performance management during the rest of CP5 and into CP6:

Individual “big” incidents have had an impact on FOC on TOC delay. In Period 2016/17 Period 11 the largest ever individual FOC on TOC incident was allocated more than 80,000 minutes of delay

As responsibility for this incident remains in dispute, 50% of the minutes are currently allocated against the FOC which is sufficient in itself to worsen the metric.

Small incidents also have an effect – 83% of Network Rail caused incidents cause less than 24 minutes of delay.

Almost a quarter of FDM failures resulted from schedule errors. A2F is heavily impacted by the ability of a train to depart on time. 98% of trains departing on time will meet the A2F target. Terminal and yard delay has caused 5.7% of all A2F failures over the last year and is a key area for continued attention. Whilst large delays are more noticeable, improvement focussed on smaller events is likely to have a greater impact on improving FDM and A2F performance. This is illustrated in the diagram below:



Key geographic locations have repeat failures that impact performance. Locations such as Felixstowe, Whatley and Peak Forest are more than five times more likely that average to see delay and incidents. Sustained performance improvement is required in these areas to improve freight performance across the whole network.

The above highlights a challenging environment that requires stretching, but realistic targets – an approach that was supported during our stakeholder engagement sessions. The most stretching of these targets is FDM. This challenge has been built into route specific FDM targets (Route Freight Delivery Metric – R-FDM).

In the table below, R-FDM gives us a strong understanding of where we need to focus geographically in order to deliver FDM to 94%.

	Anglia	LNE	LNW	Scotland	South East	Wales	Wessex	Western
Lower	91.2%	94.1%	92.3%	93.5%	88.8%	93.0%	92.0%	92.5%
Expected	92.9%	95.3%	93.9%	94.5.%	91.0%	94.4%	93.6%	94.0%
Upper	93.5%	95.7%	94.4%	95.0%	91.7%	94.8%	94.1%	94.5%

Through CP6 we will work closely with each route to understand their performance improvement schemes, how these schemes impact FDM and any gaps. Where these gaps occur performance improvement plans will be put in place. The detailed delivery plans will be contained within our FOC and Route performance strategies.

A regulatory floor for FDM and R-FDM will also be put in place for CP6. This is a level that is considered to be significantly below the levels of expected performance. Nationally this is 92.5%. Across the geographic routes it is set at 30% more R-FDM failures than target. This is detailed in the following table.

	Anglia	LNE	LNW	Scotland	South East	Wales	Wessex	Western
Floor	90.8%	93.9%	92.0%	92.0%	88.2%	92.7%	91.7%	92.1%

5.27.1 Strategic Freight Corridors

Within the current control period the use of SFCs has had a positive impact on performance. Corridor working groups have been set up on the vast majority of routes – with improvement schemes being driven through them. FOC, Freight End User, and Network Rail staff have been complimentary of the approach.

There are currently twenty-two SFC's – many with the same origin or destination points. For example SFC007 and SFC902 both start at Southampton. This means that many of the same issues will be discussed at different meetings requiring multiple attendances. We have reviewed the effectiveness of these corridors, and are recommending a consolidation for CP6 based on ports of entry to the UK as well as commodities conveyed to improve the customer fit of each corridor. Our recommended corridors, contained in the table below, will be agreed with the industry for implementation at the start of CP6.

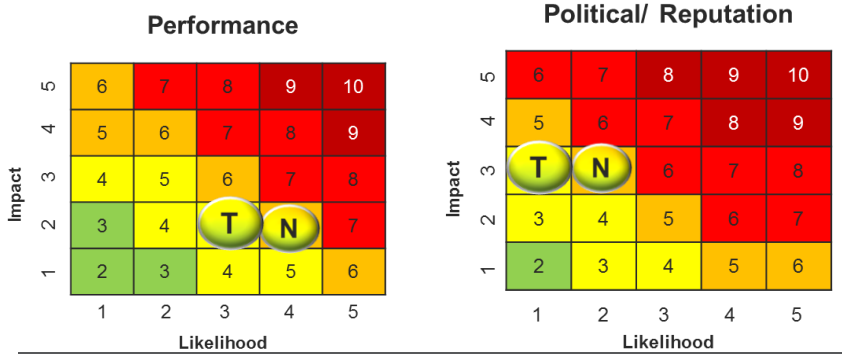
Number	Corridor
1	Felixstowe Inland (all Felixstowe services)
2	Southampton Inland (all Southampton services)
3	Channel Tunnel services
4	South East aggregate services (incorporating Western, Anglia and South East Flows)
5	Mendip primary flows
6	Peak District/Trans Pennine/East Midlands – South East primary flows
7	East Coast Ports and Terminals (Tyne, Tees, Hull, Immingham) including ECML services to Scotland
8	South Wales (including trains to sites such as Round Oak and Dee Marsh)
9	West Coast Mainline services
10	Scotland

Rather than a meeting structure the SFC's framework will become a way in which we identify root performance issues. We will then form smaller working groups to focus purely on that element of performance.

Our activity plan to deliver our plan is summarised in the table below:

Summary of objectives	A plan that continues to deliver the performance element of the FNPO scorecard. This will drive a better every day culture with an appropriately structured organisation , focusing on joint collaboration with FNPO customers

No.	Key constraints, risks and opportunities	What we plan to do	Owner	Timescale
1	O: Increasing average speeds of freight train services.	We will take an intelligent, requirements based, approach to improving average speed. For example, targeting improvements based on commodity – with a greater emphasis on the need for intermodal services to travel more quickly	Head of Strategic Capability and Head of Performance	Action plan to be agreed with customers by December 2018
2	R: Anticipated CP6 growth for passenger and freight may represents a risk for performance.	Realistic but stretching performance targets to be put in place for CP6, including TOC on FOC to be included as a key metric.	Head of Performance	April 2019
3	O: Work closer with geographic routes in delivering reliable and consistent freight performance.	R-FDM will continue to be a performance metric with routes. Put in place a joint performance strategy governance structure where we work with routes and FOCs to understand priorities.	Head of Performance	Strategies & governance by April 2019.
4	C: Right time departures is constrained by the importance placed on it in specific commodities and flows.	Right time departures target put in place at a level that recognises this conflict. Performance improvement initiatives to be prioritised.	Head of Performance	To be delivered through until 2024
5	O: Work more collaboratively with FOCs to improve holistic industry performance – delivering A2F to 87% by 2024	Carry out a review of the joint performance improvement strategies with the FOCs, to identify key priorities.	Head of Performance	March 2020



Summary of risk outcome:

Freight performance remains on track to meet the CP5 regulatory target, therefore the risk assessment is within corporate appetite. During CP6 we are predicting an increase in average speed and an increase in passenger growth. We will aim to mitigate the risk of increasing average speed through taking a requirements based approach to improving average speed. We aim to mitigate the risk of increased passenger numbers by having TOC on FOC as a key metric.

5.28 Digital Railway

The Digital Railway (DR) is a rail industry-wide programme designed to benefit the economy by accelerating the digital enablement of the railway. Key benefits for the freight industry that the Digitalisation could provide, centre on the following areas:

- Additional capacity through enhanced signalling system capability delivering consistently higher train velocity and headway reduction
- Improved quality of freight paths with enhanced traffic management capability, adapting real-time changes for cross route flows across regional control centres. In itself, this the potential to improve the quality of paths, the interaction between freight and passenger services and overall network management
- Digitalisation could also optimise the nodal yard concept to align train paths by optimising of live network timetable data. There is an opportunity to create a wider traffic management network connecting the cross-London freight flows to the key radial intermodal corridors from the ports of Felixstowe, Southampton and London Gateway across London to the Midlands, North and Wales
- Train control and operation could be optimised if systems were capable of dynamic modelling of freight rolling stock capability

The freight industry has identified two key elements that need to be considered and specified within the Digital Railway development process:-

- Firstly, due to the nomadic nature of fleet flows, freight locomotives will have to be prioritised for initial European Train Control System (ETCS) fitment in order for line side signals to be removed
- Secondly, to realise the maximum benefits of the Digital Railway, the ETCS technical and operating parameters must be optimised to reflect the latest freight braking performance data to ensure that freight performance and capacity are not restricted

5.28.1 Activity Plan

The Digital Railway business plan is currently seen as follows:

Now (End of CP5) – independent DR system application on committed projects:

- Cambrian
- Thameslink
- Crossrail
- Romford
- Cardiff and Western 1st Traffic Management deployments
- National enabling projects – ECTS in-cab fitment project, First in Class and Test facilities
- Identifying funding and financing options to support Strategic Outline Business Case (SOBC)

Prioritised Deployment Plan (End of CP7)– integrated DR System Deployment. Select candidate schemes from:

- South East, including Sussex and Kent
- Western – (London to Bristol and Wales)
- Great Eastern Mainline (Liverpool Street – Ipswich and Felixstowe, North London Line and linking to Essex Thameside)
- East Coast Mainline (Kings Cross – Peterborough)
- Wessex (Waterloo – Southampton)
- Trans Pennine
- East London Line

Project Control boards have been/are being set up in each Route to jointly develop business cases.

5.28.2 Freight Technology

This is a long-standing Network Rail and FOCs initiative to leverage smaller-scale technological improvements and has delivered benefit over CP5 to date. A number of schemes have been identified although funding for these has yet to be confirmed:

- Forward Facing CCTV (FFCCTV) – It is proposed that Network Rail could support the purchase and fitment of FFCCTV equipment and associated interfaces. FOCs would then provide Network Rail with access to that data for use in investigating SPADs, maintenance, vegetation management etc
- Application Programming Interface and Open Data - Network Rail could provide FOCs with open access to systems and data owned by Network Rail. This would Improves transparency and allows single sourcing of reliable information. It is expected to help improve FOC efficiency
- Improved planning tools - FOCs have highlighted issues with the current planning and path bidding process and want a new, easy to use visual tool to simplify processes and improve bid success rate. System Operator have a project currently being trialled called “Whole System Modelling”. FNPO will work with SO and FOCs to add their FOC requirements to “Whole System Modelling”
- TOPS (Total Operations Processing System) Replacement. The TOPS system has been the backbone for recording the operational lifecycle of freight wagons for the past four decades within the Freight Industry. However, it is now a very old system, and is poorly placed to meet the needs of the modern freight industry. A programme is needed to manage the replacement of TOPS in a safe and controlled manner

5.28.3 Digital Railway governance for freight scheme

As this Route Strategic Plan was being finalised, the future governance of the DR Programme is being reviewed. How DR works with Network Rail Route Businesses is also changing with guidance provided by a Route Steering Board: this model and approach will also be used to frame FNPO’s role going forward.

The delivery model for the DR Freight Programme will see FNPO become the Client.

The wider freight engagement with the Digital Railway Programme is handled centrally through the Freight Stakeholder Group. The role of the Freight Stakeholder Group will be reviewed early in 2018 to ensure alignment with:

- The changing nature of the DR programme and the need to ensure proper freight engagement in the development of Traffic Management, ATO, C-DAS as well as ETCS
- The role of the geographic routes and Route Project Boards
- The FNPO route’s new “Client” role
- The new Digital Railway Governance Framework

At this stage FNPO will by working with DR and FOCs to ensure a seamless transition for any migration of project responsibility and governance.

National Passenger Operators Route Strategic Plan

6. Cross Country Trains Ltd

6.1 Business overview

Cross Country Trains Ltd (XCTL) is a national operator with services running from Scotland to Cornwall, the North West to the South Coast and from Wales to East Anglia - the largest geographical coverage of any UK passenger train operator. Unlike other train operators, they do not manage any railway stations.

XCTL delivers 37 million journeys p.a., operates 297 planned services a day calling at 121 stations, operating on all of Network Rail geographic Routes except South East. The hub of its operations is Birmingham New St station in Britain's second city and is a pivotal location where performance of services is of paramount importance.

XCTL customers predominantly come from the leisure and business travel markets over a variety of distances, with demand varying each day of the week and every month of the year. Around 15% of passengers commute on a daily basis and most business and leisure travel is discretionary. XCTL must attract and keep customers who have the option not to travel, as well as take alternatives. This is particularly important given the well-known challenges of timetabling and journey times that can make other modes more attractive.

The current CrossCountry franchise expires in October 2019. Work continues on exploring the current franchise between the existing franchisee, the DfT and Network Rail to develop the franchise ahead of the tendering process, due to start in early 2018. It is difficult to predict what this might look like at this early stage and the forecasting of targets for performance and scorecards is difficult without any certainty around franchise commitments.

Emerging issues around HS2 construction works are likely to see an impact on performance. We are yet to understand to what degree as the current issues revolve around how XCTL are indirectly impacted by works on the WCML, particularly at Euston. With other Operators running fewer services to London, XCTL is likely to experience heavier passenger loadings as alternative routes to London destinations are used by the travelling public, notably via Birmingham to link up with Chiltern services to Marylebone or via Leicester to utilise the East Midlands Trains to St Pancras. It has been seen that this places considerable strain on the resources available to XCTL and managing this appropriately across the Network is key over the next 5-10 years. As construction picks up pace and moves to the Midlands area, severe disruption is likely to be seen on key flows around Birmingham New Street.

6.2 Passenger demand

During CP5 XCTL has seen an increase in passenger growth. In CP6 passenger demand is expected grow across the various flows and is likely to be sustained at or around the 4% pa. The key areas of growth are likely to be at:-

- Major city to city, particularly North East (Newcastle, Leeds, York and Sheffield) to Birmingham and the Manchester – Birmingham corridor. There is likely to be sustained growth on all Routes that gravitate towards Birmingham.
- Airports, particularly Birmingham, Stansted and Manchester will see further demand for rail travel to these locations. Connectivity to Heathrow will add potential links between multiple airports.

6.3 Objectives

To support our customers in delivering their future passenger growth and to deliver an effective reliable transport services for passenger undertaking leisure, business and commuting journeys, our aims throughout CP6 will be to:

- Deliver a safe railway for our passengers and workforce.
- Continually review our performance, deliver our targets and through collaboration, focus on specific areas to drive improvement.
- Maximise capacity and capability.
- Protect and improve journey times.
- Optimise timetabled disruption to minimise the impact on passenger journeys

6.4 Scorecard

In 2016/17 Network Rail and XCTL introduced customer scorecards in track and monitor delivery of the various performance metrics. Below is the scorecard for 2017/18 for XCTL.

The customer scorecards have a line of sight with the FNPO Route Scorecards (ref Section Route Objectives). For XCTL, PPM and CaSL remain the industry regulatory measures.

This focused approach has driven improvements across some of the metrics and with more understanding of the measures generated through the various specific work streams setup around these measures there should be improvement throughout the remainder of CP5 which will give a firm footing as we head into CP6.

Following the introduction of Customer Scorecards across all Routes in 2017/18, the opportunity for further alignment has arisen. Alignment has been gained with other Operators, such as at Birmingham New Street, where London Midland has right time arrivals at Birmingham New Street on its scorecard and Virgin Trains West Coast has it as a roll up measure of Right Time arrivals at all destinations. This added alignment with other Operators should drive even more focus on these metrics throughout CP5 and into CP6.

Cross Country Scorecard

Performance	Definition	AIP % WEIGHTING		WORSE THAN TARGET	TARGET	BETTER THAN TARGET
XC PPM	XC PPM delivery (time to 10)	50%	10%	89.2%	90%	90.8%
XC CaSL	XC Cancellation and Significant lateness delivery		10%	4.05%	3.95%	3.85%
Average Lateness @ Destination	Average minutes lateness at destination not including cancellations		6%	3.16	3.12	3.08
RT arrivals at Birmingham New Street	not including cancellations		10%	35%	40%	45%
RT arrivals at Reading (from Basingstoke)	not including cancellations		2%	35%	40%	45%
RT arrivals at Peterborough (from Cambridge)	not including cancellations		2%	50%	55%	60%
RT departures from Bristol Parkway (both directions)	not including cancellations		2%	52.5%	57.5%	62.5%
RT departures from Doncaster (northbound)	not including cancellations		2%	55%	60%	65%
RT departures from Leeds (northbound)	not including cancellations		2%	68%	72%	76%
RT departures from Newcastle (southbound)	not including cancellations		2%	85%	90%	95%
RT departures from Edinburgh (southbound)	not including cancellations		2%	82.5%	87.5%	92.5%
Train Planning	Definition	AIP % WEIGHTING		WORSE THAN TARGET	TARGET	BETTER THAN TARGET
Access Planning Milestones Met	Key planning milestones met	20%	10%	70%	75%	80%
Informed Traveller Response	Number of trains responded to at TW-14		5%	6%	5%	4%
Open disputes	Number of open timetable and access planning disputes		5%	4	2	0
Commercial	Definition	AIP % WEIGHTING		WORSE THAN TARGET	TARGET	BETTER THAN TARGET
Schedule 4 and 8 invoicing process (days late)	Number of days late in processing schedule 4 and 8 invoices	10%	1%	>0	0	
Claims paid [from NR to XC] in 30 days as per MPM	Percentage of agreed claims paid within 30 days as per Managing Public Money		1%	90%	95%	100%
£ owed to NR from XC	Amount overdue (invoices older than 28 days) from XC to NR		1%	£50k	£40k	£30k
# Open claims	Number of open claims			Not Targetted		
Total value (£) of outstanding claims	Total value in pounds of outstanding claims					
Average time to close claims	Average number of days taken to close claims over preceding 13 periods		2%	230	200	170
% of disputed delays still unresolved at day 42	Percentage of delays still in dispute at Day 42 for the corresponding period		2.5%	3%	2%	1%
Outstanding periods over preceding 13 periods	Number of periods in the preceding 13 periods with outstanding disputes		2.5%	4	2	0
Cross Route	Definition	AIP % WEIGHTING		WORSE THAN TARGET	TARGET	BETTER THAN TARGET
L2 Safety Open Actions	Number of L2 safety actions open	20%	2%	20	15	10
Average time to close L2 actions	Average number of days taken to close L2 actions over preceding 13 periods		5%	195	180	165
Performance - Periodic meetings	Meeting frequency and attendance on Route periodic meetings		3%	80%	90%	95%
Performance - Quarterly meetings	Meeting frequency and attendance on Route quarterly meetings		8%	80%	90%	95%
Performance - action close out rate	Percentage of actions closed out on time		2%	70%	80%	90%
			100%			

We have started discussions with our customer to develop our CP6 customer scorecard. Some of the draft metrics and targets are shown below.

Train Performance		17/18	18/19
Cross Country - PPM	Lower	89.2	90.0
	Expected	90.0	90.8
	Upper	90.8	91.6
Cross Country - CaSL	Lower	4.05	4
	Expected	3.95	3.9
	Upper	3.85	3.8
Average Minutes Lateness at Destination	Lower	3.16	3.14
	Expected	3.12	3.10
	Upper	3.08	3.06
On Time Arrivals at Birmingham New Street	Lower	35	40
	Expected	40	45
	Upper	45	50
On Time Arrivals at Reading (from Basingstoke)	Lower	35	40
	Expected	40	45
	Upper	45	50
On Time Departures from Bristol Parkway	Lower	52.5	55
	Expected	57.5	60
	Upper	62.5	65
On Time Arrivals at Peterborough (from Cambridge)	Lower	50	55
	Expected	55	60
	Upper	60	65
On Time Departures from Doncaster (Northbound)	Lower	55	60
	Expected	60	65
	Upper	65	70
On Time Departures from Leeds (Northbound)	Lower	68	71
	Expected	72	75
	Upper	76	79
On Time Departures from Newcastle (Southbound)	Lower	87	87
	Expected	90	90
	Upper	93	93
On Time Departures from Edinburgh (Southbound)	Lower	82.5	87
	Expected	87.5	90
	Upper	92.5	93

		19/20	20/21	21/22	22/23	23/24
On Time at all stations	Lower	TBC	TBC	TBC	TBC	TBC
	Expected	TBC	TBC	TBC	TBC	TBC
	Upper	TBC	TBC	TBC	TBC	TBC
Cancellations	Lower	TBC	TBC	TBC	TBC	TBC
	Expected	TBC	TBC	TBC	TBC	TBC
	Upper	TBC	TBC	TBC	TBC	TBC
Average Minutes Lateness	Lower	TBC	TBC	TBC	TBC	TBC
	Expected	TBC	TBC	TBC	TBC	TBC
	Upper	TBC	TBC	TBC	TBC	TBC
On Time Arrivals at Birmingham New Street	Lower	40	45	45	45	45
	Expected	45	50	50	50	50
	Upper	50	55	55	55	55
On Time Arrivals at Reading (from Basingstoke)	Lower	40	40	40	45	45
	Expected	45	45	45	50	50
	Upper	50	50	50	55	55
On Time Departures from Bristol Parkway	Lower	55	55	60	60	65
	Expected	60	60	65	65	70
	Upper	65	65	70	70	75
On Time Arrivals at Peterborough (from Cambridge)	Lower	55	55	55	55	55
	Expected	60	60	60	60	60
	Upper	65	65	65	65	65
On Time Departures from Sheffield (all directions)	Lower	TBC	TBC	TBC	TBC	TBC
	Expected	TBC	TBC	TBC	TBC	TBC
	Upper	TBC	TBC	TBC	TBC	TBC
On Time Departures from Newcastle (Southbound)	Lower	87	87	87	87	87
	Expected	90	90	90	90	90
	Upper	93	93	93	93	93
On Time Departures from Edinburgh (Southbound)	Lower	87	87	87	87	87
	Expected	90	90	90	90	90
	Upper	93	93	93	93	93

These will be reviewed and agreed with the successful bidder post the franchise letting process.

6.5 Safety

– **Passenger and public safety**

The safety of the public that interact with the Network is paramount to our businesses. We are here to move people from A to B and we must ensure we do that in the safest manner possible, day in, day out.

The management and operation of the platform – train interface (PTI) is complex and presents a number of hazards for station users. These are often exacerbated by an individual's actions and behaviour. Following a number of accidents at the PTI, in particular the accident at James Street, Liverpool in October 2011, there has been considerable focus on improving the operation and management of the PTI. Effective management and operation of the PTI also requires the consideration of operational performance, capacity, right of access for train operation (including freight services), accessibility, public behaviour, and perception.

It is vital that robust procedures are in place to deal with customers who become ill on train services to not only reduce the performance impact (delays and cancellations) but also to ensure the health and wellbeing of the general public. It is important to minimise the risk of passengers being trapped in queuing services which consequently creates the risk of more passengers becoming ill or agitated on following services. We continue to work with station and on-train staff as well as the Emergency Services, will help to mitigate this risk and furthermore reduce the risk of customers self-egressing from trains that are trapped.

– **Level Crossing Safety**

There are approximately 6,500 level crossings in use on the national mainline rail network in Great Britain with another estimated 1,000 to 1,500 on heritage and minor railways. The number of unsafe events occurring at level crossings in Great Britain compares favourably with the record of other countries in Europe. Britain's mainline railway remains amongst one of the safest in the European Union (EU) in terms of the number of unsafe events that have happened, and is the best in the EU at managing risks at level crossings. However, every incident has the potential for significant human and economic loss. Level crossing risk control is a shared responsibility between Network Rail, XCTL, Highway Authorities and users of the crossing. Effective co-operation and collaboration between these parties is critical and each has a role to play, although the contribution of each party to risk control will vary at each crossing, as will their level of understanding.

– **Workforce Safety**

In a 24/7 railway industry, fatigue is an operational concern that needs to be effectively managed just like any other hazard. This is particularly the case in respect of the work carried out by drivers, signallers, train managers/senior conductors, train dispatchers, control room operators and maintenance workers which is critical to safe operations. Safety critical work can occur at any time, day or night, in difficult circumstances and against demanding work schedules. It is therefore essential that controllers of safety critical workers understand the multiple causes of fatigue and adopt a more systematic approach to managing the risks.

Priorities

– Deliver FNPO Route Scorecard – safety metrics i.e. LTIFR, SPADS, Derailments, Close Calls.

– Maintenance at our managed stations, specifically:
Birmingham New Street is a particular area of focus where water ingress and lighting have been of particular concern, both impacting passengers and work force. The "Lamp Block", at the north end of platform 1, is XCTL's primary train crew hub and conditions in and around this area, as well as safe access to it, have raised concerns over the past few years. It is imperative than any issues at

Birmingham New Street and the Lamp Block are addressed swiftly to ensure the safety of the travelling public and XCTL's staff

Bristol Temple Meads has a number of safety and passenger experience issues such as poor platform markings, lack of tactiles and poor location of the customer information point. It will be key to address these issues as part of any station works here in CP6.

– Maintenance of lineside environment such as walking routes and security around stabling locations is important to protect National Passenger Operator (NPO) staff and assets (rolling stock).

  The provision of safe walking routes for XCTL staff on Network Rail infrastructure has been a feature over the past few years, particularly at Birmingham New Street and Central Rivers depot (near Tamworth) which is XCTL's main depot for the fleet of Voyagers. It is important that more effort is put into managing safe walking routes in areas such as this and to move away from having to react to a safety incident, as has been the case with these 2 locations.

  Leicester Carriage Sidings is a notable hot spot where continued action on trespassers and graffiti incidents on XCTL rolling stock to reduce incidents of this type. Ongoing work to minimise trespass on to the network at out stabling locations is key to reduce vandalism of railway assets.

– Improvements on the passenger / train interface (PTI) are important to continually reduce the risk of passenger incidents at stations. Most notably in this area is the correct use of signage and platform markings (white / yellow lines), announcements through PA systems, correct use of tactiles etc.

– Maintaining and improving stepping distances is an area of focus to decrease the risk of passenger incidents when joining / alighting services. Through collaboration between Network Rail and XCTL, we can further understand maintenance activities such as tamping to take action against increasing the stepping distances and potentially improve them with little additional cost.

– Boundary management is a growing area of concern for XCTL and the number of incursions due to unauthorised access onto the line has increased in recent years.

  Since XCTL run over 7 Routes, the area of lineside fencing that its operations are exposed to is considerable. All fencing should be fit for the purpose of preventing unauthorised access and this should be consistent across all Routes.

– Unmanaged vegetation obscures drivers' sighting (especially of signals and speed boards) and damages rolling stock. The number of incidents arising from poorly managed vegetation has also increased in recent years. It is important for operational safety that all Route are consistently and adequately managing their vegetation.

The activities we plan to undertake to deliver these priorities are summarised in the table below:

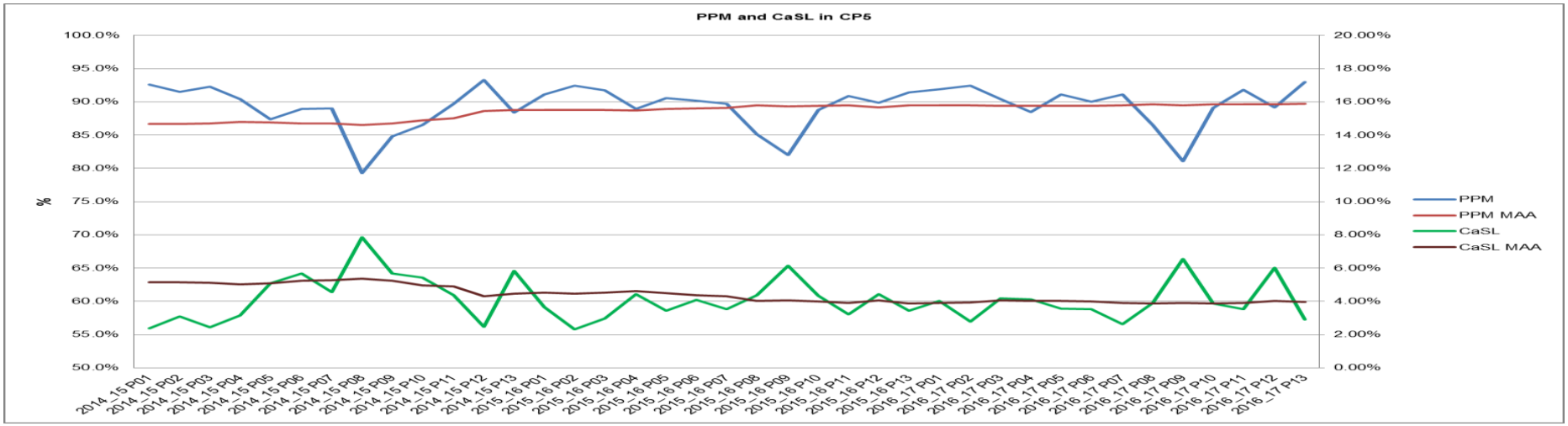
Summary of objectives	Deliver a safe railway for Cross Country passengers and workforce.			
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Timescale (start/ finish)**
1	O - Develop and implement Safety improvement Strategy	Agree a Joint Safety Improvement Strategy that drives continuous and collaborative safety improvements in identified areas of concern.	Head of Customer Relationship Management (Passenger) HoCRM	March 2019
2	O - Reduce Level Crossing Risk	Identification and classification of the high risk level crossings on XCTL's network and take appropriate action to close or reduce safety risk to of the public	Routes	Ongoing
3	R - Walking Routes	Ensure proactive maintenance is carried out on priority walking routes to reduce the risk of slip, trips and falls of XCTL and NR workforce	Routes	Ongoing
4	R - Managed Stations	Robust reporting procedures in place with designated contacts for each managed station leading to better tracking of issues and swifter resolution	HoCRM	March 2019
5	R - Boundary Management	By working jointly with XCTL, FNPO will be able to use drivers' knowledge to understand when the fences need to be maintained and when they're not fit-for-purpose. FNPO will then work with the Route to reinstate suitable lineside fencing as quickly as possible.	HoCRM	Ongoing
6	O – Meeting Structure	Develop robust meeting structure that ensures Route engagement with XCTL safety issues and increases collaboration and governance of safety issues	HoCRM	March 2018

6.6 Train Performance

Performance for XCTL has seen steady improvement throughout CP5. Both PPM and CaSL have seen a year on year improvement, despite falling short of the CP5 target of 90.8 by year 3. The PPM MAA has risen from an entry point of 86.7 to 89.7 at the end of year 3 in CP5. CaSL has seen similar steady improvement, with the MAA dropping from 5.14% at CP5 entry to 3.95% at the end of year 3 in CP5, this is shown in the graph below

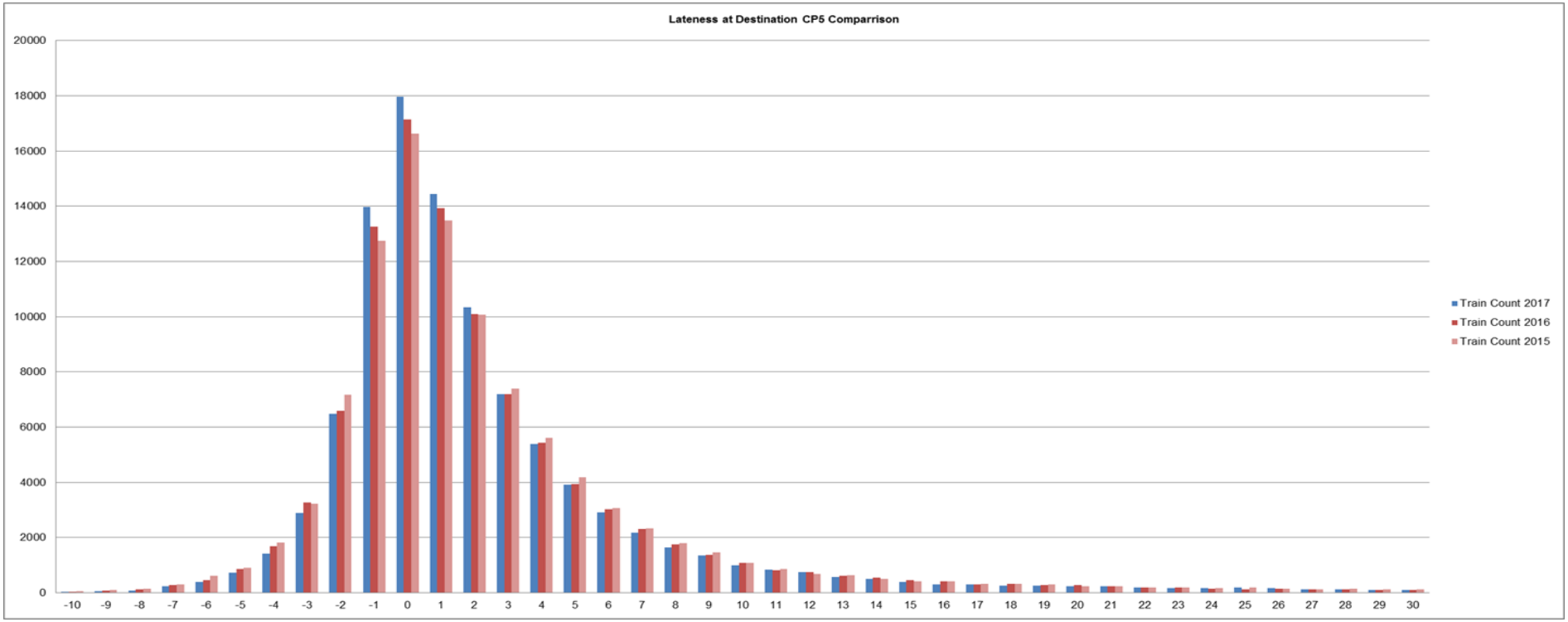
Consistently good performance is critical to XCTL as the majority of the passenger base is leisure and discretionary. The average XCTL passenger only travels once or twice a year so every journey matters. No one flow is worth more than 1% of total revenue so delivering consistently across the whole network and into a number of key nodes is vital. 40% of XCTL's passengers interchange and 10% of passengers change at Birmingham New Street on to another Operators service so right time delivery is crucial across the network but even more so at Birmingham.

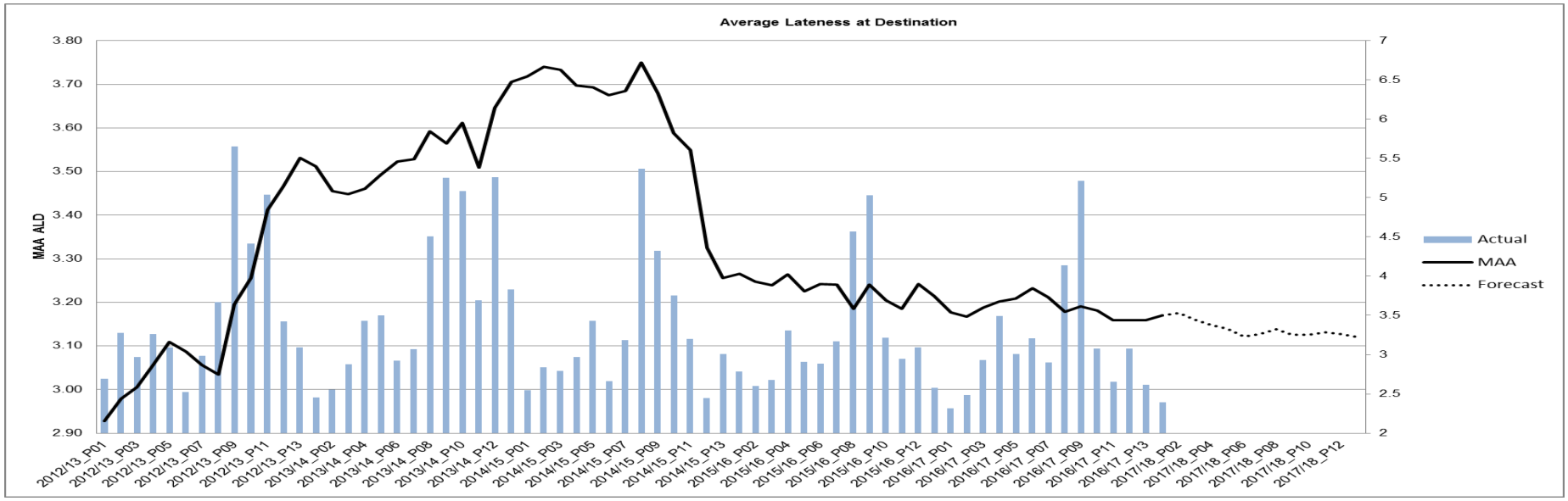
Transport Focus research states that the number one priority for XCTL's customers is seat availability. A reduction in service provision either planned or unplanned is something that needs to be avoided wherever possible. This requires sensible access planning and service recovery plans that are balanced to reduce DPI and continue to offer capacity to disrupted customers. Due to the journey length operated by a large number of services, most passenger journeys take place between intermediate stations. This means that PPM at destination, as the current key performance measure, isn't suitable to the delivery of punctuality and reliability that impacts on the passenger. On Time and cancellations should be seen as the more important measures for XCTL's passengers.



Performance challenges

The overarching strategy is to move the Average Lateness at Destination curve to the left, which aligns with Transport Focus feedback to the industry at CP6 workshops. Below is a graph of how this measure has tracked over the previous years and includes the trajectory for 2017/18

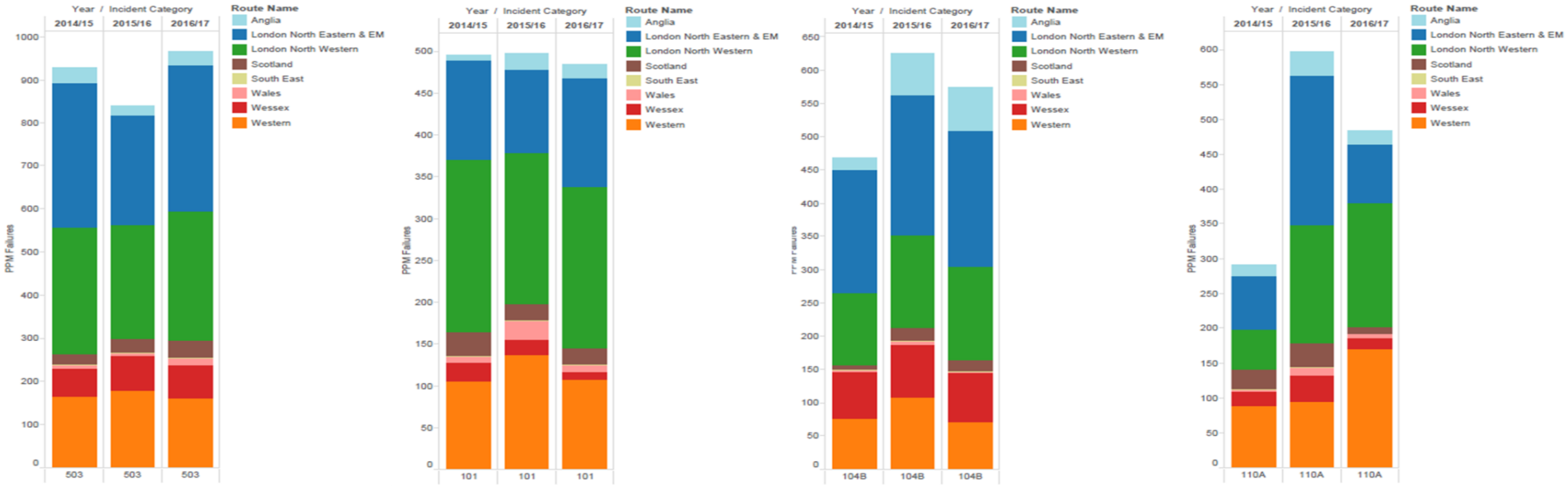




Average Lateness at Destination is a key metric for the remainder of CP5. It seeks to understand the average lateness for XCTL's services at destination. Whilst we are focusing on destination only at this point, it is a sign of the shift towards an On Time operation and the new suite of measures for CP6. It is envisaged this measure will move towards Average Minutes Lateness as we move into CP6. All performance improvement activity should look to improve this graph. This is a new measure that was introduced for 2017/18 and specific plans to understand and improve it are being developed.

Analysis of Network Rail's performance highlights some of the KPIs that remain the biggest impacting, with little improvement seen throughout CP5 so far. These are areas where focused improvement from the Network Rail routes is required to push PPM to the required level by the end of CP5 and give us a strong footing as we move into CP6.

As shown in the schematic below on the next page, Fatalities and Trespass remains the single biggest impacting KPI on XCTL performance, with LNE & EM and LNW the biggest impacting Routes. Work in this area has been developing over the years, with physical mitigations such as lineside fencing improvements, mid platform and platform end fencing the primary interventions. Through CP5 there has been a move towards more "soft" mitigations such as improvements in interventions at key hotspots and the introduction of smart cameras. The strategy is developing further into working in partnership with local mental health authorities. Reactionary delay to a fatality incident has had similar focus, with changes to response and management of the inevitable disruption these types of incident cause. Continued focus to drive down incidents in this KPI is vital to the success of XCTL's performance.



From left to right: 503 (Fatalities and Trespass), 101 (Points Failures), 104B (Track Faults), 110A (severe weather).

The impact of track faults and the inevitable Temporary Speed Restrictions (TSR) that are imposed following such incidents have considerable impact. Whilst TSR's don't often have an impact on PPM, they do have a considerable impact to On Time performance if they are severe enough. Improvements in the management and swift removal of TSRs generated through track faults and other infrastructure issues would see the On Time performance of XCTL services improve considerably. This has been demonstrated regularly where On Time performance dips with the introduction of a TSR, only to return to a normal performance level once the TSR is removed. Unfortunately, some TSRs remain in situ for a considerable length of time.

Severe weather remains a risk as this KPI has seen some variance over the years. Further work on infrastructure robustness, particularly flooding on the Western Route, is required to improve resilience in this area. The works at Hinksey have helped improve this although Cowley Bridge and Dawlish remain susceptible to extremes of weather. The management of the train services across all Routes and Operators is another area that can be improved to ensure that when the infrastructure is susceptible to severe weather, the train service is managed appropriately to reduce the impact on XCTL and the travelling public.

The process for the governing of Network Rail's Performance Delivery is that of a continuous plan, do and review cycle. By focussing on the attrition categories we can understand where PPM is lost. While focus remains on primary delay, including improved governance of Network Rail KPIs, there is an increasing need for robust mitigation of reactionary delay and to gain better understanding of underlying poor performance on our best days through improved analysis and insight gained from our Train Running Specialists to deliver improvements in the day to day plan. The key areas of network wide and routes focus is summarised below:-

Network wide focus

- Autumn preparedness including vegetation clearance and Rail Head Treatment Train circuit improvements
- Reduction in line obstruction and lineside fencing improvements at key hotspots (identified by both Network Rail and XCTL) to reduce instances of animal incursion
- Continual improvement in asset reliability
- Weather resilience actions
- Working more closely with Infrastructure Projects to ensure performance delivery is included in their remits where possible
- Changes to regulation policies to align with the new CP6 performance metrics
- expected performance of the train plan
- Sourcing funding for performance improvements irrespective of the Route of ownership
- Improvements to analytical capabilities including more insight into the
- Improved service recovery plans to help reduce DPI

Route specific focus

LNW

- Right time arrivals at Birmingham New Street
- Reduce HS2 impact as much as reasonably practicable
- Service recovery
- Fatalities & Trespass

Wessex

- Reading Right Time arrivals from Basingstoke
- Track quality, TSR management including timely removal
- Bournemouth and Southampton platforming during perturbation
- Freight management, recognising the projected increase in traffic
- Animal Incursions

Western

- Right Time departures from Bristol Parkway
- Weather resilience
- Fatalities and trespass, particularly off route (Thames Valley) impacting XCTL

Anglia

- Right Time arrivals Peterborough Scorecard Measure
- Track quality and TSR management and timely removal
- Incident reduction in the Cambridge area

Wales

- Right Time improvement for XCTL originators and terminators at Cardiff
- Operational resilience in the Cardiff area post - Cardiff Area Signalling Renewal

Scotland

- Fatalities and Trespass
- Signalling systems and power supply
- Right Time Improvements on Glasgow – Edinburgh corridor

LNE

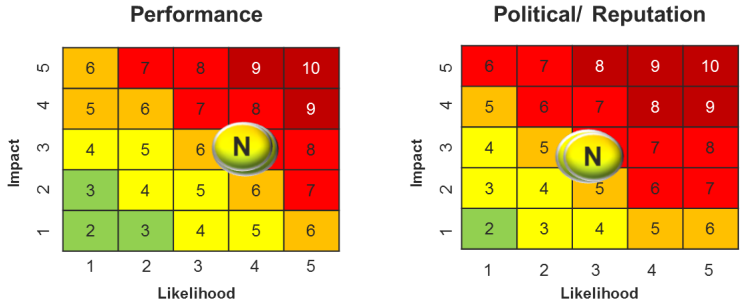
- Right Time boundary handovers and Scorecard Measures
- Fatalities and Trespass
- Bridge strikes

East Midlands

- Points failures
- Signalling systems and power supply
- Right Time improvement at Nottingham and Leicester

The activities we plan to undertake to deliver these priorities are summarised in the table below.

Summary of objectives	Continually review our performance, deliver our targets and through collaboration, focus on specific areas to drive improvement			
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Timescale**
1	R - Speed Restrictions	Improved management of ESR / TSR and swift removal. Use of technology such as the RailVac and Mobile Maintenance Train	Routes	Ongoing
2	O - Regulation Policies	Regular review of regulation policies to ensure they remain fit for purpose and work in conjunction with the new CP6 metrics	Routes	Ongoing
3	C - KPI Management	Continued challenge on Route delivery to tackle emerging trends and poor performing KPIs to drive performance forward	HoCRM	Ongoing
4	R - Fatalities and Trespass	Continued work with the Routes to understand key hotspots. Deliver schemes that reduce the frequency and impact of incidents	HoCRM & Routes	Ongoing
5	O - Improved analytics	Develop suitable tools to better analyse XCTL performance and target improvement where required	HoCRM	Start March 2018
6	O - Focus on XCTL On Time performance	Continued focus on key locations with Routes to improve the service for passengers where it matters.	HoCRM	On Time - Key Node March 2019
7	R – HS2 Impact mitigation	Ensure disruptive access and amended timetables for HS2 cause as little performance impact as possible – Ensure the plans are well developed – Stakeholder engagement is carried out promptly – Correct approach taken to negotiating access and developing the timetable	Head of Customer Relationship Manager (HoCRM)	Ongoing



Summary of risk outcome:

There is a risk to delivering safe train service performance and protecting and improving journey time for XC. This is due to our reliance on System Operator and geographical routes to deliver an effective train plan and regulation during perturbation, to passenger journeys. Our National Passenger Operator team will work collaboratively with SO and Routes to achieve optimal solutions that minimises the disruption to XC passenger journeys. This approach will mitigate the risk and allow us to achieve our target risk profile.

6.7 Capacity & Capability

Currently, XCTL journeys are “slowed down” by approximately 2000 minutes each day due to pathing allowances and excess dwells (compared to TPR requirements) in the timetable, which equates to around 7 minutes per train. From a passenger perspective, this situation translates into longer journey times and the perception of a slower journey as the train will spend significant amounts of time being stationary. From an economic point of view, this situation reduces the value of the XCTL franchise as it creates a less attractive product when the journey time is compared to that of other modes of transport such as the car which can be seen as more favourable in respect of door to door journey time, flexibility, convenience (parking, changing trains etc) and cost.

Reduced journey times result in rail being more attractive to the public, particularly when compared to road travel. In addition to relieving congestion and reducing road accidents, rail travel also reduces carbon emissions and the wider impact on the economy all of these factors have. Journey Time is therefore an important consideration in the development of enhancements and renewals, including the opportunity to enhance the infrastructure simultaneously. All improvements should be factored in to the development of the timetable to reduce journey times and improve performance.

6.7.1 Priorities

- Identifying schemes that lead to removal of bottlenecks and improve performance
- Integrated transport solutions such as good parking at stations or convenient bus / tram connections to make a journey by train as simple as possible and attractive to the passenger
- Maximise benefits for all operators not just those of a single Operator
- Future-proof and improve the reliability of the infrastructure
- Ensure better links between Projects/System Operator/Performance
- Maximise the opportunities created by new rolling stock and enhanced infrastructure to deliver a reduction in journey times and additional services
- Particular focus on improved journey times for LNW on Birmingham – Reading and East Mids to West Mids XC routes
- Additional path via Birmingham International
- Improvement to planning headways
- Earlier services to Stansted Airport
- Line speed improvements through CP6 infrastructure enhancements

The activities we plan to undertake to deliver these priorities are summarised in the table below:-

Summary of objectives	Opportunities exist for potential schemes to improve capacity and capability for XCTL			
No.	**Key constraints, risks and opportunities**	**What we plan to do**	**Owner**	**Timescales**
1	O - Derby Re-signalling	Works in the Derby area to improve performance and journey times between Birmingham, the North East and Scotland.	Infrastructure Projects	March 2019
2	O - Heathrow West Curve	Explore the opportunity to extend existing Reading services through to Heathrow and directly serve the airport. This would potentially give a direct link from Heathrow to Birmingham International.	Infrastructure Projects	March 2023
3	O - Leicester area capacity enhancement	Increase capacity between Leicester and Peterborough with the potential for additional services through to Cambridge and Stansted	Infrastructure Projects	CP6
4	O - Kingsbury Arrival Road	Remove the bottleneck of propelling moves, improve performance of XCTL services between Derby and Birmingham and increase capacity for additional freight paths.	To be confirmed	To be confirmed
5	O - West of England (Bristol – Penzance)	Re-signalling and enhancement schemes to improve performance, capacity and reduce journey times.	Infrastructure Projects	CP6
6	O - Birmingham – Manchester	Explore the potential for a 3rd Birmingham – Manchester path with capacity improvements and TPR rationalisation and further timetabling work.	HoCRM & LNW Route	March 2019
7	O - Birmingham – North East	Explore the potential for a 3rd Birmingham – North East path to improve connectivity and service offering.	HoCRM & LNE Route	March 2020
8	O - Platform lengthening at Wilnecote and Willington	Provide additional capacity on the Birmingham – Derby route.	Infrastructure Projects	CP6
9	O - Ely Area Capacity Scheme	Ely North Junction doubling, Signalling works, level crossing and bridge enhancements. Deliver a second train per hour between Birmingham and Cambridge/Stanstead.	Infrastructure Projects	CP6
10	O - ECML North of York loops	Loops between Northallerton and Newcastle and uplift from 5 trains per hour to 6. Alleviate capacity constraints in aspirations for XCTL, VTEC and TPE.	To be confirmed	To be confirmed
11	O - Birmingham New Street Area Resignalling	Resignalling of the station itself will deliver significant performance improvements for XCTL.	Route	March 2022
12	O - Oxford Corridor	A new platform at Oxford Station and headway improvements in the Oxford Corridor to provide performance and capacity benefits to XCTL.	Infrastructure Projects	March 2024

6.8 Access and Timetable Planning

Altering the XCTL timetable structure without changing the service outcome (frequency, calling pattern or service flows) is very challenging because of its rigidity, due to:

- The large operating area
- Scale of interaction with other operators
- Number of congested nodes across the network which XCTL services need to be planned through
- Rolling stock allocation based on the original franchise specification to deliver peak demand numbers.

Developing and delivering high quality timetables is a collaborative process. This is particularly necessary on a large, diverse network such as XCTL's, where many routes are shared with other TOCs and freight operators.

The XCTL timetable must be:

- Deliverable - it must not have errors that prevent the base timings being achieved
- Robust - able to cope with some degree of perturbation

The industry must ensure the Timetable Planning Rules and overall construction of the timetable delivers the target performance levels.

Amended timetables must facilitate the enhancement, renewal and maintenance programme while balancing service quality and the overall passenger experience with the need for efficient project delivery

6.8.1 Priorities

- To work collaboratively with XCTL to continually seek innovative ways to ensure that the Timetable Planning Rules and overall construction of timetables delivers the target performance levels
- Earlier access planning to ensure robust delivery and performance of the timetable
- Earlier timetable work to understand the impact of engineering work on XCTL's train service as part of the package for disruptive access to give more certainty and better understanding of costs incurred by Network Rail.
- Develop more robust industry processes within the Engineering Access Statement process to reduce late change and cost, time and quality pressure exerted by late changes to the plan
- A more flexible workforce within the SO to ensure resource is where it is needed and to enable better workload planning
- Reshaping timetable design to support On Time delivery
- An integrated approach by Event Steering Groups to ensure network wide TT benefits for all operators and reduction of performance risk
- Recognise the impact multiple disruption has on a cross-route operator and commit to working with XC to minimise the impact of overall disruption to the passenger
- Reduce conflicts across our network where possible and maintain adherence to the Rules of the Revenue
- Minimises the impact of HS2 delivery
- Learn lessons from CP5 and introduce improved network-wide governance

6.9 Railway Ombudsman

The DfT is supporting the introduction of an independent Ombudsman in the rail sector to investigate and make rulings on unresolved customer complaints. The Ombudsman will change the way that the rail industry deals with complaints relating to service provision within a defined scope and will improve services by the industry for its customers.

Network Rail is planning to join the scheme subject to discussions with the DfT/HMT that this is permissible under our Managing Public Money obligations; confirmation from Rail Delivery Group (RDG) on the final scope of the scheme; and confirmation that the cost to Network Rail of belonging to the scheme is included within the periodic review settlement.

RDG has developed proposals for a scheme and are undertaking a procurement process and reviewing the potential cost models. Customer services that Network Rail delivers at its Managed stations are eligible under the scheme criteria.

The cost of the scheme for Network Rail (running costs and compensation payments) is estimated at £150k pa (£750k over CP6).

We are including the costs in the FNPO plan (Section 10.3) as the Managing Director, FNPO is leading for Network Rail, working with RDG, on the introduction of the Ombudsman scheme. Once agreed we anticipate separating and transferring the budget across Network Rail's Routes.

7. Caledonian Sleeper

7.1 Business overview

Caledonian Sleeper operates sleeper train services between London Euston and major cities across Scotland including Edinburgh and Glasgow. In 2015 the services were moved out of the Scotrail Alliance and became a standalone 15 year Franchise with Serco Caledonian Sleeper chosen by the Scottish Government as the new operator. The vision is for the Sleeper to be a modern, revitalised overnight travel and hospitality experience between Scotland and London.

With a mix of business and leisure travellers, the Caledonian Sleeper offers a rather unique passenger experience, being a mix of normal train travel coupled with “hotel-like” customer service. The services operate six nights a week between London and Scotland, serving London Euston, Glasgow, Edinburgh, Aberdeen, Inverness and Fort William.

The Caledonian Sleeper “Highlander” operates between London Euston and Fort William, Inverness, and Aberdeen. Services depart from Aberdeen, Inverness and Fort William with the 3 portions combining at Edinburgh into a single service to London Euston. In reverse, the service departs Euston in the late evening and divides at Edinburgh, with additional “day coaches” added to the Fort William portion.

The Caledonian Sleeper “Lowlander” operates between London Euston, Glasgow Central and Edinburgh Waverley. A late evening service departs both Glasgow and Edinburgh before combining at Carstairs to form a single service to London Euston with the exact same operation in reverse in each night.

The current rolling stock consists of a mix of specially converted Mark II and Mark III coaches which is now some of the oldest rolling stock still operating on the network. The fleet of locomotives hired in from GBRf to operate the sleeper service is made up of 7x class 92 electric locos which haul the portions to / from Euston, Glasgow and Edinburgh and 6x class 73s that are used on the “Highlander” portions north of Edinburgh.

The separate portions are not reported individually as a train service for performance measurement and only the arrivals at destination are considered. These are made up of the 2 morning Euston arrivals (the “Highlander” and “Lowlander”) and the morning arrivals at the 5 Scottish destinations (the Glasgow and Edinburgh portions of the “Lowlander” and the Inverness, Aberdeen and Fort William portions of the “Highlander”). The current franchise has no target around PPM and only Right Time arrival at the above destinations is considered.

7.2 Priorities

Caledonian Sleepers introduce a brand new fleet of sleeper coaches (known as the Mark V) in late 2018, with ‘Lowlander’ services expected to operate with Mk Vs from October 2018. Minimal disruption during the Mark V introduction will assist with the continued growth in year round business and maximise the commercial impact of the introduction. While Caledonian Sleeper appreciate that Network Rail’s possession and enhancement strategy often revolves around Bank Holidays (due to it being the least disruptive time for most day time passenger operators) Network Rail need to have cognisance of the fact that this is Caledonian Sleepers’ busiest period and try to minimise the impact on its services.

The current Right Time Arrival at destination target of 75% rises to a very challenging 80% for 2018/19 and remains flat for the rest of the franchise after this point. Caledonian Sleeper and Network Rail need to work closely to improve Right Time arrivals to achieve this consistently.

The requirements for major infrastructure works at Euston station to facilitate HS2 will have a considerable impact on Caledonian Sleepers' business and coincides with the introduction of the Mark Vs. One solution to the issue caused by HS2 at Euston, might be to migrate to a different terminal station such as Kings Cross or St Pancras International.

Caledonian Sleepers are looking to expand into new markets including Oban and the Far North of Scotland with possible new intermediate markets between England and Scotland and providing its own dedicated lounges at key stations.

Development of options for early boarding at managed stations to further enhance the service offering to guests. This would provide the opportunity to arrive early, get settled and enjoy a meal or a drink prior to departure in the comfort of the train's lounge car. This is a key aspect of the Caledonian Sleeper business plan.

The new Mark V vehicles will start arriving in early 2018 and a gauging project is well underway to facilitate this with sponsors and project managers appointed in the various routes where surveys and possible infrastructure interventions have been identified. Testing of new stock over a set piece of infrastructure will take place in mid 2018. Development work to understand if improvements at Inverness can help with improved dedicated servicing facility freeing up platform capacity and reducing the number of moves in and out the station at a time when the station will see an uplift in traffic as a result of the Aberdeen to Inverness infrastructure enhancements.

Under the FNPO Route's stewardship, particularly the FSDM monitoring and interventions, improvements have been made with 'on the night' action and help to overcome issues with other industry partners. Further work on the "last mile" initiative will be required to improve Caledonian Sleepers' On Time performance as we seek to reduce the On Time near miss numbers even further.

Network Rail acknowledges that HS2 works will have a significant impact on London Euston, Caledonian Sleepers' services and its customers. Discussions are ongoing between CS and Kings Cross / St Pancras International and will conclude later in 2018. This may lead to future opportunities in growing the sleeper market should any change in terminus prove beneficial to the guests using the service. CS are committed to working with HS2 and all TOCs to improve customer satisfaction levels at Euston.

CS are keen to work with Network Rail to help facilitate 'early boarding' to enable guests to board the train earlier and improve the overall customer experience. This requires longer platform occupation, which reduces capacity and is a considerable challenge at some of our major stations. Network Rail and CS will work on developing options in this area further.

Management of vegetation on the network remains a challenge. Vegetation in Scotland causes damage to rolling stock. RETB aerials which are required for signalling on the West Highland Line are very susceptible to vegetation strikes. This type of damage can cause significant delay to passengers and guests and cause reactionary delay on routes that are notoriously difficult to recover.

Co-ordination of the access plans across the Network Rail Routes is likely to be increasingly more difficult and Network Rail must ensure its plans leave a viable route available via either the WCML or ECML to facilitate the sleeper operating its nightly services.

7.3 Scorecard Metrics

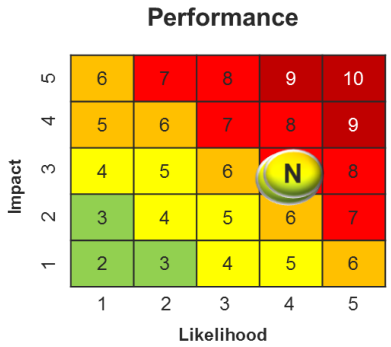
In 2017/18, Network Rail and Caledonian Sleeper introduced a scorecard at a Customer level. The scorecard metrics will be reviewed each year to ensure they remain fit for purpose and place the required emphasis on the measures that are the most important for the customer. The scorecard values will change from April 2018. Below is the customer scorecard for 2017/18 and the activity plan to achieve the business priorities.

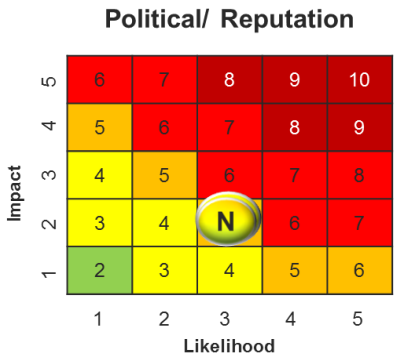
The activities we plan to undertake to deliver these priorities are summarised in the table below:

Caledonian Sleeper Customer Scorecard

Safety	Definitions	AIP % WEIGHTING		WORSE THAN TARGET	TARGET	BETTER THAN TARGET
CS Reported NR Close Calls	Close calls and infrastructure issues raised where NR is the responsible owner	35%	15.0%	7	5	3
Safety Issues Satisfactorily Resolved within 30 days	Both parties agree that the issues have been resolved		20.0%	70%	75%	80%
Train Performance						
Caledonian Sleeper Right Time Arrivals - Overall	All Caledonian Sleeper services that arrive at destination early or right time	35%	0%	72%	75%	78%
Right Time Arrivals- Euston 'Highlander'	All Caledonian Sleeper 'Highlander' services that arrive at destination early or right time at Euston		5%	72%	75%	78%
Right Time Arrivals-Euston 'Lowlander'	All Caledonian Sleeper 'Lowlander' services that arrive at destination early or right time at Euston		5%	72%	75%	78%
Right Time Arrivals-Inverness	All Caledonian Sleeper services that arrive at destination early or right time at Inverness		5%	72%	75%	78%
Right Time Arrivals-Ft William	All Caledonian Sleeper services that arrive at destination early or right time at Fort William		5%	72%	75%	78%
Right Time Arrivals-Aberdeen	All Caledonian Sleeper services that arrive at destination early or right time at Aberdeen		5%	72%	75%	78%
Right Time Arrivals-Glasgow	All Caledonian Sleeper services that arrive at destination early or right time at Glasgow		5%	72%	75%	78%
Right Time Arrivals- Edinburgh	All Caledonian Sleeper services that arrive at destination early or right time at Edinburgh		5%	72%	75%	78%
Project Delivery						
Totems - Project Milestones Outstanding	% of GRIP milestones met	10%	2.5%	TBC	TBC	TBC
Delivery against Grip Stage Cost	Delivery against Grip Stage Cost		2.5%	TBC	TBC	TBC
MK 5 Gauging Project Milestones	% of GRIP milestones met		2.5%	TBC	TBC	TBC
Progress against MK 5 Approvals	No. of NR actions overdue against agreed dates		2.5%	TBC	TBC	TBC
Commercial						
Open Claims (No.)	No. of open claims commercial or RoU, at any given time	10%	0.0%	3	2	1
Current Value of Claims (agreed approximate value)	Current Value of Claims (agreed approximate value)		0.0%	N/A	N/A	N/A
Claims - Average Time Open	Average time open for all active claims		0.0%	365	270	180
Delay Attribution - No. of delays unresolved at Day 42	No. of delays unresolved at Day 42		5.0%	3	0	0
Schedule 4 Invoiced by Day 56	Agreed schedule 4 claims not processed within 56 days		2.5%	0%	100%	100%
Schedule 8 Invoiced by Day 56	Agreed schedule 8 payments not processed / invoiced within 56 days		2.5%	0%	100%	100%
Customer Satisfaction						
Satisfaction with NR overall	Quarterly pulse check % score based on survey question - minimum 4 respondents	10	10%	70%	75%	80%
			100%			

	Key Constraints, Risks and Opportunities	What we plan to do	Owner	Timescale
1	O / R - Track Access Contract	Establish a suitable contract that serves the purpose of Caledonian Sleepers' business and affords Network Rail the opportunity to undertake work at Euston and on the WCML for HS2	Head of Customer Relationship Manager (HoCRM)	March 2019
2	O - Introduction of Mark V rolling stock	Opportunity to further improve performance and service offering with the introduction of Mark V coaching stock	HoCRM	Ongoing
3	O - New Traffic	Develop business opportunity for more paths to the Far North of Scotland	HoCRM	March 2020
4	O - Last Mile Initiative	Further understand and deliver improvements in preventing 1-2 minute losses caused on approach to destination	HoCRM & Routes	Ongoing





Summary of risk outcome:
We expect that CP5 levels of performance to continue and improve into CP6 for Caledonian Sleeper as in April 2017 we implemented our FNPO transformation, where we strengthened the focus via our FSDM team to do "pre flight checks" of the train plan with Route and Customers. We plan to continue with this approach and therefore our net and target risk profile are already aligned.

8. Charters

Charters and Open Access Operators are important niche markets within the FNPO portfolio. Their specialised requirements are recognised in having a dedicated management team.

1000 Charter Services operate across the network each year, with around 50% of these being steam hauled. The market is diverse, ranging from:

– "High end" luxury dining and hotel services
– Days out to popular destinations
– Bespoke charters, e.g. for sporting events
– "Enthusiast" tours to appreciate specific locomotives or branch lines

There is an intensive seasonal peak, with around 70% of services operating between May and September.

A number of parties are involved in the supply chain, each of whom will attempt to engage with multiple parties within Network Rail at every conceivable opportunity. i.e.

– Tour promoters who devise and market the product
– Charter Train Operators who plan and operate the train.
– A third party rolling stock and/ or loco owner may also be involved

Charter Train Operations bring a positive benefit to both the rail industry and to UK Plc.

– They boost local economies by bringing tourism to key destinations across the network
– High profile excursions using revered locomotives such as the Flying Scotsman and Tornado, create an empathy for the railway, which aids Network Rail's profile
– The Jacobite, which operates between Fort William and Mallaig, is an international attraction, with many foreign tourists travelling on this service as part of their UK trip

Unlike other passenger operators, Charter Train Operators have Track Access Contracts granted by the ORR under General Approval;

These give operators the ability to bid to run bespoke charter operations anywhere on the network, subject to network capacity and capability.

The 'go anywhere' nature of these rights, means that Network Rail has the challenging requirement to;

– Maintain published gauge capability over the entire network
– Keep the entire network free of vegetation encroachment

FNPO is working with Charter customers to secure a number of 'Strategic Charter Paths', which would provide guaranteed gauge and vegetation cleared paths on core charter routes.

An industry Charter Conference was held in 2017 which brought together key stakeholders within the charter industry, to develop a Charter Strategy, committed to deliver a sustainable future for charters. This Strategy will form the basis of FNPO delivery to the charter industry through CP6.

The nature of Charter Track Access rights means paths can only be requested from Network Rail after other operators' firm rights have been planned. This can create uncertainty for the tour promoter who has to plan a service or programme many months in advance.

Capacity Planning works hard with the industry to find solutions and in the majority of cases they are successful. On some occasions unfortunately, paths cannot be found and in the worst case, proposed services cannot be confirmed and have to be cancelled. We plan to minimise this risk by developing Strategic Capacity for Charters.

In the summer months, the operation of steam services across the network can present the risk of lineside fires. FNPO Route has established a 'Fire Risk Protocol' with geographic routes and Charter Train Operators, that describes the risk assessment process and mitigations to be put in place to reduce the risk of steam related fires.

Network Rail is keen to work with stakeholders to identify new opportunities for development of the charter market to aid local economies. One opportunity is for FNPO Route to engage with Local Enterprise Partnerships to promote opportunities for new charter services. An example of this is the potential to operate day trip services from Southampton to London, providing excursions for visiting cruise ships docking at Southampton, offering passengers the opportunity to visit London for the day while the ship is docked.

An ongoing challenge is the ability to secure network capacity. FNPO is trialling strategic charter paths in the December 2018 timetable. This will then be developed further through CP6 in order that a catalogue of Strategic Paths is established. These paths would be gauge cleared for specific locomotives, and kept operationally robust and clear of vegetation. This approach minimises NR costs by avoiding bespoke planning and clearance, and provides more certainty for operators and customers.

Network Rail has a commitment to ensure effluent discharge is eradicated from the network by 2020. To achieve this FNPO Route is working closely with Charter Operators and rolling stock providers to find solutions which is challenging given the nature/age of heritage rolling stock, and the lack of depot discharge facilities.

The main CP6 objective the creation of a Strategic Capacity Statement for charters. The output will be a catalogue of robustly performing paths, which are fully gauge cleared, and have further operational characteristics such as watering locations and vegetation clearance.

In parallel, Network Rail is working on updating the rules applied to gauging steam locos, aimed at fewer prohibits being issued. The intention is to provide annual certification for regular running locomotives over specific routes, which will reduce the volume of bespoke gauging clearance required.

FNPO Route will also develop:

– Performance strategies for Charter Operators, detailing performance initiatives such as standby locos, and robust station dispatch arrangements
– Joint Safety Strategies with each Charter TOC, which will set out obligations on both the Operator and Network Rail, and will work towards achieving agreed safety targets. During CP6 we will develop a strategy for ETCS fitment and funding of Charter and heritage fleet, although it is not yet clear in what timescales charter operations might be affected by ETCS
– Network Rail will progress current discussions aimed at the elimination of effluent discharge from charter trains, as soon as is practicable. These discussions involve the charters community, ORR and DfT

The activities we plan to undertake to deliver these priorities are summarised in the table below.

Charters CP6 Strategy		Development and delivery of Charters Strategy in order to secure a sustainable future for charters.		
No.	**Key Constraints, Risks and Opportunities**	**What we plan to do**	**Owner**	**Timescale**
1	O Establish a catalogue of Strategic Capacity for Charters	Agree with Charter TOCs and Promoters a trial for Strategic Capacity in the Dec 18 timetable Establish a full catalogue of strategic capacity by December 2020	Charters CRE Charters CRE	March 2018 March 2020
2	O Work with ORR to review and support an appropriate regulatory regime for charters	Develop options for the contractual protection of charter paths, as well as the limitation of 'go anywhere' rights to bid Establishment of agreed options for an appropriate regulatory regime	Charters CRE Charters CRE	March 2020 March 2022
3	R Ability to develop a robust plan for the fitment of retention tanks to charter rolling stock	A plan is being developed to provide robust costs for the fitment of retention toilet tanks to charter heritage fleet with Charter TOCs. The costs associated with fitment of retention tanks to charter rolling stock is currently estimated at £10m.	Charters CRE	March 2019
4	R Ability to develop a robust plan for the fitment of ETCS to charters fleet	Agree plan with ETCS project for the funding and fitment of ETCS to charter fleet	Head of Freight Policy	March 2024
5	O Establish Joint Performance Strategies with Charter Operators	Agree and implement the detail of a performance strategy with each Charter TOC	Charters CRE	March 2019
6	O Establish a Joint Safety Plan with Charter Operators	Agree and implement the detail of a Joint Safety Plan with each Charter TOC, to include for example fire risk protocols, on train discipline, SPAD reduction plans	Charters CRE	March 2019

9. Aspirant Open Access Operators

FNPO Route currently represents all aspirant Open Access Operators (OAOs) within Network Rail.

FNPO is committed to support open access operations with the aim of increase passenger growth and improving customer satisfaction. We work collaboratively with the geographic routes and keep them informed as to the particular needs of open access operators, and the requirement to treat them fairly and consistently.

Aspirant OAOs occupy a niche position. They often have different (and often more complex needs) compared to franchised operators whilst having less railway experience and familiarity. FNPO Route provides a centre of expertise to advise them and represent these needs. These operator aspirations often;

– cross multiple route boundaries
– have multiple operator interactions
– occur outside of refranchising timescales

Grand Central and Hull Trains operate successfully on LNE Route, recording high levels of customer satisfaction.

First East Coast Trains will also commence open access operations on LNE&EM Route in 2020.

FNPO Route is currently representing Alliance Rail, Go-Op, and Swanage Railway with their open access aspirations.

Since FNPO Route assumed responsibility for Open Access Operators, the first-ever jointly negotiated Section 18 contract with an open access operator was awarded by ORR in 2015 to Network Rail and Alliance Rail.

OAOs are often funded by 3rd party investors who need certainty of access rights in place before they will confirm capital investment (e.g. in rolling stock) – whereas ORR would prefer that investment funding to be in place before they grant of access rights. Securing access to the network in advance is thus not straightforward.

Priorities

There is a complex relationship between Government, ORR and OAOs if there is any prospect of an OAO affecting franchise revenue streams, irrespective of abstraction tests carried out by the ORR. Potential OA operations are usually highly political sensitive and require careful management.

The access charging regime for open access operators may change in CP6, with open access operators paying a contribution to the fixed charge. If that happens, it is anticipated that the process of gaining access to the network for OAOs will become easier.

There would then be an opportunity for Network Rail to work with aspirant OAOs to agree how to improve the process for operators seeking capacity on the network.

FNPO will work with SO Capacity Planning and OAOs to establish a robust process for the assessment of capacity for applications involving timetables beyond the current timetable development stage.

10. Activities & expenditure

This plan is predicated on the key assumptions laid out in Appendix A and will be impacted as these assumptions change

10.1 Cost and volume summary

Operating Expenditure (post headwinds and efficiencies in 17/18 prices)

	Unit of measure	CP5						CP6						CP7
		14/15	15/16	16/17	17/18	18/19	CP5	19/20	20/21	21/22	22/23	23/24	CP6	24/25
Controllable Costs	£m	3.7	3.3	3.9	5.2	5.6	**21.7**	5.6	5.7	5.4	5.4	5.4	**27.3**	**5.4**
Railway Ombudsman	£m	N/A	N/A	N/A	N/A	N/A	N/A	0.2	0.2	0.2	0.2	0.2	**0.8**	**0.2**
Total	**£m**	**3.7**	**3.3**	**3.9**	**5.2**	**5.6**	**21.7**	**5.8**	**5.9**	**5.6**	**5.6**	**5.6**	**28.1**	**5.6**

10.2 Controllable Costs.

Approximately 90% are staff and related costs. The increases in late CP5 reflect the transformation programme into the 'FNPO Route'.

FNPO controllable costs are not directly linked to traffic volumes – but to the complexity of customer relationships.

Paradoxically the decline in coal will increase the requirements of the customer teams to ensure the conditions for traffic growth in other sectors, as well as safety improvement, are in existence.

These requirements have become more complex given the structural, and geographic changes of the rail freight market with much of the new traffic growth in construction and intermodal being realised in the South East.

10.3 Railway Ombudsman

These are costs relating to the running and compensation of the ombudsman scheme as detailed in Section 6.9.

10.4 Headroom

We do not want to be in a position where we have to re-plan our activity every time a risk materialises in CP6 as this would be very inefficient. Therefore, our strategic plan includes £4m of route headroom, which has been created by holding back some SoFA funding from Network Rail's overall CP6 plan. This route headroom is particularly for the business performance risk we face in the control period.

Ideally, actual results will be in line with our CP6 plan and we will be able to release our route headroom to invest it in improving the railway – this headroom can be considered as contingent investment.

If needed, we will also have the opportunity to access portfolio headroom in CP6, particularly for inflation risk. Again, we will ideally spend this on further investment to improve the railway. Portfolio headroom will be controlled through our corporate business planning process. Increased investment will depend on successful delivery of the company's plans and good business cases.

Note that figures here exclude connections income which is recognised within Other Single till income noted in Table 12.6.

Capital Expenditure - Renewals (in 17/18 prices)

	Unit of measure	CP6						CP7
		19/20	20/21	21/22	22/23	23/24	CP6	24/25
ETCS Fitment (Freight)	£m	23.2	43.7	44.1	60.1	66.9	**238.0**	**61.6**
ETCS Fitment (Heritage)	£m	0.5	0.8	6.0	10.0	12.8	**30.0**	**6.0**
Total	**£m**	**23.7**	**44.5**	**50.1**	**70.1**	**79.7**	**268.0**	**67.6**

Note that included within the Freight ETCS fitment figures is, £1m for additional staff costs within the FNPO team, and an element of contingency covering schedule 8 risk held by Network Rail for delays resulting from ETCS in cab failures. These are contingent on the funding for ETCS and therefore are not include in the core FNPO funding in sections 11 and 12.

Network Rail is committed to delivering a digital railway. The Digital Railway Programme (DRP) has developed five SOBCs (with the Routes involved and other stakeholders) for digital upgrade schemes. These SOBCs represent an early stage of the investment decision framework (HMT's 'Green Book') as required in the memorandum of understanding agreed between Network Rail and the DfT signed on 17 March 2016.

The SOBCs for upgrading are integrated into the Route Strategic Plans, reflecting the decision of ExCom Plus on 4 July 2017 that the company's CP6 plans should present its commitment to digital. Where appropriate, the net funding amounts correspond to the digital railway elements of this RSP i.e. represent the additional funding required above that needed to fund conventional renewals that were planned prior to integration of DR in addition to committed supporting enhancements.

It is the DR programme's assumption that development funding in CP5 for progression of digital upgrades, in order to deliver them within CP6/7 will come from the NPIF funds. Where there is a shortfall in government funding, this will need to be obtained from other means. DfT funding via the CP6 determination or NPIF is the preferred funding source, although third party funding may also present an opportunity to progress schemes where government funding is not available.

Additionally, there may be options for private finance, although this will still require the identification of a funding source for the repayment of capital and finance charges.

Due to the “go anywhere” nature of freight, the ETCS Freight Programme is a key enabler prior to any broader ETCS infrastructure deployment. As such the ETCS Freight Programme has been established, under the principles of Network Change, to prepare the FOCs to transition to ETCS businesses. The FOCs have been involved from the inception of the programme to ensure their end requirements are met. The programme is essentially in two parts:

– First in Class (FiC) vehicles to prove the design and integration of the ETCS onboard equipment to the vehicle and ensure the associated approvals are complete and the design, material supply and instructions are ready for fleet roll out - this part is more a design and development environment
– Fleet fitment rolls out the proven design to the fleet – this part is more of a ‘production’ environment

In support of the proposed infrastructure ETCS deployments, the current programme schedules the FiC from 2018 to 2022 with the fleet activity commencing 2022 to 2028. Should the infrastructure ETCS deployment plan demand a different vehicle delivery profile this will be change controlled into the ETCS Freight Programme. Associated with the vehicle fitments, the necessary business change activities within the FOCs also form part of the ETCS Freight Programme such as staff training and process and procedural updates.

The programme is structured around 3 main agreements:
Freight Commercial Agreements (FCAs) between Network Rail and each FOC to set out the activities the FOCs will undertake to support their fitment programmes, the compensation framework and the maturity criteria by which responsibility for the on-board equipment transfers to the FOCs Supply Agreement for the provision of up to 21 ETCS FiC projects between 2018 and 2022 and fleet fitment of up to 745 vehicles between 2022 and 2028. IP Signalling has led the procurement of a turnkey contract to make the supplier responsible for delivery of a working solution, with approvals as far as they are legally and efficiently able

Support Agreements which are tripartite between Network Rail, the ETCS supplier and the FOCs for the maintenance of the on-board equipment for 10 years (up to 25 years by exercising options). Responsibility for maintenance costs will transfer to the FOCs when the agreed criteria for system reliability and stability are satisfied.

The FCAs were signed on 7 December 2017 as were the supply and support agreements which had been the subject of a tender competition. The initial FiC works which are funded by the DfT through a Grant Offer and will deliver 3 FiC fitments and 6 completed designs. This (and the funding requested in the table above) will allow the FiCs to be completed, and the fleet fitment to commence, and the associated FOC business change to be undertaken, with the expectation of further funding for fitment in CP7 to complete the project in 2028.

The ETCS (Heritage) fund allows the development of solutions to fit historic vehicles with digital on-board equipment so that current network access rights held by Charter and Heritage Operators are maintained. Work completed to date in conjunction with the Charter and Heritage community has shown that the application of ETCS to such vehicles is feasible and an outline programme spanning CP6 and CP7 has been developed to undertake a fitment programme which is reflected in this submission.

11. Cost competiveness & delivery strategy

Summary of Capex headwinds and efficiency

All major capital expenditure included within the FNPO plan relates to Digital Railway activity and especially the freight in-cab ETCS fitment requirement to support enhancement schemes such as ECML ETCS. These are all set out in Strategic Outline Business Cases and therefore uncertainty still exists as to the precise timing and delivery costs which means they are not yet mature enough for consideration of Headwinds and Efficiencies.

Summary of controllable costs, headwinds and efficiencies

	Year			Year					
Opex	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	CP6 total
At current cost level (£m)	3.9	4.0	4.0	5.6	5.6	5.6	5.6	5.6	27.8
Head winds (£m)	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.4
Scope Change (£m)	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Efficiency (£m)	0.0	0.3	0.1	0.0	0.0	0.3	0.3	0.3	0.9
Post efficient spend (£m)	3.9	5.2	5.6	5.6	5.7	5.4	5.4	5.4	27.3

Excludes estimated ombudsman costs

Team Structure

Area	Headcount	Staff and related Costs* £m (Annual)
Network Management	24	1.8
Customer Management	22	1.5
Performance	12	0.7
Planning and Capability	10	0.6
Business Development	3	0.4
Managing Director	2	*Split out above*
Total	73	5.0

**Excludes indirect costs*

Headwinds

Area	Cost pressure name	Description	Mitigating actions	Control Period £
Controllable costs	Increasing complexity of Rail Freight market	Following the drop off in coal, and the increases in traffic in the South East, more resource is required to continue to meet our customers' requirements.	The business development team continues to work to identify new revenue opportunities to offset against this.	400k

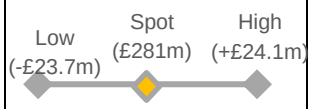
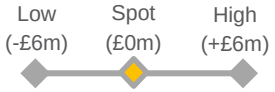
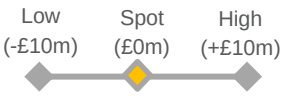
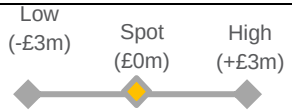
Efficiencies (FNPO funding)

Area	Efficiency name	Type of efficiency	Description	Control Period £
Controllable costs	Continuous improvement	Cost reduction	Following the rightsizing of the team through the transformation programme to create the FNPO route – the team is committed to identifying methods to increase our outputs and therefore efficiency going forward.	900k

Efficiencies (Not to be realised in FNPO books)

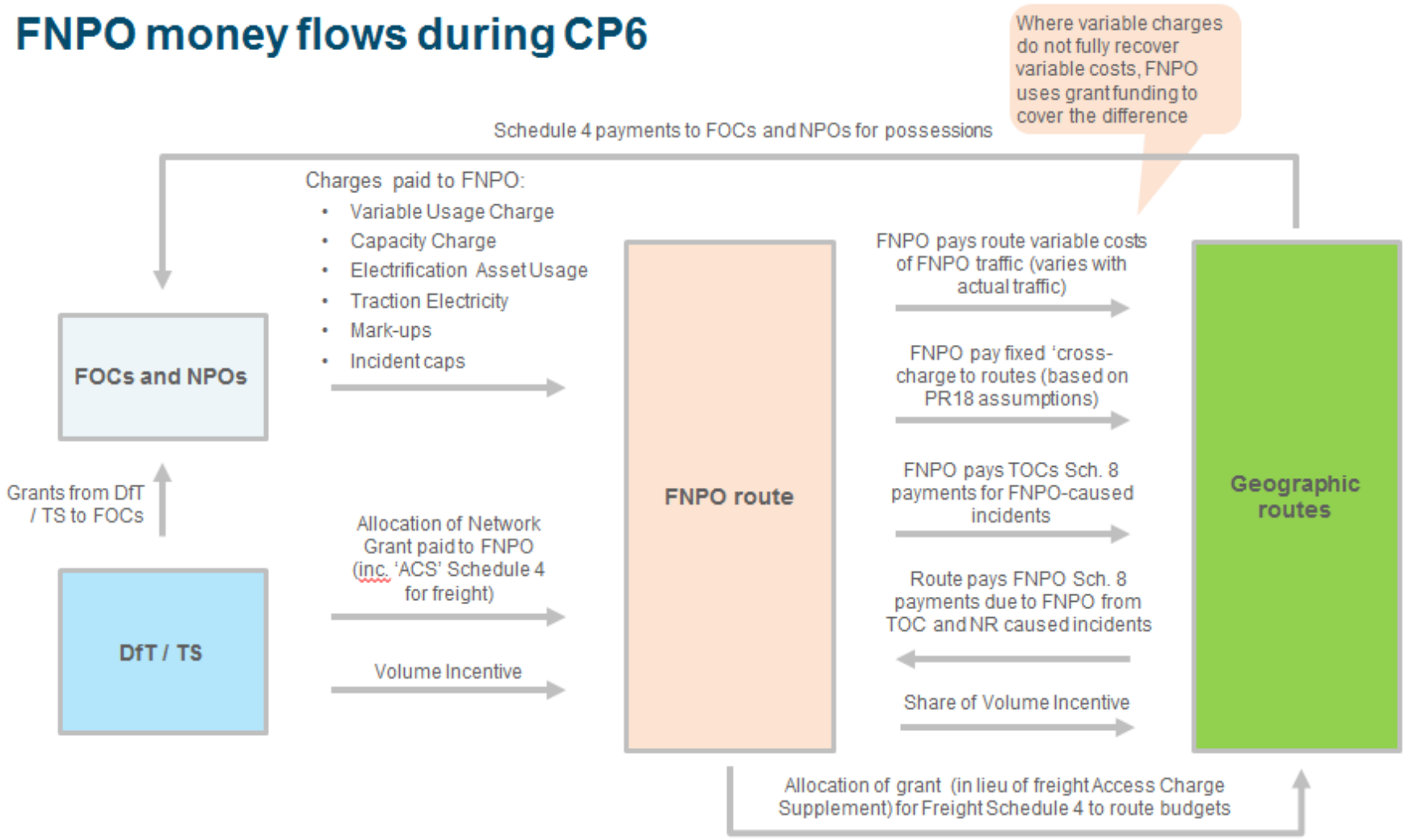
While the FNPO finances may not lend themselves to large scale efficiencies, FNPO intends on setting up a Freight Infrastructure Optimisation programme. This programme will drive efficiencies and savings in CP6 within the geographic routes where infrastructure previously used extensively by coal traffic can be downgraded or scrapped. This programme is in its infancy and quantification of benefits is still to be done in this area. The mechanism for incentivising the FNPO route to collaborate with geographic routes during this programme is still being discussed, but is likely to revolve around the sharing of FPM (financial performance measure) between routes where efficiencies are realised.

FNPO Uncertainty Analysis

Area: (R, M, O, S, Income)	Potential range (low – spot – high) (Control period)	Summary of key drivers of range	% Uncertainty
Freight Income		Freight income can be highly variable, and is affected by a wide range of economic drivers. As part of the preparation for CP6, consideration has been given to multiple plausible scenarios for the future of Freight traffic. The range set out here represents the difference between the best case scenario (conditions favour rail over road, with high economic growth), and the worst case scenario (conditions favour road over rail, with low economic growth). The forecast included in the plan is believed to be the most likely outcome, however the nature of Rail Freight lends itself to market pressures, which should fall within this range. ***Note that due to the FNPO money flows model, which involves passing variable income to geographic routes as a proxy for variable costs – this uncertainty sits within the geographic routes.***	+9% -8%
NPO Schedule 8		The schedule 8 regime is designed to be net neutral, however there is a possibility of discrepancies between NPO on Self income and the related NPO on TOC costs that Network Rail incurs. This has been noted during CP5 at times, and leaves both a risk and opportunity within the plan that is mostly outside of Network Rail's control. It depends on where the TOC on Self delay happens and therefore which other operators are affected. CrossCountry schedule 8 in particular could provide large volatility given the geographical reach this operator has. ***Note that due to the FNPO moneyflows model, which involves holding the geographic routes neutral for NPO on TOC incidents, this discrepancy will exist within the FNPO books. FNPO does not have the ability to fund a shortfall here and therefore this risk needs to be covered through another mechanism.***	N/A
Freight Schedule 8		The schedule 8 regime is designed to be net neutral, however there is a possibility of discrepancies between FOC on Third Party income and the related FOC on TOC costs that Network Rail incurs. This has been noted during CP5 at times, and leaves both a risk and opportunity within the plan that is mostly outside of Network Rail and FNPO's control. It depends on where the FOC on Third party delay happens and therefore which other operators are affected. Freight covers the whole network and therefore could produce a great deal of volatility in this figure. ***Note that due to the FNPO moneyflows model, which involves holding the geographic routes neutral for NPO on TOC incidents, this discrepancy will exist within the FNPO books. FNPO does not have the ability to fund a shortfall here and therefore this risk needs to be covered through another mechanism.***	N/A
Freight Schedule 8		The freight schedule 8 regime is likely to be calibrated on Network Rail's FDM trajectory. Performance above or below this will result in a financial flow between Network Rail and the FOCs. Across the control period, FDM is expected to be within the range of 93-95% and therefore this is our range of uncertainty. ***Note that due to the FNPO moneyflows model, which involves passing variable income to geographic routes as a proxy for variable costs – this uncertainty sits within the geographic routes.***	+9% -8%

Area: (R, M, O, S, Income)	Potential range (low – spot – high) (Control period)	Summary of key drivers of range	% Uncertainty
Freight Schedule 4	Low (-£8m) Spot (£91.7m) High (+£19m) 	Freight schedule 4 costs have been estimated along with the passenger ACS estimates. These are based on Cp6 maintenance and renewals plans, and assumptions around the emergency timetable requirements. Any changes within these plans, and late notice possessions will reduce the certainty over this expenditure. The uncertainty around the renewals work bank has therefore been used here as a % estimate. ***Note that due to the FNPO moneyflows model, which involves recognising freight schedule 4 in the geographic routes this uncertainty sits within the geographic routes.***	+21% -9%
FNPO Operating expenditure	Low (£-2.8m) Spot (£27.3m) High (£2.8m) 	Operating expenditure within FNPO, and previously the Freight team, has generally been seen to be within 10% of the operating expenditure budget, therefore the range of uncertainty here is relatively small.	+10% -10%

FNPO money flows during CP6



Please note: In this diagram, we do not show the step where income is received into NR Centre (i.e. by Treasury) and passed onto routes. We also do not show payments to central functions and System Operator

12. CP6 regulatory framework

This chapter sets out the funding and financing implications of our strategic plan for Control period 6 (CP6), which runs from 1 April 2019 to 31 March 2024.

The FNPO route will have its own revenue requirement for CP6, similar to the 8 geographic routes and the system operator.

The FNPO financials will incorporate track access income from all Freight and National Passenger operators, which the FNPO route will then 'pass' onto the geographic routes for use of the track – acting as a 'super user' on behalf of our operators (this is noted as Income from FNPO in each route strategic plan). This will cover geographic fixed and variable costs associated with Freight and Charter traffic, as well as CrossCountry and Caledonian Sleeper. These 'money flows' will also incorporate recognition of schedule 4 and 8 costs within the geographic route books to incentivise the right areas of the business (for example schedule 4 in geographic routes as they make the decision to take possession of the track, or that the FNPO will hold other routes neutral for FOC/NPO on TOC delays).

[note that the FNPO submission currently includes freight schedule 4 and 8 which will be "budget flexed" to the other routes in CP6 – this is being done to keep all freight finances in one place while discussions are had around the pricing regime].

This methodology will allow the FNPO route financials to be managed like a route business – providing completeness and transparency over income and costs relating to our customers' activity and therefore providing greater insight and opportunity to drive efficiencies network wide. It will also allow FNPO to hold geographic routes more accountable for our customers' interests. The risk/opportunity window around track access income will therefore sit within the geographic routes, as the FNPO route passes variable income onto the geographic route via the 'money flows' model. This will serve to incentivise the geographic routes to operate, maintain and renew the railway in an efficient manner.

Conversely, there is a risk that, if the schedule 8 regimes are not calibrated accurately, there may be a disconnect between income received from TOC on Self/FOC on TP delays, and expenditure from the resulting TOC on TOC/FOC on TOC. This will result in greater transparency of the regimes, however it is also a risk that cannot be mitigated by the route itself, and annual wash-ups from geographic routes will be needed to cover this.

Network Rail's key areas of influence in the development of the rail freight sector are therefore most directly related to Network Capacity and Capability and through its freight estate freehold interests, Terminal Capacity and Capability. Moreover, Network Rail can have positive influence over the effective development of the requisite connecting infrastructure relating to third party terminal developments on private rail adjacent freehold.

12.1 Summary of FNPO route expenditure assumptions

Table 12.1 sets out the proposed route expenditure for CP6. It includes all costs that are incurred directly by the FNPO route and central costs that are allocated / attributed to the FNPO route. However, it does not include the geographic route costs that are allocated / attributed to the FNPO route. These are shown in section 12.3.

Table 12.1: CP6 forecast of FNPO route expenditure

£m in 2017/18 prices	19/20	20/21	21/22	22/23	23/24	CP6
Route expenditure						
Operations *	6	6	6	6	6	**28**
Schedule 4 & 8	21	18	19	19	14	**92**
Allocated / attributed expenditure						**0**
Traction electricity	9	9	9	10	10	**47**
Industry costs and rates	0	0	0	0	0	**0**
System Operator	7	8	9	8	8	**40**
Central support and operations	0	0	0	0	0	**0**
Risk and uncertainty allowance	0	0	0	0	0	**0**
Central renewals	0	0	0	0	0	**0**
Group Portfolio Fund	1	1	2	2	2	**8**
Route costs**	1,134	1,219	1,232	1,158	1,089	**5,832**
Total expenditure	**1,178**	**1,261**	**1,277**	**1,202**	**1,129**	**6,047**

** Excludes Digital railway capital expenditure noted in section 10.*

*** Shows expected 'internal recharge' paid by FNPO route to geographic route for FNPO use of geographic routes' infrastructure.*

12.2 Revenue requirement

Table 12.2 sets out the CP6 route revenue requirement. The net revenue requirement is the amount of income that we need to recover from customers and funders in CP6 to deliver the outputs in our route plan.

We have calculated the revenue requirement based on identifying all costs (including amounts paid to geographic routes) relating to the route. Under this approach we calculate total fixed and variable cost relating to Freight and National Passenger operators, expected schedule 4 & 8 costs (which will be noted as an 'income' in the geographic route submissions) and total operating expenditure. Added to these will be the allocation of central costs to form a total cost base that will need to be recovered through charging or grant income.

Table 12.2 CP6 revenue requirement

£m in 2017/18 prices	18/19	19/20	20/21	21/22	22/23	23/24	CP6
Route support, operations and maintenance	6	6	6	6	6	6	**28**
Central support and operations	0	0	0	0	0	0	**0**
Traction electricity, industry cost and rates	7	9	9	9	10	10	**47**
Schedule 4 & 8 **	11	21	18	19	19	14	**92**
System Operator	0	7	8	9	8	8	**40**
Group Portfolio fund	0	1	1	2	2	2	**9**
Allowed Return	0	0	0	0	0	0	**0**
Amortisation	0	0	0	0	0	0	**0**
Tax	0	0	0	0	0	0	**0**
Gross revenue requirement		**44**	**43**	**45**	**44**	**40**	**216**
Other single till income	(4)	(4)	(4)	(4)	(4)	(4)	**(20)**
Net revenue requirement before allocation of route costs		**40**	**39**	**41**	**40**	**36**	**197**
Freight avoidable costs (including variable costs)*	N/A	302	330	347	339	320	**1,638**
NPO and Charter avoidable costs (including variable costs)*	N/A	188	199	205	187	168	**947**
Minimal network geographic route costs allocated to FNPO*	N/A	644	690	680	632	601	**3,247**
Net revenue requirement		**1,174**	**1,258**	**1,273**	**1,198**	**1,125**	**6,029**

** Shows expected 'internal recharge' paid by FNPO route to geographic route for FNPO use of geographic routes' infrastructure.*

*** Freight Schedule 8 is assumed as nil for CP6 due to recalibration, therefore only schedule 4 and Service Variations and Cancellations shown here*

12.3 Breakdown of FNPO related route costs

The majority of the FNPO route revenue requirement is made up of a 'cross-charge' from the FNPO route to geographic routes for use of geographic routes' infrastructure by freight and national passenger operators. Table 12.3 provides a breakdown of this 'cross-charge'

Table 12.3 Breakdown of FNPO-related geographic route costs

£m in 2017/18 prices	19/20	20/21	21/22	22/23	23/24	CP6
Variable geographic route costs allocated to FNPO (SRMC)						
Freight	49	50	53	56	61	**269**
NPO and Charter	15	15	15	15	15	**75**
Total	**64**	**65**	**68**	**71**	**76**	**344**
Other avoidable geographic route costs allocated to FNPO						
Freight	253	280	294	283	259	**1,369**
NPO and Charter	173	184	190	172	153	**872**
Total	**426**	**464**	**484**	**455**	**412**	**2,241**
Minimal network geographic route costs allocated to FNPO						
Freight	435	469	469	437	416	**2,226**
NPO and Charter	209	221	211	195	185	**1,021**
Total	**644**	**690**	**680**	**632**	**601**	**3,247**
Total geographic route costs allocated to FNPO	**1,134**	**1,219**	**1,232**	**1,158**	**1,089**	**5,832**

12.4 Income

We summarise the income that we are forecasting from each charge in CP6. A more detailed breakdown of income can be found in table 12.5.

The income forecast, below, reflects forecast CP6 traffic levels and is consistent with the CP6 revenue requirement set out in Table 12.2 above. However, it assumes the use of CP5 uncapped access charge rates for freight and continuation of CP5 rates for National Passenger Operators, rather than making assumptions about how the level and structure of charges might change in CP6. The capacity charge has, however, been removed in line with the decision made by the ORR. It should be noted however, that should rates be uncapped in CP6 this would represent a scenario where road may become more favourable than rail and materially affect these forecasts.

Freight traffic levels have been forecast using the outputs of the MDS Transmodal Rail Freight Forecasts draft report. Of the four scenarios, Network Rail believes that an average across all four to be most appropriate. This reflects that we expect medium market growth and conditions that don't favour either rail or road. These assumptions are heavily dependent on government policy and the health of the UK economy. Should there be material changes in either these assumptions will need to be reviewed with a likely material impact on the financial position. These forecasts will be revisited ahead of the draft determination to allow further consideration around the appropriateness of the underlying assumption.

Table 12.4: Total CP6 income

£m in 2017/18 prices	19/20	20/21	21/22	22/23	23/24	CP6
Variable and 'other' charges	66	67	70	74	79	356
EC4T	8	8	9	9	9	43
Schedule 4 ACS	0	0	0	0	0	0
FTAC / Network Grant (SOMR)	896	958	1,003	960	881	4,698
Grant for tax, financing and BTP *	204	224	192	156	156	932
Other single till income	4	4	4	4	4	20
Subtotal (gross revenue requirement)	**1,178**	**1,262**	**1,277**	**1,202**	**1,129**	**6,048**
Capital grant for enhancements	0	0	0	0	0	0
Total income	**1,178**	**1,262**	**1,277**	**1,202**	**1,129**	**6,048**

**The allocation of geographic route costs to FNPO includes costs that will be funded by Government grants outside of the periodic review. These costs are: corporation tax costs, financing costs and BT Police costs. In Table 10.2, we have shown, separately, FTAC/Network Grant, which is intended to cover support, operations, maintenance and renewals costs, from grant funding for costs not covered by the SoFA.*

12.5 Breakdown of forecast CP6 access charges income

Table 12.5 provides a more detailed breakdown of the forecast of CP6 access charging income, which identifies the charging income by customer type, i.e. freight, national passenger operators and charter.

The income forecast, below, reflects forecast CP6 traffic levels and is consistent with the CP6 revenue requirement set out in Table 12.2. However, it assumes the use of CP5 uncapped access charge rates, rather than making assumptions about how the level and structure of charges might change in CP6.

Table 12.5: CP6 forecast of route access charging income

Charges	Year						CP6 total
£million in [2017/18 prices]	18/19	19/20	20/21	21/22	22/23	23/24	
Variable Usage Charge (VUC)	47.0	63.5	64.9	67.8	71.2	76.3	343.7
Freight	45.6	48.5	49.9	52.8	56.2	61.2	268.5
National passenger operators	13.6	13.6	13.6	13.7	13.7	13.7	68.3
Charter	1.4	1.4	1.4	1.4	1.4	1.4	7.0
Electricity for Traction Charge (EC4T)	6.0	7.9	8.4	8.6	8.8	9.2	42.9
Freight	3.0	4.0	4.2	4.3	4.4	4.6	21.5
National passenger operators	3.0	4.0	4.2	4.3	4.4	4.6	21.5
Charter	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electrification Asset Usage Charge (EAUC)	0.3	0.3	0.3	0.3	0.3	0.3	1.3
Freight	0.2	0.1	0.1	0.1	0.1	0.1	0.6
National passenger operators	0.0	0.1	0.1	0.1	0.1	0.1	0.7
Charter	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Freight Specific Charge	0.2	0.8	0.8	0.8	0.8	0.8	3.9
Freight - Other (ICACS & CCACS)	1.4	1.3	1.4	1.4	1.4	1.6	7.1
Schedule 4 Access Charge Supplement	14.5	0.0	0.0	0.0	0.0	0.0	0.0
FTAC/Network Grant	0.0	896.0	958.0	1,003.0	960.0	881.0	4,698.0
Grant for tax, financing and BTP*	0.0	204.4	224.3	191.5	155.8	156.0	931.9
Total charging income	**54.9**	**1,174.2**	**1,257.9**	**1,273.4**	**1,198.4**	**1,125.0**	**6,028.9**

12.6 Allocation of Group Portfolio Fund

Our CP6 plan includes funding for risk and uncertainty (the 'Group Portfolio Fund'). Ideally, actual results will be in line with our CP6 plan and this funding will be gradually released to invest in improving the railway. In CP6, some of this funding will be held at a route-level, with the remainder held at a portfolio-level. There is no 'central' route in our SBP submission so we have allocated all funding for risk and uncertainty to routes and System Operator. Table 10.4, below, includes our allocation of the Group Portfolio Fund for CP6.

Table 12.6: Allocation of Group Portfolio Fund

£m in 2017/18 prices	19/20	20/21	21/22	22/23	23/24	CP6
Group Portfolio Fund	1	1	2	2	2	**8**
Route	1	1	1	1	1	**4**
Portfolio	0	1	1	1	1	**4**

12.7 Breakdown of other single till income

Table 12.6 provides the breakdown of forecast other single till income for CP6. This represents Network Rail income that is received from sources other than track access charges and network grants.

Connections income is operating cost recovery relating to 3rd party connections maintained by Network Rail.

Table 12.7: CP6 forecast of other single till income

£m in 2017/18 prices	18/19	19/20	20/21	21/22	22/23	23/24	CP6
Other route income (connections income)	(3.9)	(3.9)	(3.9)	(3.9)	(3.9)	(3.9)	**(19.5)**
Total other single till income	**0.0**	**(3.9)**	**(3.9)**	**(3.9)**	**(3.9)**	**(3.9)**	**(19.5)**

12.7 Network Rail management connection income

Network Rail manages maintains and develops Britain's national rail infrastructure. Facility owners of freight or passenger facilities such as terminals, ports, sidings, depots, in order to use the rail network need a physical connection in place with Network Rail, consequently followed by the connection contract.

Connection contracts set out the rights and obligations between two parties in respect of the ongoing maintenance, repair and renewal of connecting infrastructure and come under the access provisions in the Railways Act 1993, any such agreements need to be approved by Office of Rail and Road (ORR).

The Model Connection Contract (MCC) is an ORR approved template, which has been developed on the same basis as the provisions in the model track access contracts, already produced and adopted for freight and passenger train operations.

The costs of maintaining, repairing and renewing connection infrastructure generally have both fixed and variable elements. That means, that some of the costs are present regardless of the level of traffic while other costs vary with the number of services operating over the connection.

We are currently undertaking work to review the current cost model, with the aim of updating the charging regime to align it with the asset lifecycle activities and unit rates used by the asset management teams. This will give great transparency of costs to our customers. This work is ongoing and we plan to engage and consult with customers during 2018/19, with a view to implementing any changes in CP6.

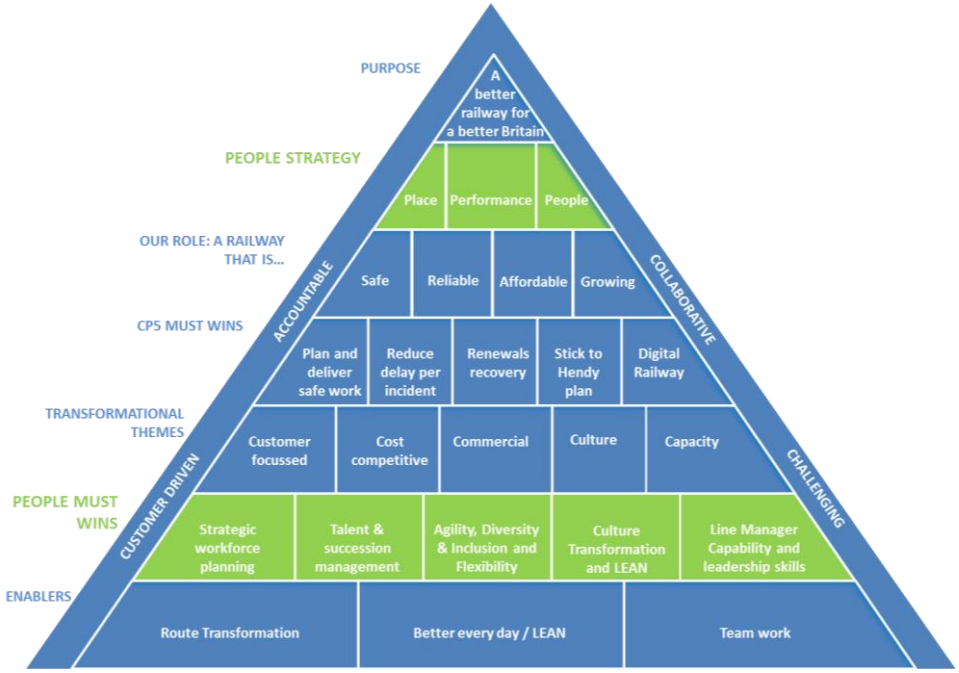
13. People strategy

Organisations should manage people within a planned and coherent framework that reflects the business strategy. This helps ensure that the various aspects of people management work together to develop the performance and behaviours necessary for the delivery of organisational value.

Chartered Institute of Personnel and Development

13.1 Objectives

The FNPO People Strategy forms part of our “Better Every Day Plan”. This has been aligned to the National People Strategy theme of ‘great people’, ‘great place to work’ and ‘high performance’. It also links into the priorities that have been identified going forward into CP6, these being structured around the five key People Must Wins; Strategic Workforce Planning, Talent and Succession Management, Agility, including D&I and Flexibility, Culture Transformation and Line Manager Capability and Leadership Skills. This in turn supports the delivery of a safe and reliable railway; while allowing for the activities necessary to engage, recruit, reward, recognise and retain our people and people managers. By defining specific areas to focus on, this strategy can be adapted and adopted flexibly as it matures within FNPO.



13.2 Strategic workforce planning

Strategic workforce planning is more important than ever before. The skills required are constantly adapting, for example, with the introduction of devolution and Digital Railway; and as such we must address the skills level gap which has been identified within the industry. This will enable us to meet the necessary performance level and operational needs of FNPO (e.g., the right number of people, with the right skills and capabilities at the right time). There needs to be a clear view of the numbers of people, the locations where they will be needed, and the skills sets they will require to perform the roles we have now, and in the future. Analysis needs to be far enough ahead to give us time to recruit develop and retrain the people to fill the roles.

13.3 Talent & succession management

The Talent Matrix is used to identify people with key skills and high potential in order to drive business performance across FNPO by developing, deploying, engaging and retaining talent. The purpose of this is to identify potential and develop individuals into their next role or provide sufficient challenges to retain them at their existing level. Personal Development Plans (PDPs) are used to document their development goals. This provides a pipeline of staff with the required skills that FNPO will need in the future.

Succession plans are the key control to confirm the resource pipeline for key roles in FNPO. It enables HR and line management to identify and address resource gaps for future requirements. This is by recruitment or longer term projects to attract candidates that can be developed into those roles.

13.4 Agility, Diversity & Inclusion and Flexibility

FNPO's activities align with Network Rail's vision to be an open, diverse and inclusive organisation. Achieving this will make us more receptive to new ideas, creativity and innovation, and help us to be more transparent and accessible. FNPO has a structured diversity and inclusion strategy which includes collaboration internally within Network Rail and the wider rail industry. This includes work to improve the health and wellbeing of our employees as well as further improving the gender diversity within FNPO. FNPO also has a focus on agile and flexible working which enables attraction and retention of a diverse and inclusive workforce.

13.5 Culture transformation and LEAN

Integrating continuous improvement into the business will help to increase collaboration and share best practice, resulting in greater innovation and more efficient ways of working whilst focusing on our customers' and creating more capacity to deliver strategic priorities / Must Wins. Within FNPO, we are striving to embed continuous improvement in all aspects of the business, including the employees' life cycle from Recruit, Reward, Recognise, Retain and Relate (Engage). We recognise that with opportunity and change comes risk, however change is possible when we involve our people from the outset. With strong leadership; and to anticipate and meet these risks, we should engage and communicate effectively with our employees and their trades unions.

13.6 Line manager capability and leadership skills.

Line manager capability and leadership skills are central to the successful implementation of the FNPO People Strategy. Leaders have a crucial part to play, not only in the consistent demonstration of leadership behaviours and leading by example with both customers and employees, but in the day-to-day management of people and operations and in the implementation of HR policies. It's therefore important that proper consideration is given to the way line managers are selected, developed and managed on an ongoing basis.

The activities we plan to undertake to deliver these priorities are summarised in the table below.

No.	Key Constraints, Risks and Opportunities	What we plan to do	Owner	Timescale
1.	O: We will be able to fill current and future vacancies with the right person, with the right skills, at the right time and in the right place.	– Develop and Implement a Strategic Workforce Plan Solution – Consistent and updated headcount forecast in place for all client areas. – Develop and implement resource plans and align with Strategic Workforce Plan solution. – Develop recruitment strategy for new entrants, apprentices and graduates to attract and retain people in line with the resource plan/strategic workforce plan and taking into account succession planning.	Route MD / Executive Team / HR	July 2019
2.	R: Increase in retention and fewer vacancies that can't be filled. Better career development for employees. .	– Quarterly Talent and Succession Forum in place to objectively review high potentials and emerging talent. – Robust and effective personal development plans (PDPs) in place and reviewed for all employees. – Succession Plans in place for all Exec direct reports and also their direct reports. Succession plans also developed below that for all key roles within client areas	Route MD / Executive Team / HR	Ongoing
3.	O: Meet expectations of the current and future workforce, and increase diversity whilst doing so, and be better able to fill vacancies internally by supporting people moving roles/location.	– Diversity and Inclusion Plan in place that promotes inclusive leadership and diversity throughout the FNPO Route. – Consistent demonstration of leadership behaviours throughout the FNPO Route. – Engagement Action plans in place, reviewed periodically and progress communicated quarterly. – In conjunction with FOC's, TOC's and FNPO, develop a programme for cross industry graduate placements and secondments opportunities.	Route MD / Executive Team / HR	Ongoing
4.	O: Integrating LEAN (Better every Day) into the business will increase efficiency and reduce costs whilst focusing on our customers' and creating more capacity within FNPO to deliver strategic priorities / Must Wins	– Deliver Safety, D&I, change and LEAN plans. – Promote the sharing of best practice improvements from 'LEAN' and visualisation across the business – Safety leadership to be embedded in our people processes e.g. performance reviews, recruitment, training and development and ensure that safety is a constant factor in any activity we plan and conduct – Work with the Trade Unions to facilitate an environment for the organisation to meet its objectives and targets. To work collaboratively with the Trade Unions and to agree the correct mechanisms to achieve our CP5 and CP6 targets.	Route MD / Executive Team / HR	Ongoing

5.	R: Reduce the risk of IR issues when making changes to the business. Faster decision made locally; reducing time/effort and improving customer experience.	– Aligned objectives that support the Business plan and Organisational behaviours – Measure in place to record the three key meetings of the performance year- objective settings, interim reviews and final reviews. – A structured programme of activity to support people managers which will provide advice and guidance on how to manage and lead people. – A focus on capability of people managers including training interventions. – People managers supported to ensure ease of access to people policies that are clear and easily understood by everyone	Route MD / Executive Team / HR	Ongoing

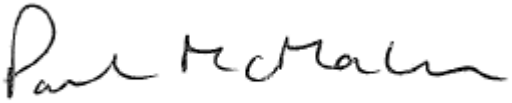
Sign-off

This document and accompanying templates are owned by the Managing Director Freight & National Passenger Operators (FNPO)

Submission of this document indicates confirmation that:

- **all appropriate level 1 assurance activities have been undertaken;**
- **the MD FNPO is satisfied with the quality, currency and appropriateness of the content of this document as well as the cost, volume and activity projections to which it refers;**
- **the signatories are satisfied that the plan has been assessed as deliverable, subject to the assumptions articulated in Appendix A.**

Authorised by:



Paul McMahon
Managing Director, FNPO — 19th January 2018

Simon Harding
Senior Management Accountant, FNPO — 19th January 2018

Appendix A - Key assumptions

Ref no.	Topic (e.g. access, deliverability, climate etc.)	Assumption	Areas impacted (e.g. all opex, track renewals, all spend etc.)
1	Safety	• c £22m safety improvement fund being identified and available • Collaboration with FOCs	• Safety targets in particular derailments, SPAD's and Customer Staff LTI's
2	Performance (FNPO)	• Collaborative working between Network Rail and Customers (Freight & Passengers) to deliver agreed joint performance strategies. • Material increases in Intermodal and construction traffic.	• FNPO Performance targets • FPM - Schedule 8 payments • Customer and Freight End User Satisfaction
3	Asset Management	• Geographical Route support of freight network optimisation programme	• Safety targets • Performance targets • Freight traffic growth • Customer and Freight End User Satisfaction
4	Capability	• Routes will maintain route capability e.g. linespeed, route availability	• Freight traffic growth • Capacity and capability to deliver improved average speed • Customer and Freight End User Satisfaction
5	Capacity	• Support from System Operator to optimise and develop timetable	• FPM • Freight traffic growth • Customer and Freight End User Satisfaction

Ref no.	Topic (e.g. access, deliverability, climate etc.)	Assumption	Areas impacted (e.g. all opex, track renewals, all spend etc.)
6	Rail freight growth	• Secure affordable sustainable access charges for Freight sector • DfT/TS support for funding freight enhancements. • Forecasts are based on conditions that do not favour either road or rail, and are therefore subject to change based on government policy. • Forecasts are based on medium market growth. • Forecasts and underlying will be reviewed in early 2018 against government policy and economic activity and forecasts.	• Net tonne mile targets • Service Plan Review • Capacity and capability to deliver improved average speed • Customer and Freight End User Satisfaction
7	Business development	• DfT/ ORR support for phased funding that supports freight sector 15 year, c£2bn strategic freight network development plan. • Support for innovative funding/financing arrangement to support growth and socio-economic value capture.	• Net tonne Mile • Service Plan Review • Capacity and capability to deliver improved average speed • Customer and Freight End User Satisfaction • FPM
8	Digital Railway	• Non-capital expenditure will be incurred as a direct result of the digital railway schemes noted in section 10.	• Operating expenditure • Schedule 8

Appendix B – Geographical Route Summaries

Anglia Route & Freight & National Passenger Operators (FNPO) Route

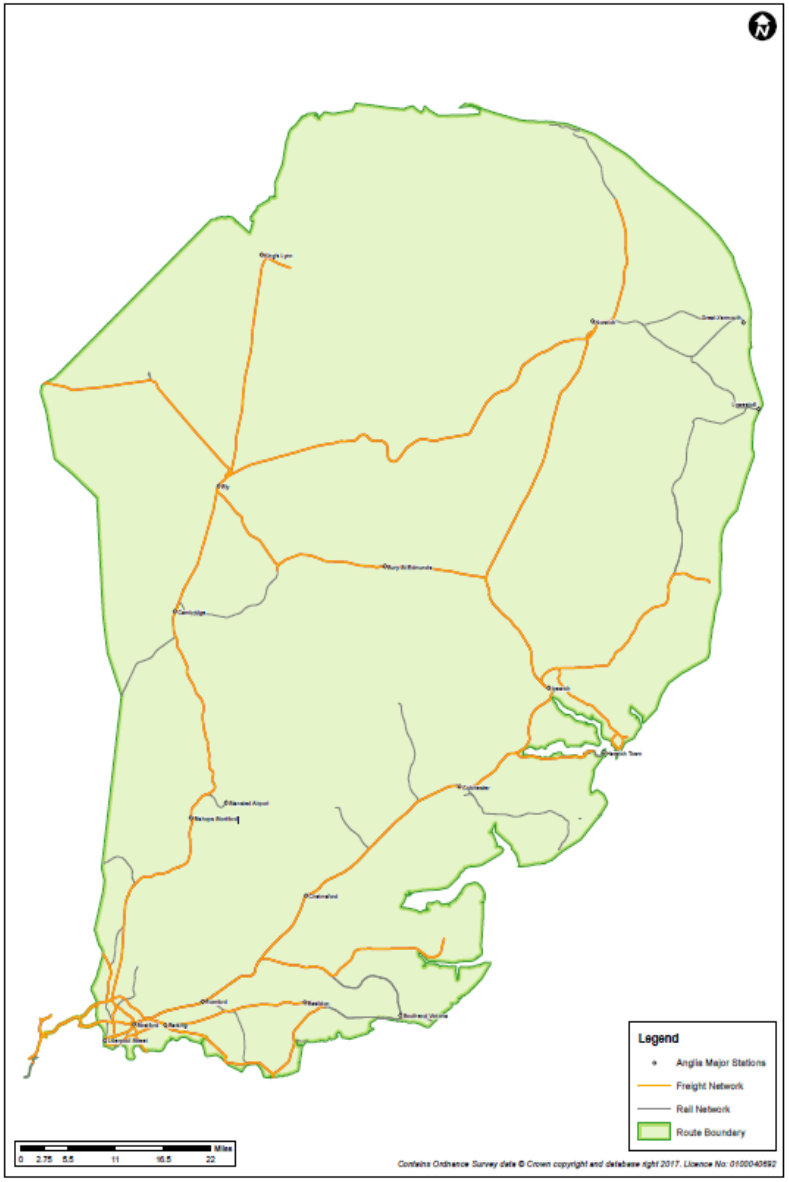
This summary sets out how the Anglia and FNPO routes will work together to deliver the Route Strategic Plan for Anglia. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

National Passenger Operators:
CrossCountry is a regular user of Anglia route, with services to and from Stansted Airport. In addition to the Ely area scheme in CP6, there are two important signalling schemes that could improve Cross Country services in CP6. These are the Cambridge area signalling renewal and Ely to Peterborough.

Integration meetings are schedules early in 2018 to connect the Ely scheme and signalling renewal team. The interdependencies that these schemes have are important and need monitoring at programme level to ensure maximum benefits are obtained.

Other key issues include right time arrivals from to and from Peterborough, TSR management and timely removal and incident reduction in Cambridge area.

Charter trains also operate across Anglia route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.



Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	Aggregate Growth O: Volume growth from sea-dredged sand facilities to concrete batching plants across the Southeast – Angerstein, Cliffe, Grain, Griffin Wharf, Dagenham to Purley, Battersea, Tolworth, Park Royal, Brentford R: Capacity and capability. Infrastructure not able to cope with traffic demand.	• Explore opportunities for longer and heavier trains maximising loco capability • Support introduction of new wagons that maximise payload/length ratio • Support Terminal and Yard developments – e.g. complete redevelopment of Bow Yard on the Anglia Route for rail freight to be a part of the future Olympic Legacy development in Stratford. • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Explore opportunities for new capacity – enhanced use of HS1 and the Channel Tunnel for rail freight to either free-up paths on the classic network or stimulate entirely new traffic

No	Key Challenges, Risks and Opportunities	What we plan to do
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Ports / Terminals (Felixstowe, London Gateway, Tilbury 2) R: Train paths and SRT discrepancies with longer, heavier trains R: Capacity and capability, including gauge clearance and diversionary capability	• Work with customers to maximise opportunities to increase length of trains • Increase Average Journey Speed origin to destination • Explore provision of recognised diversionary routes with adequate capability • Facilitate new terminal developments – future expansion of London Gateway with additional rail terminals similar to the Port of Felixstowe. Demand dependent, but rail needs to be fostered as the best solution for end users. • Explore opportunities for new capacity – Strategic Freight Corridor improvements on the cross country route from Felixstowe to the Midlands and the North including promoting the business cases for Haughley Junction Doubling, Ely-Soham Doubling, Ely area improvements, as well as off route enhancements at Leicester to facilitate the future growth in traffic from Felixstowe
3	**Gauge establishment** C: Establishment of recognised diversionary routes for gauge critical traffic	• Explore gauge clearance on key corridors, e.g. (GE Mainline, Thameside, North London Line, Gospel Oak-Barking, West Anglia Main Line), and provision of diversionary capability • Explore funding opportunities, including Third Party • Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows – reduced duplication
4	**Other Commodity Traffic Growth** O: Steel & other scrap metals O: Automotive O: Forest Products O: Bulk O: Aviation Fuel & other Petro-chemicals	• Work with customers to maximise opportunities for longer and heavier trains maximising loco capability • Support Terminal / Yard developments to facilitate growth • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading. Promotion of and assisting customers to set up new automotive flows and growing traffic from Dagenham and Purfleet Deep Wharf. • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use including the Parkeston Tip Sidings
5	**Franchise changes / Crossrail** R: Refranchising of Greater Anglia Franchise on Anglia seeks greater capacity on shared lines	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations including the introduction of Brantham Depot for Greater Anglia, an enhanced Ilford Depot for Crossrail and Greater Anglia
6	**Infrastructure enhancements / electrification** O: Greater capacity/opportunity following enhancement (Thameside/Great Eastern OLE Enhancements). O: Electrification of the Gospel Oak – Barking Line - opportunity for through electric rail freight to Ripple Lane & Barking. R: Loss of Capacity following timetable change. Crossrail and Greater Anglia on Anglia Route	• OLE upgrades could potentially present greater opportunities for electric rail freight on the GE and Thameside Routes. • Support Route forums (RSPG etc.) to influence scope and secure freight benefit following scheme delivery • FNPO, FOCs and Freight End Users to provide appropriate input into the decision making process • Work with Route Business development team to identify potential Third Party funding sources
7	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction R: Capacity for new aggregate and spoil flows from HS2 project	• Work with DfT, HS2 Ltd, FOCs and End User -customers to offer solutions to demands of major projects • Work with customers to manage the impact of major projects on their business (HS2) • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity, or bring out of use infrastructure back into use

8	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity Work with System Operator to support funded early stage timetable work for SRFI developers. Intermodal developments for Anglia will be the additional paths from Felixstowe and the expected expansion of London Gateway Intermodal Operation
9	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tarmac, Aggregate Industries)	• Work with end user -customers to develop business growth and support modal shift to rail • Work with end user -customers to strengthen service delivery and support

No	Key Challenges, Risks and Opportunities	What we plan to do
10	**Review of redundant and unused assets** O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network R: FOC objection to supporting Network Changes	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets and other assets including gauge, S&C (actual v published capability) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
11	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis. Keeping up emphasis on maintaining and enhancing major terminal infrastructure, including Bow. • Working with Routes and customers to establish and benchmark walking route use and condition. For instance establishing a walking route to the headshunt for the Carless Operation at Parkeston •
12	Timetable Review O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage and remove unused paths and agree strategic capacity • Work with FOC's to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding Train Slot • Work with the Route, System Operator and FOC's/TOCs where in upcoming major timetable re-casts the available capacity may be less than contracted rights, the new Greater Anglia and Crossrail Timetables for Anglia Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
13	Digital Railway O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs. The first major challenge will be the implementation of Traffic Management on the Thameside Route and ensuring that Freight is fully represented and interests protected as we move towards this new way of operating
14	Upgrades and Disruptive Possessions R: Major upgrade programmes including Crossrail, Thameslink and Great Eastern Track and S&C renewals including High Output will require significant disruptive access	• Champion requirements of FOCs and Freight End Users so that services can operate as required during disruptive possessions including availability of diversionary routes and timely provision of capacity studies to identify train service capability

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity proposed quarterly.
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g.Thameside) • Use of Control Rooms and Visualisation at major sites (e.g. Felixstowe) • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement arrangements.
	Measuring FDM and FDM-R	Focus on defined key routes: • Asset Performance • Asset Resilience • Effective contingency plans	• Target FDM-R Route target for end CP6 of 92.9% • Input to Route CP's for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM. FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes • Transparent network capability per route for customers	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections e.g. (Route TBC) • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. (Route TBC) for aggregates • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers. • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into • Engineering Access Statements • Access Planning Requests	Engineering plans that are; • Transparent • co-ordinated • consistent across Routes • planned well in advance and • take into consideration contingency arrangements for long distance services	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed.
	Review Freight Only lines and other infrastructure	Understand the potential to reduce OMR.	• Review based on existing & predicted future use • Input into track/structures/maintenance plans • Outputs to be agreed with customers/ORR	SRFM/ Route COO/ RAM	Definition of Review by Dec 2017. Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them.	SRFM/ Route COO/ RAM	Ongoing periodic review of performance impact of TSRs to be agreed per Route

LNE&EM Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the LNE&EM and FNPO routes will work together to deliver the Route Strategic Plan for LNE&EM. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

National Passenger Operators:
CrossCountry is an extensive user of LNE&EM route and key issues include boundary handover of services, as well as the management of fatalities and trespass incidents. The access strategies on LNE&EM for CP6 are key as well as TOC mutually agreed and balanced service recovery plans during times of perturbation, with the aim of reducing overall industry

Caledonian Sleeper operates on the East Coast Main Line into Kings Cross, when diverted away from the West Coast Main Line due to engineering possessions

Charter trains also operate across LNE&EM Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.

Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from Peak District, Leicestershire and Yorkshire R: Capacity and capability (e.g. MML South currently congested infrastructure), infrastructure not able to cope with traffic demand	• Explore opportunities for longer and heavier trains maximising loco capability • Support introduction of new wagons that maximise payload/length ratio • Support Terminal and Yard developments – e.g. York and Newcastle areas. • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Explore opportunities for new capacity – e.g. Hope Valley and MML south
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Ports / Terminals (e.g. Felixstowe, London Gateway, Teesport, Immingham, Hull) R: Train paths and SRT discrepancies with longer, heavier trains R: Capacity and capability, including gauge clearance and diversionary capability	• Work with customers to maximise opportunities to increase length of trains • Increase Average Journey Speed origin to destination • Explore provision of recognised diversionary routes with adequate capability • Facilitate new terminal developments – e.g. Rossington, Radlett and East Midlands Gateway • Explore opportunities for new capacity – e.g. F2N schemes, Leicester and Trans-Pennine

No	Key Challenges, Risks and Opportunities	What we plan to do
3	**Gauge establishment** C: Establishment of gauge (e.g. Immingham to Doncaster and Trans-Pennine) and recognised diversionary routes for gauge critical traffic R: Exclusion from major programmes (e.g. Trans Pennine Route Upgrade), and funding	• Explore gauge clearance on key corridors, e.g. Trans-Pennine and Northallerton to Tees via Yarm, and provision of diversionary capability • Explore funding opportunities, including Third Party • Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows – reduced duplication
4	**Other Commodity Traffic Growth** O: Coal O: Steel R: Biomass O: Automotive O: Forest Products O: Bulk R: Capacity and capability on certain routes	• Work with customers to maximise opportunities for longer and heavier trains maximising loco capability • Support Terminal / Yard developments to facilitate growth • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use
5	**Logistics and Mail Opportunity** O: Potential mail growth on main corridors and premium logistics developments	• Explore opportunities for business growth with existing and potential new customers
6	**Franchise changes** R: Refranchising of TOCs in Route seeks greater capacity on shared lines	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations
7	**Infrastructure enhancements / electrification** O: Greater capacity/opportunity following enhancement (e.g. East West Rail on LNE&EM) R: MML Electrification to Kettering – risk to freight capacity O/R: Current enhancement proposals (e.g. ECML loops) may not be delivered due to affordability. Potential Third Party funding to secure delivery	• East/West Rail provision for gauge and freight diversions • Trans-Pennine provision for gauge and freight growth including diversionary capability • MML Electrification • Support Route forums (RSPG etc.) to influence scope and secure freight benefit following scheme delivery • FNPO, FOCs and Freight End Users to provide appropriate input into the decision making process • Work with Route Business development team to identify potential Third Party funding sources
8	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities (e.g. Tunnel segments) in to support construction R: HS2 routing requires the removal and re-location of existing freight facilities (e.g. Toton, Leeds Freightliner Terminal, Leeds Midland Road and Leeds Stourton Aggregates)	• Work with DfT, HS2 Ltd, FOCs and End-customers to offer solutions to demands of major projects • Work with customers to manage the impact of major projects on their business (HS2) • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) • Work with FOCs and Freight End Users to resolve conflicts with existing freight facilities (e.g. Toton, Leeds Freightliner Terminal, Leeds Midland Road and Leeds Stourton Aggregates) • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity, or bring out of use infrastructure back into use
9	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity • Work with System Operator to support funded early stage timetable work for SRFI developers

No	Key Challenges, Risks and Opportunities	What we plan to do
10	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tarmac)	• Work with end-customers to develop business growth and support modal shift to rail • Work with end-customers to strengthen service delivery and support
11	**Review of redundant and unused assets:** O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network R: FOC objection to supporting Network Changes	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets and other assets including gauge, S&C (actual v published capability) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
12	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis • Working with Routes and customers to establish and benchmark walking route use and condition
13	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage and remove unused paths and agree strategic capacity • Work with FOC's to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding Train Slot • Work with the Route, System Operator and FOC's/TOCs where in upcoming major timetable re-casts the available capacity may be less than contracted rights, e.g. ECML December 2019 timetable change • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
14	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	• Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs
15	**Upgrades and Disruptive Possessions** R: Major upgrade programmes such as MML, ECML and TRU will require significant disruptive access	• Champion requirements of FOCs and Freight End Users so that services can operate as required during disruptive possessions including availability of diversionary routes and timely provision of capacity studies to identify train service capability

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs by concentrating on Network Rail yard infrastructure, connecting sidings and walking routes conditions	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites • Complete review of activities undertaken at Network Rail locations for each customer (FOCs/TOCs) and including authorised walking routes/crew change locations etc • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customers within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments by concentrating on Network Rail yard and sidings infrastructure	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be established to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be established with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity proposed quarterly.
Performance	Right time performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Use of joint Control Rooms and visualisation at major sites (e.g. Immingham and Drax) • Local workings groups to be established where appropriate, e.g. Mountsorrel and Doncaster area • Re-brief of Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement arrangements.
	Measuring FDM and FDM-R	Focus on key defined routes – e.g. ECML, MML, TransPennine corridor and Immingham to Doncaster: Asset Performance Asset Resilience Effective contingency plans	• Target FDM-R LNE&EM target for end CP6 of 95.3% • Input to Route Contingency Plans for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset reviews with Route Asset teams to share traffic forecasts and asset challenges • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategies with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Identifying future capacity needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements • Capability constraints review – RA, gauge, HAW and other. Reconcile published versus actual infrastructure. Future plans for improvement to meet capacity requirements • Interactive maps for gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM. SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery by strategic route
	Review capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on the key freight corridors • Robust gauge cleared diversionary routes • Transparent network capability for each route	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections e.g. Radlett and East Midlands Gateway • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. York and Newcastle area for aggregates • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ NSO	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers	SRFM/ System Operator	Defined engagement process and inputs in place with Route Strategy by April 18

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Co-ordinated freight input into • Engineering Access Statements • Access Planning Requests	Engineering plans that are; • Transparent • co-ordinated • consistent across Routes • planned well in advance and • take into consideration contingency arrangements for long distance services	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Access Planning from March 2018 incorporating end to end Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed.
	Review Freight Only lines and other infrastructure	Understand the potential to reduce Operations, Maintenance & Renewals costs	• based on existing & reasonable future use • Input into track/structures/maintenance plans	SRFM/ Route COO/ RAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route.
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them	SRFM/ Route COO/ RAM	Ongoing periodic review of performance impact of TSRs to be agreed per Route

LNW Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the LNW and FNPO routes will work together to deliver the Route Strategic Plan for LNW. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

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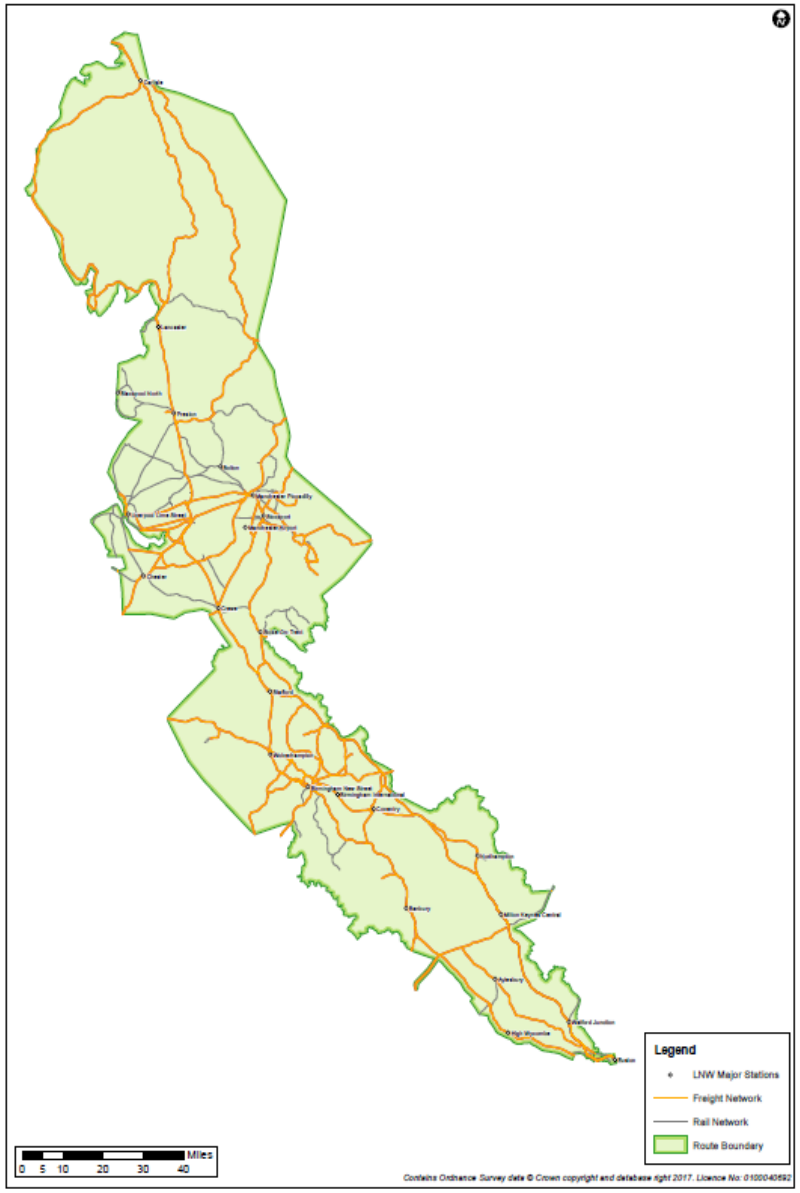
National Passenger Operators:
CrossCountry is an extensive user of LNW route and key issues include right time arrivals at Birmingham New St, as well as the management of fatalities and trespass incidents.

Caledonian Sleeper also operates nightly services, six nights per week, from London Euston via WCML to Glasgow, Edinburgh, Aberdeen and the Scottish Highlands. These services rely on overnight availability and reliability of WCML and the longer platforms at London Euston station.

Charter trains also operate across LNW Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.

Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from quarries in the Peak District area R: Capacity and capability. Infrastructure not able to cope with traffic demand.	• Explore opportunities for longer and heavier trains maximising loco capability • Support introduction of new wagons that maximise payload/length ratio • Support Terminal and Yard developments – e.g. Peak Forest and other locations required for sector growth. • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Explore opportunities for new capacity – e.g. Buxton URS lengthening, trial longer trains



No	Key Challenges, Risks and Opportunities	What we plan to do
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Ports / Terminals (Daventry, Hams Hall, Liverpool, Trafford Park) R: Train paths and SRT discrepancies with longer, heavier trains R: Capacity and capability, including gauge clearance and diversionary capability	• Work with customers to maximise opportunities to increase length of trains • Increase Average Journey Speed origin to destination • Explore provision of recognised diversionary routes with adequate capability • Facilitate new terminal developments at Daventry, Northampton, West Midlands and Parkside. • Explore opportunities for new capacity through better paths, longer trains, faster and cleaner paths.
3	**Gauge establishment** C: Establishment of recognised diversionary routes for gauge critical traffic	• Explore gauge clearance on key corridors and provision of diversionary capability • Explore funding opportunities, including Third Party • Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows – reduced duplication
4	**Other Commodity Traffic Growth** O: Coal O: Steel R: Biomass O: Automotive O: Forest Products O: Bulk	• Work with customers to maximise opportunities for longer and heavier trains maximising loco capability • Support Terminal / Yard developments to facilitate growth • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use • Support the development and introduction of the West Cumbrian Mining traffic flow to Teesside and other locations
5	**Logistics and Mail Opportunity** O: Potential mail growth on main corridors and premium logistics developments	• Explore opportunities for business growth with existing and potential new customers • Continue to work with Royal Mail to improve performance and train service delivery
6	**Franchise changes** R: Refranchising of TOC in Route seeks greater capacity on shared lines	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations
7	**Infrastructure enhancements / electrification** O: Greater capacity/opportunity following enhancement (East West Rail) R: Loss of Capacity following timetable change	• East/West Rail provision for gauge and freight diversions • Trans-Pennine provision for gauge and freight growth • Support Route forums (RSPG etc.) to influence scope and secure freight benefit following scheme delivery • FNPO, FOCs and Freight End Users to provide appropriate input into the decision making process • Work with Route Business development team to identify potential Third Party funding sources
8	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction R: HS2 routing requires the removal and re-location of existing freight facilities	• Work with DfT, HS2 Ltd, FOCs and End-customers to offer solutions to demands of major projects • Work with customers to manage the impact of major projects on their business (HS2) • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) • Work with FOCs and Freight End Users to resolve conflicts with existing freight facilities • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity, or bring out of use infrastructure back into use

No	Key Challenges, Risks and Opportunities	What we plan to do
9	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity • Work with System Operator to support funded early stage timetable work for SRFI developers
10	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future	• Work with end-customers to develop business growth and support modal shift to rail • Work with end-customers to strengthen service delivery and support
11	**Review of redundant and unused assets**: O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network R: FOC objection to supporting Network Changes	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets and other assets including gauge, S&C (actual v published capability) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
12	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis, • Working with Routes and customers to establish and benchmark walking route use and condition
13	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage and remove unused paths and agree strategic capacity • Work with FOC's to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding Train Slot • Work with the Route, System Operator and FOC's/TOCs where in upcoming major timetable re-casts the available capacity may be less than contracted rights. • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
14	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	• Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs
15	**Upgrades and Disruptive Possessions** R: Major upgrade programmes such as HS2 which will require significant disruptive access	• Champion requirements of FOCs and Freight End Users so that services can operate as required during disruptive possessions including availability of diversionary routes and timely provision of capacity studies to identify train service capability

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. meeting regularity proposed quarterly.
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g. Peak District, Daventry) • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal arrangements.
	Measuring FDM and FDM-R	Focus on defined key routes: - Asset Performance - Asset Resilience - Effective contingency plans	• Target FDM-R Route target for end CP6 of 93.9% • Input to Route Contingency Plan for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM. FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes • Transparent network capability per route for customers	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Capacity and Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth,(West Cumbrian Mining for coal) • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers. • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into Engineering Access Statements Access Planning Requests	Engineering plans that are; • Transparent • co-ordinated • consistent across Routes • planned well in advance and • take into consideration contingency arrangements for long distance services	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Engineering Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed.
	Review Freight Only lines and other infrastructure	Understand the potential to reduce OMR.	• Review based on existing & predicted future use • Input into track/structures/maintenance plans • Outputs to be agreed with customers/ORR	SRFM/ Route COO/ RAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route.
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them.	SRFM/ Route COO/ RAM	Ongoing periodic review of performance impact of TSRs to be agreed per Route

Scotland Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the Scotland and FNPO routes will work together to deliver the Route Strategic Plan for Scotland. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

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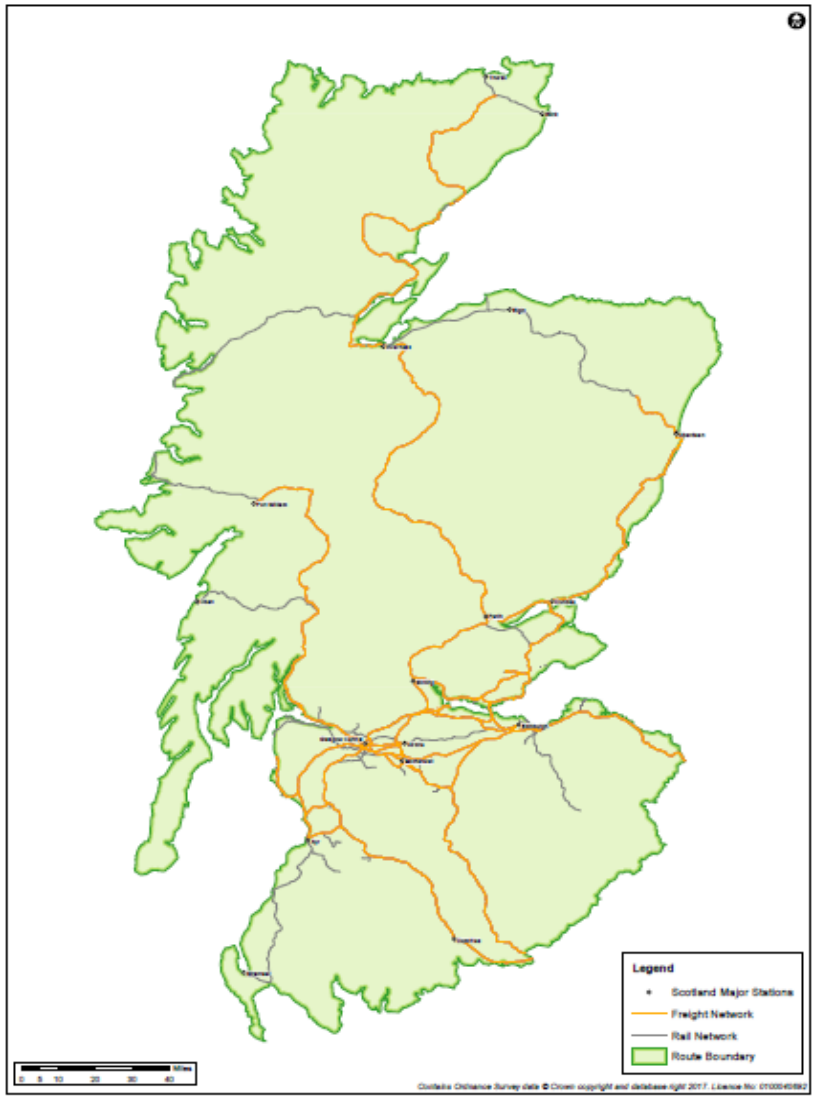
National Passenger Operators:
CrossCountry is an extensive user of Scotland route and key issues include the management of fatalities and trespass incidents and right time improvements on the Edinburgh to Glasgow corridor

Caledonian Sleeper also operates nightly services, six nights per week, from London Euston via WCML to Glasgow, Edinburgh, Aberdeen and the Scottish Highlands. These services rely on overnight availability and reliability of WCML and the longer platforms at London Euston station.

Charter trains also operate across Scotland Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.



Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Leading response to Transport Scotland's (TS) rail freight growth challenge** (O) Potential growth sectors identified by TS strategy include Intermodal, Retail (Food & Drink), Forest Products, Aggregates and Metals (R) Needs whole-sector approach, including FOCs, 3PLs, terminal operators, ports and rolling stock suppliers (R) Potential customers may decide not to "buy" for reasons outside the sectors' control (R) Scotland's size, geography and remoteness from markets	• Lead response to TS challenges: ○ Development of Industry Plan to target 7.5% volume growth target by end CP6 measured in kgtm ○ Making rail freight easier for Scottish customers to use ○ Commodity/area workshops ○ Flexible approach to new traffic • Develop the freight element of the Scottish Gauge Requirement

No	Key Challenges, Risks and Opportunities	What we plan to do
2	**Domestic and Deep Sea Intermodal Growth** (O) volume growth from ports (Teesport, Felixstowe) and inland terminals (Coatbridge, Mossend, Daventry) (O) volume growth in food & drink and retail sectors (R) Scottish Strategic Freight Network programme not completed (R) Planned capacity already used by other TOCs (R) Limited looping capability in Scotland (R) Train Paths and SRT discrepancies with longer, heavier trains	• Maximise use of 775m trains • Increase Average Journey Speed, origin to destination • W10/W12 gauge enhancement to allow 10'2" containers on megafret wagons over WCML to Central Belt • Facilitate earlier train arrivals into Grangemouth to meet retail customer requirements • Facilitate overnight path to Inverness to meet retail customer requirements • Explore provision of recognised diversionary routes with adequate capability • Facilitate new terminal developments or terminal capacity enhancements • Explore opportunities for new capacity eg Mossend area enhancements
3	**Gauge Establishment** (C) Establishment of recognised diversionary routes for gauge critical traffic	• Explore gauge clearance on key corridors e.g. WCML to Grangemouth, G&SW, Central Scotland to Inverness and Aberdeen. • Explore funding opportunities, including Third Party • Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows • Review of RT3973 provisions and work with Scotland Route to 'protect' existing capability
4	**Aggregates Growth** (O) volume growth from Scottish quarries (R) Limited volumes (R) Proximity to markets	• Facilitate new terminal developments • Explore opportunities for longer and heavier trains, maximising loco capability • Support Terminal/Yard developments. • Support introduction of ''pop up' terminals, bringing out of use infrastructure back into use and lineside loading potential. • Review requirements for HAW traffic on lower RA routes
5	**Forest Products secured to rail** (O) volume growth potential (R) Lack of geographically suitable loading/unloading sites. (R) Historic customer experience may inhibit development (R) Double handling from forest to road to railhead reduces the attractiveness of rail	• Facilitate new loading / unloading points, including minimum cost "temporary" solutions such as "Loading on the Line" • Support introduction of ''pop up' terminals, bringing out of use infrastructure back into use and lineside loading potential
6	**Food and Drink/Retail Growth** (O) Volume growth potential (R) Diffuse volumes requiring consolidation for rail	• Facilitate [a network of] new loading/unloading facilities, including consolidation points • Clarify the pinch points and facilitate the expansion of 2.55m and 2.6m wide gauge between the Central belt of Scotland and Aberdeen/Inverness

No	Key Challenges, Risks and Opportunities	What we plan to do
7	**Other Traffic Growth/Reductions** (O) Metals/Steel traffic growth (O) Automotive growth (O) Logistics and Mail growth (R) potential further volume loss for coal traffic	• Work with Customers to maximise opportunities for longer and heavier trains maximising loco capability. • Support Terminal / Yard developments to support growth. • Support introduction of ‘‘pop up’ terminals, bringing out of use infrastructure back into use and lineside loading potential. • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use. • Help Scotland Route pro-actively manage coal-related OM&R as market changes • Explore opportunities for business growth with existing and potential new customers
8	**Yard and Siding Infrastructure and Walking Routes** (R) Yard and Siding infrastructure asset condition is critical both to sustain current traffic levels, avoiding derailment events and customer LTIs) and to support growth	• Highlight potential for Freight only Lines currently Short Term Network Changed out of use to return to Operational use during CP6 to Scotland Route. • Liaise with Scotland Route in order that the Route allows for funding requirements. • Clarify where growth is likely to occur • Review maintenance & renewals requirements in freight yards and sidings • Review of redundant and unused assets which could support a reduction in OMR • Working with Routes and customers to review asset condition on a regular basis. • Working with Routes and customers to establish and benchmark walking route use and condition. • Regularise the status of freight assets (actual v published) • Explore potential to transfer ownership of redundant lines/assets to secure better opportunities for redevelopment
9	**Capacity & Capability** (R) Nature of infrastructure north of Central Belt with single lines, short loops and gradients constrains standard freight train characteristics (R) Capacity for volume from new markets, especially when target markets are geographically remote (R) capacity challenge stemming from Scotrail’s “Revolution for Rail” (R) Timetable Review with 2019 timetabling limiting freight train options (O) Timetable Review provides an opportunity to review path usage, velocity and traction usage	• Review freight requirements so that they are included in all route plans • Promote targeted freight enhancement proposals to address constraints • Review RoTR constraints • Maximise train length’s • Continue the use of the SPR process • Promote use of AC traction on WCML for pathing reasons • In partnership with FOCs and stakeholders, review train paths to improve journey times where feasible
10	**Timetable Review** (O)/(R) Timetable improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage • Work with FOC’s to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding train slot. • Work with the Route, System Operator and FOC’s/TOC’s to review opportunities to improve average speed between origin and destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (loads book, timing loads, lengths)

No	Key Challenges, Risks and Opportunities	What we plan to do
11	**Upgrades and Disruptive Possessions** (R) Major upgrade programmes such as Motherwell North Re-signalling will require significant disruptive access	• Champion requirements of FOCs and Freight End Users so that services can operate as required during disruptive possessions including availability of diversionary routes and timely provision of capacity studies to identify train service capability
12	**Digital Railway** (O) Successful introduction of Digital Railway offers potential for growth on busiest corridors (O) Technology from Digital Railway programme could mean freight information (gauge, SA, RA, Loads books) could be electronic	• Act as internal client on behalf of freight to build sympathetic capability for freight traffic needs.

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale

Growth		• Lead response to TS challenges:
		  ○ Development of Industry Plan to target 7.5% volume growth target by end CP6 measured in kgtm
		  ○ Making rail freight easier for Scottish customers to use
		  ○ Commodity/area workshops
		  ○ Flexible approach to new traffic
		• Develop the freight element of the Scottish Gauge Requirement
			• Published rolling programme of commodity/regional workshops.
			• Published stakeholder engagement plan to review growth potential.
			• Complete a review of existing processes appertaining to 3rd Party development (ie GRIP/Leases) to understand perceived challenges and propose solutions.
			• In partnership with FOCs, End Users and stakeholders document suggestions and, subject to funding where required, promote implementation of the proposals to secure growth.
			• Work closely with Route to define requirements to secure the freight element of the HLOS gauge requirement.
				SRFM
				SRFM
				
				SRFM / System Operator / Sponsor / Property
				
				SRFM / System Operator
				
				SRFM/System Operator / DRAM
					Nov 2017
					Nov 2017
					
					By April 2018
					
					By April 2018
					
					Plan by April 2018, Delivery of agreed proposals by end CP6

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce Lost Time Injuries (LTIs)s through concentration on Network Rail yard infrastructure, connecting sidings and walking route conditions	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites. • Route Vegetation clearance programme to include Network Yards, Sidings and Walkways • Complete review of authorised walking routes/crew change locations • Subject to funding, a programme of improvements will be specified and implemented. • 'Go Look See' with customer within two weeks of any reportable customer LTI event on Network infrastructure.	FNPO Operations and Safety Manager / SRFM	Initial Programme to be published in March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites. • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point. • Timely renewal/refurbishments of FO Infrastructure to prevent derailment risk • Subject to funding, a programme of improvements will be specified and implemented.	FNPO Operations and Safety Manager / SRFM	Initial Programme to be published in March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice.	FNPO Operations and Safety Manager	Creation of Forum by April 2018, meeting regularity proposed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Performance	Right time performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups • Use of Control Rooms and Visualisation at major sites if required • Focus on terminals at Mossend, Coatbridge, Grangemouth and Oxwellmains • Proactive management of On Time targets at all Scottish terminals • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM / FNPO Performance Manager	Quarterly FNPO review of terminal engagement arrangements
	Measuring FDM and FDM-R	Focus on WCML & other defined key routes: • Asset Performance • Asset Resilience • Effective contingency plans	• Target FDM-R Scotland target for end CP6 of 95.1%. • Transport Scotland HLOS target of 93% FDM at start CP6 increasing to 94.5% FDM at end CP6 • Input into Route CP's for consistent application of freight contingency arrangements. • FSDM input into incident recovery real-time to build consistency. • Asset Reviews with Route Asset teams to share traffic forecast and asset challenges with SRFM. • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM / FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed Joint Strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories. • Agreed industry information share. • Regular reviews against plan with each Route and FOC customer.	FNPO Performance Manager / CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly
Capacity & Capability	Identifying future capacity needs	Bring together all freight capacity plans; • Route Studies • SSFN • Customer specific	• All future project specifications to include a specific output level for freight services, that reflects the SSFN specifications and forecast future traffic requirements. • Future capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor / Lead Strategic Planner / SRFM / FNPO Head of Strategic Capability / FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route.
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors. • Robust gauge cleared diversionary routes. • Transparent network capability per route for customers	SRFM / FNPO Head of Strategic Capability / FNPO Head of Network Management / Lead Strategic Planner	Existing capability constraints review definition by April 2018 and delivery per strategic route

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Management of capability	Produce baseline freight statement that outlines HLOS requirements. Initiate Capability Review to contribute to strategy to deliver Scottish Gauge Requirement.	• Review requirements to satisfy requirement to deliver HLOS requirements that; ○ Capability of the network to be operated and maintained as a minimum throughout CP6 at a level which satisfy all track access rights in place at the time of HLOS or by March 2019 ○ all Scottish Routes are maintained to be capable of accommodating the gauge of all locomotives and passenger rolling stock , including cross-border services and charter operators' vehicles, which have run in Scotland in CP4 and CP5 or are known to be planned to run in Scotland in CP6. ○ Freight gauge capability should be maintained to at least the level shown in the Freight Gauge Database Map, or the Sectional Appendix, or full suite of RT3973 forms or Scotland route at time of HLOS publication	SRFM / FNPO Head of Strategic Capability / FNPO Head of Network Management / Lead Strategic Planner / DRAM	Recorded Details of existing capability for FNPO customers by April 2018
	Freight Train Average Speed	Undertake average speed review to ascertain what would be required to deliver HLOS target	• Establish framework for average speed measurement and improvement. • Work with Stakeholders to target specific flows and services • Annual plan in connection with timetable change. • Specifications for enhancement projects to consider journey time improvement output for freight services • Produce proposals, iterate with stakeholders, test and review with Transport Scotland annually.	FNPO Head of Performance / FNPO Head of Strategic Capability / FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter.
	Connections to new terminals	Facilitate connections to the network and associates capacity	• Work with FOCs, Freight Users and Developers to identify potential new connections. • Information share of prospective new sites via RSPG. • Identify potential sites (new connections, bringing out of use infrastructure back into use, lineside loading) to facilitate growth. • Advice to System Operator of future sites and flows to understand timetable and capacity impact. • Facilitate and promote "Loading on the Line" wherever possible. • Promote innovative options for temporary or cost-effective connections	SRFM / FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments register to be held by SRFM for review at RSPG quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Delivery of agreed CP6 freight enhancement programme	Continuation of Scotland Strategic Freight Network Funding and Industry Governance Group	• Promotion of potential freight projects and enhancement schemes. • Prioritise funding to best meet demand and facilitate growth. • Align SSFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	SRFM / System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and through mechanisms such as the Sub Group of the Route Strategy Planning Group	• Work with FOCs and System Operator through mechanisms such as the Sub Group of RSPG to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewal proposals –such as removal of differential speed restrictions aligned to renewals or enhancements • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors	SRFM /System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018
Network Availability	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Address perceived deterioration of yards over CP5 • Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location.	SRFM / Route Infrastructure Director / DRAM	Bi-annual review of yard and sidings maintenance priorities / traffic flows commencing 2018
Freight Asset Management Plans	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans • Normalise capability within Sectional Appendix to sustain existing traffic and support growth with particular reference to the Far North Line between Helmsdale and Georgemas.	SRFM / Route Infrastructure Director / DRAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed
	Review Freight Only lines and other infrastructure	Understand the potential to reduce OMR	• Review need based on existing & predicted future use • Input into track/structures/maintenance plans • Ensure adequate budgetary provision and plans for those FOLs that have been temporarily taken out of use though the Short Term Network Change process, for which future use is known • Outputs to be agreed with Customers/ORR/TS	SRFM / Route Infrastructure Director / DRAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route.
	Removal of Speed restrictions in timely fashion	Establish removal plan for TSRs recognising freight impact	• Work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them	SRFM / Route Infrastructure Director / DRAM / FNPO Performance Manager	Ongoing periodic review of performance impact of TSR to be agreed per route.

South East Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the South East and FNPO routes will work together to deliver the Route Strategic Plan for South East. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

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National Passenger Operators:
No national passenger operators use South East route infrastructure

Charter trains also operate across South East Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.

Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from locations off SE Route to end terminals on the route R: Capacity and capability. Infrastructure not able to cope with traffic demand.	• Explore opportunities for longer and heavier trains maximising loco capability • Support introduction of new wagons that maximise payload/length ratio • Support Terminal and Yard developments – e.g. Peak Forest and other locations required for sector growth. • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Explore opportunities for new capacity – e.g. including trial longer trains

No	Key Challenges, Risks and Opportunities	What we plan to do
2	**Gauge establishment** C: Establishment of recognised diversionary routes for gauge critical traffic	• Explore gauge clearance on key corridors, e.g. (Ashford/Maidstone East/Sevenoaks Line, West London Line and North Kent), and provision of diversionary capability • Explore funding opportunities, including Third Party • Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows – reduced duplication
3	**Other Commodity Traffic Growth** O: Steel & other scrap metals O: Automotive O: Forest Products O: Bulk O: Aviation Fuel & other Petro-chemicals	• Work with customers to maximise opportunities for longer and heavier trains maximising loco capability • Support Terminal / Yard developments to facilitate growth • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading. Promotion of and assisting customers to set up new automotive flows from Queenborough on the Isle of Sheppey and growing traffic from Dagenham and Purfleet Deep Wharf • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use including the Parkeston Tip Sidings and Newhaven Marine. .
4	**Franchise changes / Crossrail** R: Refranchising of Southeastern seeks greater capacity on shared lines	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations including the introduction of a potential new depot for Southeastern in the inner London area
5	**Infrastructure enhancements / electrification** R: Loss of Capacity following timetable change. Southeastern on the Southeast Route.	• Support Route forums (RSPG etc.) to influence scope and secure freight benefit following scheme delivery • FNPO, FOCs and Freight End Users to provide appropriate input into the decision making process • Work with Route Business development team to identify potential Third Party funding sources
6	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction R: Capacity for new aggregate and spoil flows in the Southeast from HS2 project	• Work with DfT, HS2 Ltd, FOCs and End-customers to offer solutions to demands of major projects • Work with customers to manage the impact of major projects on their business (HS2) • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity, or bring out of use infrastructure back into use
7	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity Work with System Operator to support funded early stage timetable work for SRFI developers. Southeast Route is hoping to see the establishment and development of Howbury Park as a major intermodal logistics hub
8	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tarmac, Aggregate Industries, Brett, Days Group, Hanson)	• Work with end user -customers to develop business growth and support modal shift to rail • Work with end user -customers to strengthen service delivery and support

No	Key Challenges, Risks and Opportunities	What we plan to do
9	**Review of redundant and unused assets:** O: Following traffic changes in CP5, opportunity exists to review size and organisation of non-passenger network R: FOC objection to supporting Network Changes	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets and other assets including gauge, S&C (actual v published capability) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
10	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis. Keeping up emphasis on maintaining and enhancing major terminal infrastructure including Angerstein and Bow. • Working with Routes and customers to establish and benchmark walking route use and condition
11	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage and remove unused paths and agree strategic capacity • Work with FOC's to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding Train Slot • Work with the Route, System Operator and FOC's/TOCs where in upcoming major timetable re-casts the available capacity may be less than contracted rights, the new Thameslink/GTR and Southeastern timetables for the Southeast Route • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
12	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs.
13	**Upgrades and Disruptive Possessions** R: Major upgrade and S&C renewals including High Output will require significant disruptive access	• Champion requirements of FOCs and Freight End Users so that services can operate as required during disruptive possessions including availability of diversionary routes and timely provision of capacity studies to identify train service capability

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity proposed quarterly
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups • Use of Control Rooms and Visualisation at major sites • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement
	Measuring FDM and FDM-R	Focus on defined key routes: - Asset Performance - Asset Resilience - Effective contingency plans	• Target FDM-R Route target for end CP6 of 91.0% • Input to Route CP's for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes • Transparent network capability per route for customers	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections e.g. (Route TBC) • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. (Route TBC) for aggregates • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers. • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018

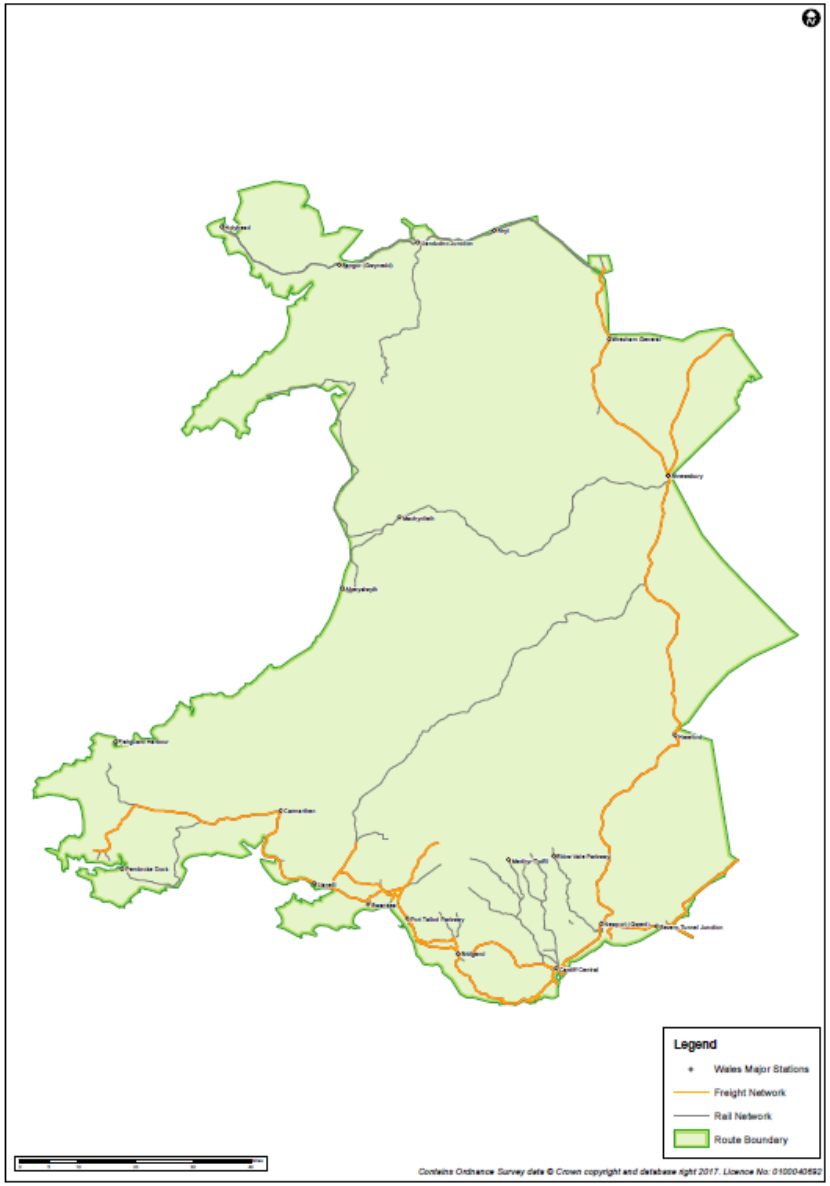
Section	Key Themes	Strategy	Specifics	Owner	Timescale
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into • Engineering Access Statements • Access Planning Requests	Engineering plans that are; • Transparent • co-ordinated • consistent across Routes • planned well in advance and • take into consideration contingency arrangements for long distance services	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Engineering Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed
	Review Freight Only lines and other infrastructure	Understand the potential to reduce Operations Maintenance & Renewals costs	• Review based on existing & predicted future use • Input into track/structures/maintenance plans • Outputs to be agreed with customers/ORR	SRFM/ Route COO/ RAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them	SRFM/ Route COO/ RAM	Ongoing periodic review of performance impact of TSRs to be agreed per Route

Wales Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the Wales and FNPO routes will work together to deliver the Route Strategic Plan for Wales. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

National Passenger Operators:
CrossCountry is a regular user of Wales route and key issues include right time improvement for services arriving and departing Cardiff, as well as operational resilience around Cardiff.

Charter trains also operate across Wales Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.



Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from quarries in Wales and South West R: Infrastructure not able to cope with traffic demand	• Explore opportunities for longer and heavier trains maximising loco capability • Support the introduction of new wagons that maximise payload/length ratio • Support Terminal and Yard developments when identified • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Develop the inbound movement of aggregate and spoil from Cardiff Docks
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Ports / Terminals (Felixstowe, London Gateway, Southampton, Liverpool) will feed into Wentloog R: Train paths and SRT discrepancies with longer, heavier trains R: Gauge enhancement to Wentloog does not go ahead	• Work with customers to maximise opportunities to increase length of trains • Increase Average Journey Speed origin to destination • Recognised Diversionary routes with adequate capability, review of the Vale of Glamorgan to see if any improvement feasible beyond W6 • Explore the opportunity for a terminal development on the Llanwern site in conjunction with Tata

No	Key Challenges, Risks and Opportunities	What we plan to do
3	**Commodity Traffic Growth** O: Tata to source more coal from UK sources O: Growth of finished steel to EU via rail O/R: Coal burn at Uskmouth may be replaced by Biomass O: Steel traffic increase as Liberty Steel expansion continues including inbound scrap movement if arc furnaces reinstalled R : Cwmbargoed coal traffic could be impacted by Cardiff Metro development	• Explore opportunities for longer and heavier trains maximising loco capability • Terminal / Yard developments to support traffic growth where possible • Ensure heavy freight requirements are incorporated into Cardiff Metro plans • Work with stakeholders to assess feasibility of re-instating rail link into Liberty site in Newport
4	**Franchise changes** R: Refranchising of TOC in Route seeks greater capacity on shared lines	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations
5	**Construction projects** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction O: Site clean-up at Port Talbot may generate spoil movement opportunity	• Work with FOCs and End-customers to offer solutions to demands of major projects e.g. M4 relief road at Newport, Swansea Bay Tidal Barrier • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) e.g. Swansea Burrows
6	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity • Work with System Operator to support funded early stage timetable work for SRFI developers
7	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tata, Celsa and Liberty House)	• Work with end-customers to develop business growth and support modal shift to rail • Work with end-customers to strengthen service delivery and support • Work with FOCs to investigate wagonload possibilities (shared services) for multiple customers
8	**Review of redundant and unused assets** O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets (actual v published) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
9	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis, • Working with Routes and customers to establish and benchmark walking route use and condition • Liaise with DBC to focus on critical interfaces at Margam and Llanwern
10	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
11	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	• Act as internal client on behalf of freight to build sympathetic capability for freight traffic needs

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites, including Cardiff Tidal Pengam, East Usk, Margam Knuckle Yard and Llanwern • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity proposed quarterly.
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g. S.Wales corridor) • Use of Control Rooms and Visualisation at major sites (e.g. Margam Knuckle Yard) • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement
	Measuring FDM and FDM-R	Focus on defined key routes: - Asset Performance - Asset Resilience - Effective contingency plans	• Target FDM-R Route target for end CP6 of 94.4% • Input to Route CP's for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes, for example for containerised traffic departing Margam • Transparent network capability per route for customers	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections where required • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. Liberty House connection on the Birdport Branch line • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers. • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors • Look for opportunities within the Cardiff Metro development to enhance freight's opportunities	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into • Engineering Access Statements • Access Planning Requests	Engineering plans that are; • Transparent and well understood • co-ordinated • consistent across Routes • planned well in advance and • take into consideration contingency arrangements for long distance services	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location. • Ensure that changes in market demand are communicated	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed.
	Review Freight Only lines and other infrastructure	Understand the potential to reduce OMR.	• Review based on existing & predicted future use • Input into track/structures/maintenance plans • Outputs to be agreed with customers/ORR • Close scrutiny on the impact of Valley coalfields decline e.g. Cwmgrach and Hirwaun branch lines • Gaerwen to Amlwch branch status to be reviewed, also the Waterston branch	SRFM/ Route COO/ RAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Continue to work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them	SRFM/ Route COO/ RAM	Periodic review of performance impact of TSRs to be agreed by Route

Wessex Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the Wessex and FNPO routes will work together to deliver the Route Strategic Plan for LNW. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

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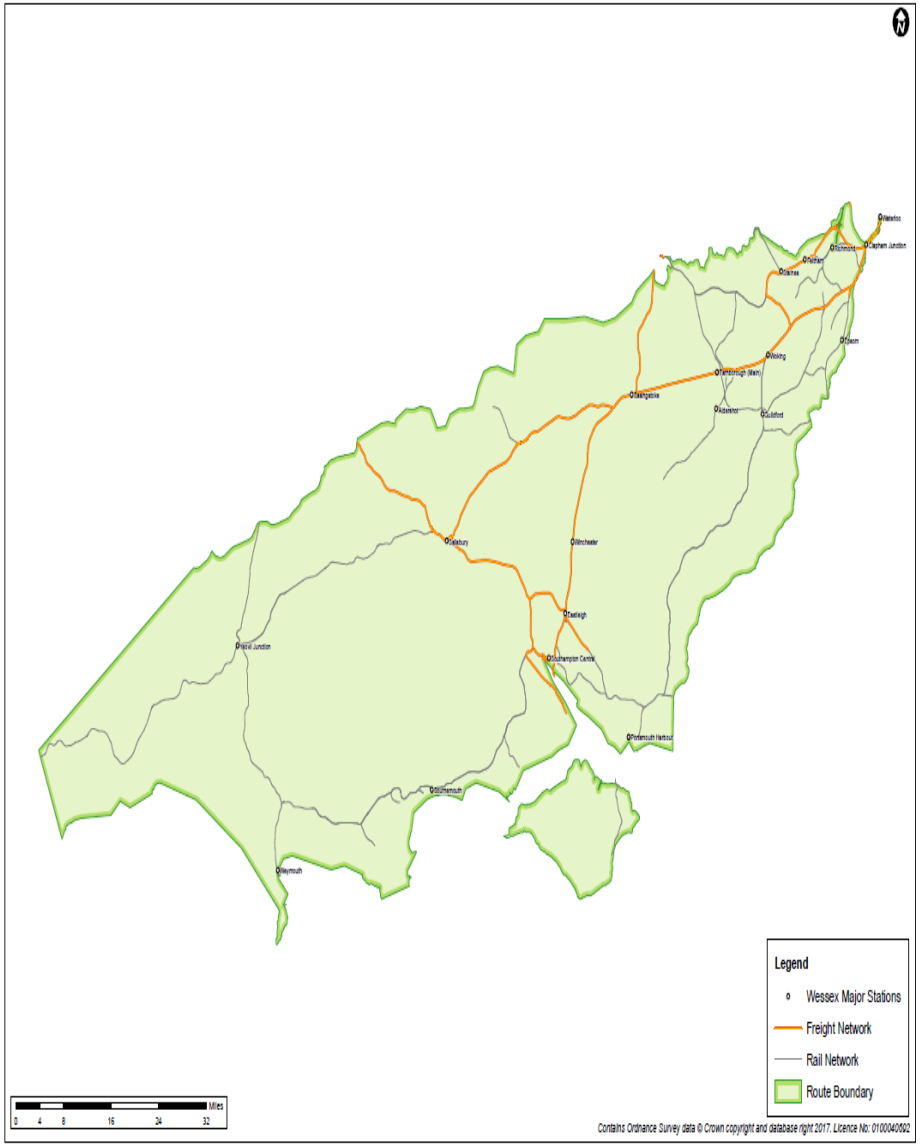
National Passenger Operators:
CrossCountry is a regular user of Wessex route and key issues include right time arrivals from Basingstoke, animal incursions and TSR management including timely removal

Charter trains also operate across Wessex Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6



Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from quarries in Mendips and Leicestershire to S and SE R: Infrastructure not able to cope with traffic demand	• Explore opportunities for longer and heavier trains maximising loco capability • Facilitate new wagons that maximise payload/length ratio • Support Terminal and Yard developments whenever identified, in particular those which could service the London market • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Southampton R: Train paths and SRT discrepancies with longer, heavier trains	• Work with customers to maximise opportunities to increase length of trains • Increase Average Journey Speed origin to destination • Recognised Diversionary routes with adequate capability • Support any inland terminal developments – e.g. DIRFT 3, Four Ashes, Port Salford, Parkside
3	**Gauge establishment** C: Establishment of recognised diversionary routes for gauge critical traffic	• Documented diversionary routes for core intermodal flows • Explore third party funding opportunities • Review of RT3973 provision to more closely align with traffic flows – reduced duplication

No	Key Challenges, Risks and Opportunities	What we plan to do
4	**Commodity Traffic Growth** O: Automotive growth from BMW Oxford via Southampton R: Brexit impact could affect the Automotive market	• Explore opportunities for longer and heavier trains maximising loco capability • Support Terminal / Yard developments to facilitate growth • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use
5	**Logistics and Mail Opportunity** O: Potential mail growth on main corridors and premium logistics developments	• Explore opportunities for business growth with existing and potential new customers
6	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction	• Work with FOCs and End-customers to offer solutions to demands of major projects • Work with customers to manage the impact of major projects on their business (HS2) • Terminal / Yard developments ('pop-up' terminals / lineside loading potential)
7	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity • Work with System Operator to support funded early stage timetable work for SRFI developers
8	**Infrastructure enhancements / electrification** R: Proposed electrification of Reading to Basingstoke will lead to more closures – lack of a robust diversionary route at W10 gauge	• Examine feasibility of creating a robust diversionary route for W10 traffic.
9	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tarmac)	• Work with end-customers to develop business growth and support modal shift to rail • Work with end-customers to strengthen service delivery and support
10	**Review of redundant and unused assets** O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets (actual v published) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment
11	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis, • Working with Routes and customers to establish and benchmark walking route use and condition
12	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage and remove unused paths and agree strategic capacity • Work with FOC's to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding Train Slot • Work with the Route, System Operator and FOC's/TOCs where in upcoming major timetable re-casts the available capacity may be less than contracted rights, e.g. (Route TBC) • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
13	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	• Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs

CP6 Plan

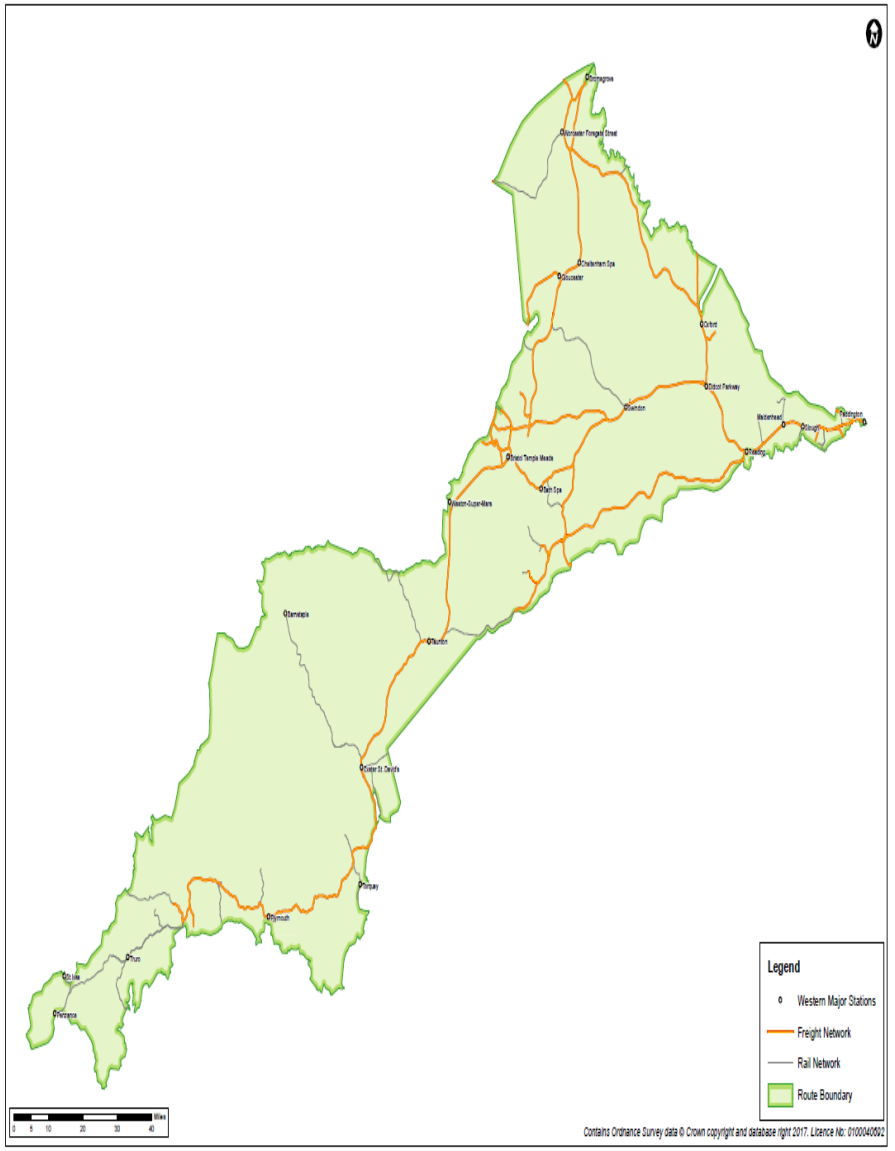
Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites including Southampton / Redbridge and Hinksey • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End User Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity quarterly.
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g. Port of Southampton, Automotive) • Use of Control Rooms and Visualisation at major sites (e.g. Southampton) • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of engagement
	Measuring FDM and FDM-R	Focus on defined key routes: Asset Performance Asset Resilience Effective contingency plans	• Target FDM-R Route target for end CP6 of 93.6% • Input to Routes for consistent use of contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be issued annually in CP6 & reviewed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes • Transparent network capability per route for customers • Continue to push for SFN 775m implementation	SRFM/ FNPO Head of Strategic Capability/ Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections e.g. (Route TBC) • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. (Route TBC) for aggregates • Advice to System Operator of future sites/flows to understand timetable/capacity impact. .Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into • Engineering Access Statements • Access Planning Requests	Engineering plans that are; • Transparent and understood • co-ordinated • consistent across Routes • planned well in advance and • take into consideration contingency arrangements for long distance services	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site • Ensure appropriate standards in use at each location.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018
	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed.
	Review Freight Only lines and other infrastructure	Understand the potential to reduce OMR.	• Review based on existing & predicted future use • Input into track/structures/maintenance plans • Outputs to be agreed with customers/ORR	SRFM/ Route COO/ RAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Continue to work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them.	SRFM/ Route COO/ RAM	Ongoing periodic review of performance impact of TSRs to be agreed per Route

Western Route & Freight & National Passenger Operators (FNPO) Route

This summary sets out how the Western Route and FNPO routes will work together to deliver the Route Strategic Plan for Western. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.



National Passenger Operators:
CrossCountry is a regular user of Western route and key issues include right time departures from Bristol Parkway, weather resilience and trespass and fatality incidents

Charter trains also operate across Western Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.

Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from quarries in Mendips and Wales to SE and Anglia O: Aggregate for export via Avonmouth O: Reactivation of rail connected quarries e.g. Tytherington R: Infrastructure not able to cope with traffic demand	• Explore opportunities for longer and heavier trains maximising loco capability • Facilitate new wagons that maximise payload/length ratio • Support terminal / yard developments e.g. proposed Southall Campus • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Explore opportunities for new capacity
2	**Domestic & Deep Sea Intermodal Growth** O: Volume growth from Southampton will feed through Western R: Train paths and SRT discrepancies with longer, heavier trains	• Work with customers to maximise opportunities to increase length of trains • Look for opportunities to increase Average Journey Speed origin to destination • Recognised Diversionary routes with adequate capability

No	Key Challenges, Risks and Opportunities	What we plan to do
3	**Gauge establishment** C: Establishment of recognised diversionary routes for gauge critical traffic	• Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows – reduced duplication
4	**Commodity Traffic Growth** O: New aviation fuel terminal at Colnbrook O: Increased movements from BMW Oxford via Southampton Docks O: Higher tonnages of steel shipped to EU from Wales will transit Western Route R: Brexit impact could affect commodity traffic adversely	• Explore opportunities for longer and heavier trains maximising loco capability • Develop new flow from Grain to Colnbrook • Look for opportunities to free-up capacity following the decline of Avonmouth coal • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability, or bring out of use infrastructure back into use
5	**Logistics and Mail Opportunity** O: Potential mail growth on main corridors and premium logistics developments	• Explore opportunities for business growth with existing and potential new customers
6	**Franchise changes / Crossrail** R: Refranchising of TOC in Route seeks greater capacity on shared lines R: Development of Crossrail will increase capacity demands on the most congested part of the Route	• Retain adequate capacity, capability and flexibility for existing and forecast freight • Review Impact on possession strategy from new flows • Review stabling plans for new rolling stock / change of locations
7	**Infrastructure enhancements / electrification** O: Greater capacity/opportunity following enhancement (eg. East West Rail on Western and LNW) R: Loss of Capacity following timetable change (eg. Crossrail on Western)	• East/West Rail provision for gauge and freight diversions • MML Electrification – risk from faster trains? • Support Route forums (RSPG etc) to influence scope and secure freight benefit following scheme delivery
8	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction	• Work with DfT, HS2 Ltd, FOCs and End-customers to offer solutions to demands of major projects • Work with customers to manage the impact of major projects on their business (HS2) • Terminal / Yard developments ('pop-up' terminals / lineside loading potential) • Work with FOCs and Freight End Users to resolve any conflicts with existing freight facilities • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity, or bring out of use infrastructure back into use
9	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning • Offer NR support to proposals when adequate strategic fit and capacity • Work with System Operator to support funded early stage timetable work for SRFI developers
10	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Mendip Rail)	• Work with end-customers to strengthen service delivery and support • Work with end-customers to develop business growth and support modal shift to rail
11	**Review of redundant and unused assets** O: Following traffic changes in CP5 and structural change in energy market, opportunity exists to review size and organisation of non-passenger network	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure • Regularise the status of freight assets (actual v published) • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment

No	Key Challenges, Risks and Opportunities	What we plan to do
12	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis, • Working with Routes and customers to establish and benchmark walking route use and condition
13	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage • Work with System Operator and customers to review opportunities to improve average speed origin-destination • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths)
14	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	• Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and walking routes conditions.	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites including Acton, Westbury, Southall and Brentford • Complete review of authorised walking routes/crew change locations per customer • Subject to funding, a programme of improvements will be specified and implemented • 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point , in particular covering the quarries at Whatley and Merehead • Subject to funding, a programme of improvements will be specified and implemented	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity proposed quarterly

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g. Mendip Rail, Acton Yard) • Use of Control Rooms and Visualisation at major sites (e.g. Merehead) • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement arrangements
	Measuring FDM and FDM-R	Focus on defined key routes: - Asset Performance - Asset Resilience - Effective contingency plans	• Target FDM-R Route target for end CP6 of 94.0% • Input to Route CP's for consistent application of freight contingency arrangements • FSDM input to incident recovery real-time to build consistency • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance Improvement Strategies	Agreed joint strategy with each FOC including details of plans to reduce each delay area	• Complete plan annually with each FOC concentrating on primary delay categories • Agreed industry information share • Regular reviews against plan with each Route and FOC customer, in particular targeting A2F improvement at the Eastern end of the Western Route where the greatest congestion occurs.	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published annually during CP6 and reviewed quarterly
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies • SFN • Customer specific	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements. • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements • Interactive maps for Gauge, RA to be created and maintained • Continued support for longer, heavier trains programme	Project Sponsor/SRFM SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors • Robust gauge cleared diversionary routes • Transparent network capability per route for customers	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Capacity & Capability	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement • Work with Stakeholders to target specific flows and services, key target is the waste flow from London to Severn Beach • Annual plan in connection with annual timetable change	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's • Information share of prospective sites via RSPG • Facilitate new network connections if required • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside loading) to facilitate growth, e.g. (Route TBC) for aggregates • Advice to System Operator of future sites and flows to understand timetable and capacity impact • Timetable studies for major terminal developments, e.g. SRFI's	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes • Prioritise funding to best meet demand and facilitate growth • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements	FNPO Head of Freight Development/ System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers. • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018

Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into
		• Engineering Access Statements
		• Access Planning Requests
			• Engineering plans that are;
			  • Transparent
			  • co-ordinated
			  • consistent across Routes
			  • planned well in advance and
			  • take into consideration contingency arrangements for long distance services
				SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Access process

Appendix C – Summary of Investment options

Below is a summary of the investments options laid out within the document, which are required to deliver the benefits articulated in each section.

Investment Option	CP6 Financial Value
Proposed options for freight – 15 year investment programme *For further details please see below C.1*	£2bn
Freight Safety Improvement programme. *For further detail please see section 5.26*	£22m
Charter CET installation *For further detail please see section 8*	£10m

C.1 Proposed options for freight – 15 year investment programme

The table below combines the options for funders set out in the April 2017 Freight Network Study with some further schemes proposed through subsequent business development work, and allocates them to a control period for development and delivery. Broadly it is expected that schemes would be developed during the control period prior to the one in which they are to be delivered. However, some small schemes could be developed and delivered within a single control period. As a result, schemes put forward as options for delivery in CP6 are limited to those for which development work has already taken place or is expected to before the end of CP5, plus some smaller schemes.

Where estimated cost ranges are put forward, these refer to the totality of the expected funding requirements. It is anticipated that this would be drawn from a range of sources including dedicated freight funds, wider industry funding with freight contributions, and third-party funding.

It should be noted that the list mentioned in Appendix C are choices for funders and none are committed schemes. Schemes will only progress from concept, through development, and into delivery, by passing joint, incremental funding decision points with the relevant funder(s). Schemes will also only progress to the next stage of the lifecycle, subject to an ongoing assessment of viability and affordability.

	CP6 delivery and development options				CP7 development options
Corridor	**➢➢Deliver in CP6**	**Estimated cost range (£m)**	**Develop in CP6 ➢➢ Deliver in CP7**	**Estimated cost range (£m)**	**Develop in CP7 ➢➢ Deliver in CP8+**
1. West Coast Main Line			Preston Station area remodelling --- Dynamic Down loop Tebay to Shap Summit --- Dynamic Up loop Carlisle to Plumpton --- Dynamic Up loop Eden Valley to Shap Summit --- Carstairs remodelling --- Winsford to Weaver Jn interventions (2026) --- Gauge clearance of WCML from London to Coatbridge (incremental up to W12) --- Gauge clearance to W10/W12 Coatbridge to Grangemouth --- Northampton Loop enhancements (Line speed and headway improvements) --- Doubling of Stafford South Jn --- 775 metre train length capability Weaver Jn to Scotland --- Nodal yards at Crewe and Mossend	375 – 875 --- 250 – 500 --- 250 – 500 --- 375 – 875 --- 100 – 250 --- tbc --- tbc --- tbc --- 225 -550 --- 15- 35 --- tbc --- tbc	Possible Crewe Yard changes --- Four- tracking Preston to the border Carlisle Station remodelling including Four-tracking of approaches; Three or four-tracking Gretna Jn to Floriston; Four-tracking sections from Carlisle to Carstairs --- Grade separation Law, Holytown and Uddingston Jns --- Settle & Carlisle upgrade to accommodate all freight traffic --- Acton Grange to Warrington capacity Wigan to Preston interventions --- Gauge clearance to W12 of the Glasgow South Western route --- Winsford to Weaver Jn interventions (2043)

2. East Midlands and Yorkshire			Gauge clearance to W12 of South Yorkshire Joint Line	15 - 35	Diversionary access for Immingham and Teesport --- Electrification of Yorkshire freight routes --- W12 gauge clearance of additional platform lines through York and Newcastle
3. Felixstowe to the West Midlands and the North	Doubling of Haughley Jn --- Headway improvements Bury St Edmunds --- Ely area capacity, including: • Level Crossings • Bridge strengthening --- Ely to Soham full doubling --- Signalling and level crossing improvements Peterborough – Syston East Jn --- Gauge clearance to W10 and/or W12 Syston to Sheet Stores Jn/Trent Jn --- Further refine layout at Ipswich Yard	10 – 15 50 – 70 100 – 250 120 -150 50 - 60 5-10 1-5	Loop at Haugley Jn --- Leicester area capacity --- Gauge clearance to W10/W12 North Stafford Jn – Stoke --- 775 metre train length capability in the West Midlands --- Nodal yards Peterborough and Bescot	35 - 75 600 – 1000 17 - 23 tbc tbc	Further doubling of Felixstowe branch --- Haughley Jn four-tracking --- Haughley Jn grade separation --- Grade separation and additional tracks around Ely --- New Ely avoiding line --- Track and signalling enhancements Leicester to Nuneaton --- Passing loop between Colchester and Witham --- Four-tracking Werrington Jn to Peterborough --- Electrification of the route via Ely --- Further gauge enhancement (incremental up to W12) of the route via Ely --- F2N Phase 3: to accommodate long term growth --- Scheme to accommodate East West Rail traffic on to WCML

4. Southampton to the West Midlands and the North	Doubling of route via Kenilworth	100 - 170	Grade separation at Didcot East Jn and either: • grade separation at Oxford North Jn and improvements at Oxford station, or • four-tracking Didcot to Oxford --- Nodal yard at Eastleigh --- Investigations into running trains longer that 775m	100 – 475 tbc tbc	Electrification of diversionary route via Andover --- Bathampton/Bradford Jn (Dundas Aqueduct) W8/W10 --- W10 diversionary via Westbury and Melksham --- Passing loop between Eastleigh and Basingstoke --- Grade separation at Basingstoke --- Capacity enhancements between Southcote Jn and Oxford Road Jn --- Banbury loops --- Leamington Spa station remodelling --- Water Orton area interventions --- Sutton Park Line electrification --- Electrification of key freight terminals in the West Midlands
5. Channel Tunnel classic routes	Gauge enhancement (incremental up to W12)	50 - 80	Redhill track circuits	15 - 30	

6. Cross London including Essex Thameside	Ripple Lane Nodal Yard --- Thameside level crossings (capacity scheme)	10 – 15 30 - 40	Cross London freight capacity	tbc	Infill electrification --- Enhancements to signalling on the Gospel Oak to Barking line --- Freight loop at Gospel Oak on the Gospel Oak to Barking line --- Modification of signalling block at Hampstead Heath Tunnel --- Freight regulation loop at Kensal Rise --- Forest Gate grade separation --- Possible Pitsea to Ingatestone rail link --- West Anglia Main Line W12 gauge clearance
7. South West and Wales to the Midlands			Gauge clearance to W10 Bristol to Birmingham	tbc	Bromsgrove Corridor interventions --- Re-opening of Stourbridge - Walsall/Lichfield Line --- Electrification of key freight terminals in the West Midlands

8. Northern Ports and Trans Pennine	Gauge enhancement (incremental up to W12) of core Trans Pennine route(s) --- New Loop between Up Decoy and South Yorkshire Joint Line --- Trans Pennine freight capacity	100 – 200 5 – 10 tbc	Level crossing enhancements Teesport – Northallerton --- Level crossing enhancements at East Boldon and Tile Shed	tbc 4	Immingham line speed improvements --- Line speed improvements from 20mph up to 40mph on the Bootle branch. --- Enabling works to support the aspiration to reach 3tph from South Liverpool Terminals to the WCML --- Enabling works to support the aspiration to reach 3tph from Port of Liverpool to the WCML. --- Rearranging maintenance schedules to allow night-time access to the Chat Moss corridor. --- A loop at Edale in the Hope Valley. --- A loop at Grindleford in the Hope Valley. --- Electrification of Yorkshire freight routes: • Tapton Junction to Masborough and Nunnery Main Line Junction, via Beighton Junction • Beighton Junction to Woodburn Junction • Hare Park Junction to Leeds Stourton terminal Reception line • Stourton terminal to Whitehall Junction --- Improved capacity and line speeds on the Calder Valley line. --- Level crossing enhancements at East Boldon and Tile Shed --- Diversionary access for Immingham and Teesport --- Capacity interventions on ECML between York & Newcastle
Network Rail					--- Gauge clearance to W12 of South Yorkshire Joint Line --- Gauge clearance to W12 of further routes

9. Midland Mainline			Gauge clearance to W10/W12 between London and Bedford (including cross London route infill) --- Gauge clearance to W10/W12 between Kettering and Wigston and Between Corby and Manton Jn (including cross London route infill) --- Line speed improvements on Midland Mainline	tbc tbc tbc	Grade separation at Harpenden and Leagrave Jns --- Bedford area enhancements including new platform and a new Turnback --- 4-tracking Kettering North Jn to Kilby Bridge Jn --- New line linking Stenson Jn to the Midland Mainline --- Stenson Jn to Sheet Stores Jn linespeed improvements --- Additional turnback facility at Derby station --- Further Peak Forest capacity Additional access to Mountsorrel Aggregates Terminal --- Dore to Sheffield capacity enhancements --- Reopening of Matlock - Buxton line

10. Great Western Main Line	Gauge clearance to W10/W12 Wootton Bassett to Bristol via Bathampton	4 - 5	Gauge clearance to W12 London to Bristol and Cardiff	8 - 12	Remodelling of Bishton Flyover (with flat junction) and west end of Severn Tunnel Jn --- Remodelling of Bishton Flyover (with replacement flyover) and east end of Severn Tunnel Jn --- Grade separation at Maindee West Jn --- Headway improvements between Bishton and Maindee Jn --- Headway improvement on Main Lines between Ebbw Jn and Cardiff Central --- Headway improvement on Main and Relief Lines between Ebbw Jn and Cardiff Central --- Electrification of Avonmouth Branch
11. Anglo-Scottish and Northern regional traffic			Grantshouse dynamic loops and four-tracking Prestonpans to Drem --- Edinburgh Suburban Line capacity improvements --- Four-tracking in Hare Park Jn area --- Freight loop at Camperdown --- Looping strategy between Dundee and Aberdeen --- Strategic infill gauge clearance to W12 of sections connecting to the East Coast Main Line	250 150 - 300 tbc 45 – 111 56 – 140 tbc	Enhancements to loops north of Newcastle --- Capacity interventions on ECML between York and Newcastle

All corridors	Remove heavy axle weight speed restrictions and/or other freight speed restrictions including on entry and exit of loops	15 - 20	Remove heavy axle weight speed restrictions and/or other freight speed restrictions including on entry and exit of loops	15 - 20	Remove heavy axle weight speed restrictions and/or other freight speed restrictions including on entry and exit of loops
Total		650 – 1100*		2900 - 6060	

*Estimated costs for Trans Pennine capacity enhancements are to be confirmed so are not included in the CP6 total.