

Assessment of the train
performance trajectories in
Network Rail's Route
Strategic Plans for PR18

Mandate L4AR004: Phase 1 report

18 June 2018

[Issue for publication]

Prepared jointly with Winder Phillips Associates

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1. Purpose of the Mandate and Arup Approach

Purpose of Mandate

To advise on

- level of NR assurance to performance trajectories
- whether performance targets are appropriate

Scope

What?	Detail	Level	Pax/freight
Comparable Route Measure (Network Rail caused delay minutes plus TOC on TOC delay minutes)*	Network Rail's proposed performance trajectory and assessment of the floor	Route	Passenger
Freight targets (FDM, FDM-R)	Network Rail's proposed performance trajectory and assessment of the floor	Route, FNPO	Freight
NR/Customer agreed 'top level' measures (various) – in particular where these are not agreed between Network Rail and its TOC customers	Network Rail's proposed performance trajectories	Route, FNPO	Passenger & freight
Cancellations	Do scorecards or Network Rail's plans provide sufficient protections against excessive cancellations	Route, FNPO	Passenger & freight
Scotland	Does Network Rail's proposal meet the HLOS targets	Network Rail Route	Passenger & freight
Network Rail's assurance process	How has Network Rail? Is the output from this process robust?	Network Rail	Passenger and freight

This report

This report describes our findings from Phase 1 of the study, namely to gain early familiarisation of Route Strategic Plans (RSPs) and assess NR internal assurance. Please refer to the Phase 2 report (*Assessment of train performance trajectories in Network Rail's Route Strategic Plans for PR18*) for our main assessment, conclusions and recommendations.

Approach to Phase 1

We have reviewed the December versions of the RSPs alongside the assurance reports produced by the National Performance Team. We have also held the following meetings. Note that we have not had time to assimilate findings from 31 Jan meetings in this report.

Date	Purpose
15 Jan	To understand ORR views of performance plans
25 Jan	To understand NR assurance by Business Review Team & National Performance Team
26 Jan	To understand planning & assurance in Wales
31 Jan	To understand planning & assurance in LNW
31 Jan	To understand planning & assurance in LSE

2. Summary of Phase 1 - Overview of Measures in Long-term scorecards

	FNPO	Anglia	LNE & Midlands	LNW	Scotland	South East	Western	Wessex	Wales
Freight Delivery Metric	FDM - National	Freight Delivery Metric (FDM)	Freight Delivery Metric (FDM-R)	FDM-R	FDM	FDM	FDM-R	FDM	FDM-R
Right Time Metrics	Right time departures (freight)				Right Time Departures				
	Caledonian Sleeper - Right time	Right Time Arrival	On Time at all recorded stations	Caledonian Sleeper Right Time Arrivals	Caledonian Sleeper Right Time Arrivals	Right Time MAA (final destination only)	Punctuality at all recorded stops [GWR]	Right-time arrivals at Reading [Cross Country]	GWR Right Time Departures leaving Wales Route at Severn Tunnel Junction
				On-Time Moving Annual Average			Right-time at destination [HEX]		
							Right-time departure at Bristol Parkway [Cross Country]		
Passenger Lateness			Average Passenger Lateness				Average passenger lateness		Average Passenger Lateness
Public Performance Measure (PPM)	PPM (Cross Country)	Public Performance Measure (PPM)	PPM MAA	PPM Moving Annual Average	PPM		PPM [GWR]	PPM	PPM
	Charter Trains - PPM							GWR - Amalgamated PPM on North Downs and Portsmouth Cardiff Route	
Cancellations	CaSL (Cross Country)	Cancelled and Significantly Late (CaSL)	Level of Cancellations		Cancellations	NR contribution to CaSL MAA	Level of cancellations	CaSL	
Delay Metrics	FOC on TOC delay (Delay Minutes/100 train km)		NR caused Delay Minutes by the route	Infrastructure Delay (Track & Non-Track Assets)	DPI Reduction	Delay minutes affecting TOC (NR caused, TOC on TOC & FOC on TOC not including TOC on self)	NR caused delay minutes		
Network Performance			Network performance - passenger	Network performance: Passenger			Network performance: Passenger		Network performance - passenger
Other				T3 Moving Annual Average (Euston-Watford Service Group)	%age improvmt in average minute per mile travelled [Abellio ScotRail]				

2. Summary of Phase 1 Findings (1)

Historic Performance

- 5 'common' performance metrics reviewed (FDM, Cancellations, PPM, On Time, APL) as shown in the following slides.
- In general, CP6 trajectory start points (and end CP5 forecasts) look sensible compared to recent performance
- The "Consistent Route Measure – Performance" (CRM-P) is excluded from this phase
- As agreed with NR and ORR, we have also not focused on other metrics which are included in specific individual Route plans

Overview of Plans

- The draft plans currently contain little analysis or data
- The linkages between elements such as asset plans and performance outputs are limited – an overview of delays caused by asset type would help
- There is little historical performance context to most of the plans
- Risk is not quantified in most plans
- Use of waterfall charts would have assisted (we understand that this will be included in the next issue)

Target Setting

- CP6 targets are generally based on the CP5 outturn forecast
- Trajectories are generally flat (or show only very modest change), which we propose to investigate in more detail in Phase 2
- Major mismatch with DfT and TfL Franchise/Concession target setting process
- Plan narrative often does not align with new scorecard targets – they usually use PPM only.
- Evident from Route teleconferences that modelling has been done, but this has not been shared with us to date as RSP format does not require it
- Also evident that very different modelling approaches have been undertaken by the Routes.
- It is unclear how some targets have been set:
 - Definition of central target varies (e.g. changed from P50 to P80 in LSE)
 - Definition and treatment of Above and Below target threshold appear to differ between Routes

2. Summary of Phase 1 Findings (2)

Assurance

- The BRT checks have focused much wider than performance, looking at the plans in the round
- NPT checks described as qualitative rather than quantitative – no detailed challenge of numbers
- Route checks are varied with some being more about the process rather than independent scrutiny or challenge by independent party
- Of the 3 Routes reviewed, only LSE appears to have carried out structured assurance
- Should there be internal independent scrutiny of forecasts?

Situational Analysis

- Only FNPO, Wessex & LNW contain any historical analysis
- Good plans should contain or reference to a quality review of historical delivery
- Seeing how the plans link to this would assist ORR in understanding if the RSP will underpin the targets
- It will also support applications for additional funding by demonstrating gaps (Appendix D schemes)

Risk

- Risk is discussed in all plans, but given greater emphasis in some (e.g. Western)
- Particular focus on risks from projects and new rolling stock
- Not clear that the benefits of these schemes are included in all RSPs (Business Case may not be reflected)

Operator Agreement

- Only Scotrail has a signed agreement to targets
- State of discussions unclear
- Little linkage with TOC plans seen to date
- Impact on non lead TOCs not clear e.g. GTR impact on LNE/EM in the SE plan

Cancellations

- Very little mention in plans
- Don't appear to take benefits from TOC fleet plans
- Cannot verify that they will be balanced against other measures

2. Summary of Phase 1 Findings (3)

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

FDM

- FNPO plan does highlight historical causes of poor performance
- Target is flat through CP6 at similar levels to now
- Linkage to geographic Route plans is not clear
- Build up of actions to deliver target is not shown

Lessons mentioned by the Routes

- Clearer remit – metrics, report templates, tools
- Better management from the centre of TOC expectations of performance targets
- Additional analyst to make the modelling more granular (service groups / line of route)

Preliminary views of RSPs

Based on reading the plans only

Wales				LN&ER				Wessex			
Criteria	FDM-R	Scorecard "top level" measures	Cancellations	Criteria	FDM-R	Scorecard "top level" measures	Cancellations	Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Blue	Blue	Blue	Level of CP6 challenge vs historic performance	Yellow	Yellow	Blue	Level of CP6 challenge vs historic performance	Blue	Yellow	Yellow
Approach & assumptions	Yellow	Yellow	Blue	Approach & assumptions	Yellow	Red	Yellow	Approach & assumptions	Red	Yellow	Blue
Evidence to support plans	Blue	Blue	Blue	Evidence to support plans	Blue	Blue	Blue	Evidence to support plans	Blue	Yellow	Blue
Risks to delivery	Yellow	Blue	Blue	Risks to delivery	Yellow	Yellow	Red	Risks to delivery	Yellow	Yellow	Yellow
Customer agreement	Blue	Blue	Blue	Customer agreement	Blue	Red	Blue	Customer agreement	Blue	Red	Red
Internal assurance - process	Blue	Blue	Blue	Internal assurance - process	Blue	Blue	Blue	Internal assurance - process	Blue	Blue	Blue
Overall view of plan	Blue	Blue	Blue	Overall view of plan	Yellow	Red	Red	Overall view of plan	Yellow	Yellow	Yellow
Anglia				SE				Scotland			
Criteria	FDM-R	Scorecard "top level" measures	Cancellations	Criteria	FDM-R	Scorecard "top level" measures	Cancellations	Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Green	Yellow	Yellow	Level of CP6 challenge vs historic performance	Red	Yellow	Red	Level of CP6 challenge vs historic performance	Blue	Red	Yellow
Approach & assumptions	Yellow	Yellow	Blue	Approach & assumptions	Blue	Yellow	Blue	Approach & assumptions	Blue	Yellow	Blue
Evidence to support plans	Blue	Blue	Blue	Evidence to support plans	Blue	Yellow	Blue	Evidence to support plans	Blue	Yellow	Blue
Risks to delivery	Blue	Blue	Blue	Risks to delivery	Blue	Yellow	Blue	Risks to delivery	Blue	Yellow	Blue
Customer agreement	Blue	Red	Red	Customer agreement	Blue	Blue	Blue	Customer agreement	Blue	Green	Green
Internal assurance - process	Blue	Blue	Blue	Internal assurance - process	Blue	Blue	Blue	Internal assurance - process	Blue	Blue	Blue
Overall view of plan	Yellow	Yellow	Yellow	Overall view of plan	Yellow	Yellow	Yellow	Overall view of plan	Yellow	Yellow	Yellow
FNPO				LNW				Western			
Criteria	FDM-R	Scorecard "top level" measures	Cancellations	Criteria	FDM-R	Scorecard "top level" measures	Cancellations	Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Yellow	Yellow	Blue	Level of CP6 challenge vs historic performance	Blue	Green	Blue	Level of CP6 challenge vs historic performance	Green	Yellow	Yellow
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Customer agreement	Blue	Blue	Blue	Customer agreement	Blue	Red	Blue	Customer agreement	Blue	Blue	Blue
Internal assurance - process	Blue	Blue	Blue	Internal assurance - process	Blue	Blue	Blue	Internal assurance - process	Blue	Blue	Blue
Overall view of plan	Yellow	Yellow	Yellow	Overall view of plan	Yellow	Yellow	Yellow	Overall view of plan	Yellow	Yellow	Yellow

3. Phase 2 – for discussion

Discussion on approach

It is clear that the Routes have adopted different approaches to developing their performance plans, also that the level of assurance carried out to date by the Routes is varied and by the Centre is qualitative rather than quantitative.

A key question is whether independent assurance should be carried out? And how best that should dovetail current ORR assurance.

A risk based approach is mentioned in the mandate. Part of this is the level of customer agreement, on which we are unsighted.

One approach is for the Arup team to carry out a deep dive assurance review of Wales, LNW and LSE for which we already have a better understanding. Based on findings, we can then decide if we should look at further Routes.

It may too be worth reviewing FNPO (to assess FDM-R) and Scotland (given HLOS requirement). There is also the question of whether we should review at a high level the System Operator RSP for consistency, given plans to improve timetabling.

Data required

- Performance models including inputs
- CRM-P calculations
- Any documentation of models, back-cast checks of model predictions vs historic performance, model forecasts for CP6 +, sensitivity tests, record of assumptions
- Any assurance documentation produced by / for the Routes; also any updated assurance from BRT and NPT
- Risk register held at Route
- Meetings with Route performance team and selected RAMs

What?	Detail	Level	Pax/freight
Comparable Route Measure - Performance (Network Rail caused delay minutes plus TOC on TOC delay minutes)*	Network Rail's proposed performance trajectory and assessment of the floor	Route	Passenger
Freight targets (FDM, FDM-R)	Network Rail's proposed performance trajectory and assessment of the floor	Route, FNPO	Freight
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Network Rail's assurance process	How has Network Rail? Is the output from this process robust?	Network Rail	Passenger and freight

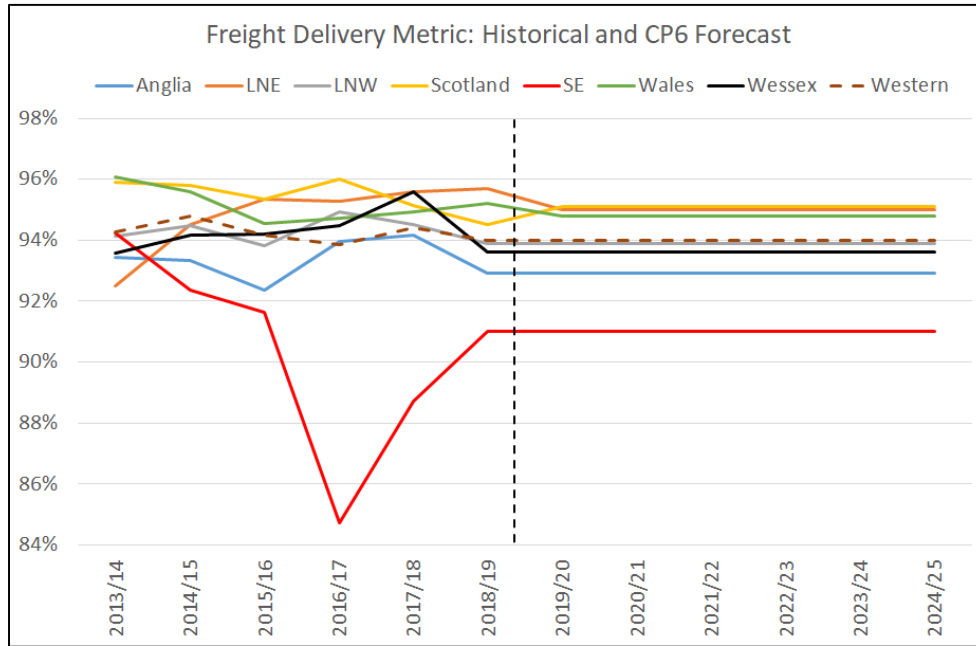
3. Phase 2 – for discussion

Menu of possible options

No.	Option	Notes
1	Review changes in Feb versions of all RSPs, update our findings	Doing so on its own will be insufficient to answer questions in the mandate
2	Deep dive on LNW, Wales, LSE, FNPO, Scotland to answer mandate questions	This sample covers a broad spectrum of approaches; can decide to expand to other routes after these reviews (~4 weeks) but if decide to do so then March reporting might be jeopardised (unless book all meetings now)
3	Deep dive on all routes to answer mandate questions	More time to set up meetings efficiently
4	Review System Operator RSP	To check for consistency with route assumptions
5	Carry out independent assurance of performance models	Should avoid repeating ORR reviews
6	Consider if investment options for performance represent good value	How will ORR consider and compare between routes?
7	CRM-P – review calculations	Possibly start with a sample and expand to all routes if deemed necessary
8	Assessment of performance floors	Are Network Rail or ORR proposing these?

4. Historical Performance – Freight Delivery Metric

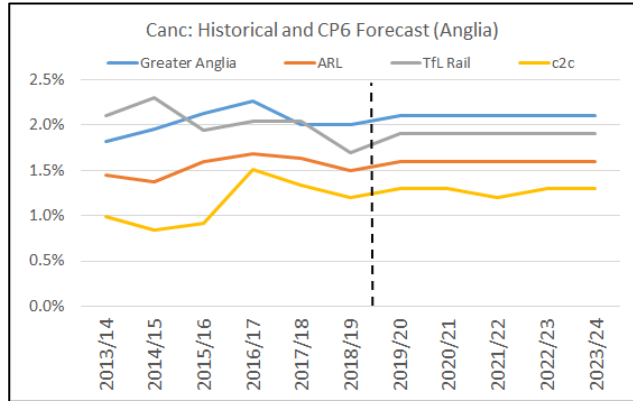
Comparison between routes



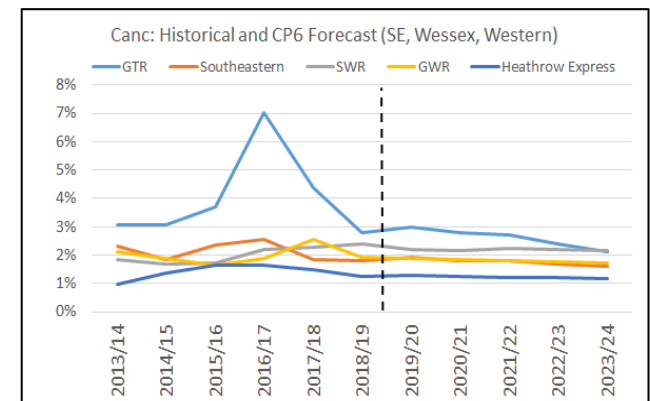
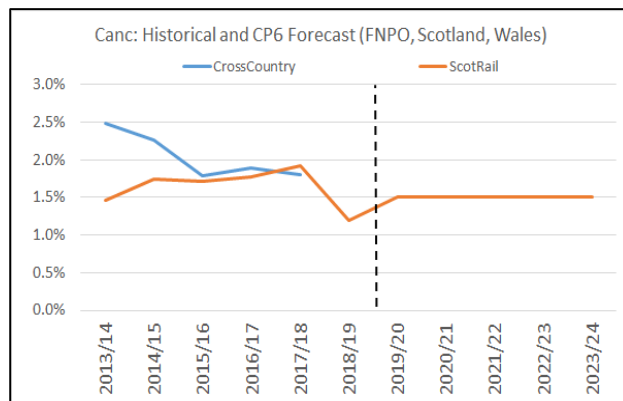
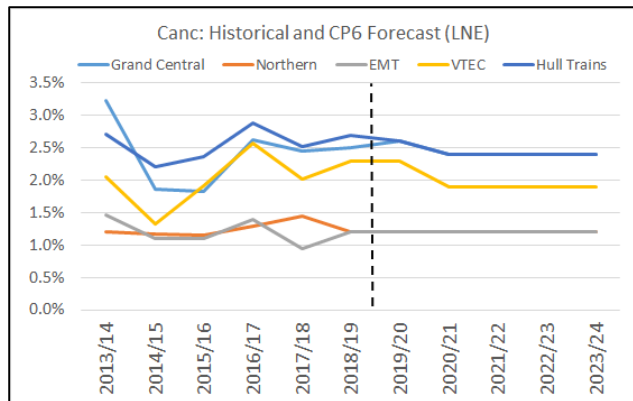
- CP6 forecasts generally reflect the end CP5 forecast, which appear sensible for most routes given current levels for this metric
- Wessex forecast (including end CP5) looks relatively pessimistic given recent performance (93.6% versus current MAA of 95.6%), which may reflect expected increase in traffic levels?
- For South Eastern, the CP6 forecast is based on FDM returning to pre-2015 levels by the end of CP5 – the MAA is still current ~2.5 percentage points below this
- The forecast FDM CP6 trajectory for “Scotland” in the FNPO plan (94.0%) does not match the FDM CP6 forecast in the Scotland plan (95.1%).
- The Scotland HLOS (July 2017) states the route should “achieve an FDM of a minimum of 93% at the start of CP6 moving through staged improvements towards 94.5% at the end of CP6”, therefore the targets in the Scotland plan currently exceed the HLOS targets.

4. Historical Performance – Cancellations

Comparison between routes

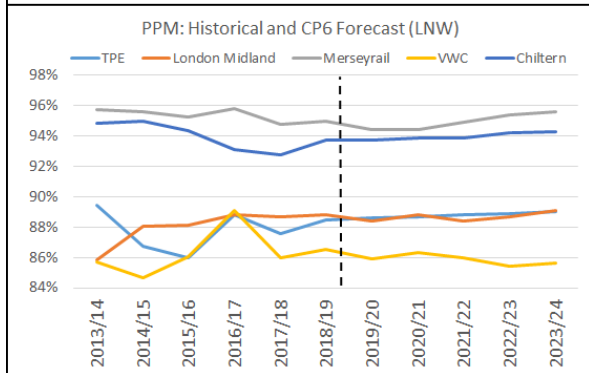
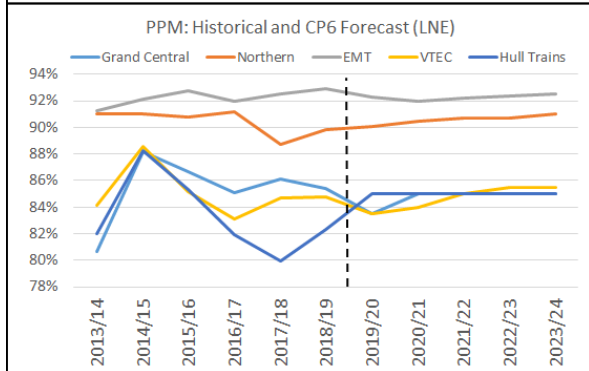
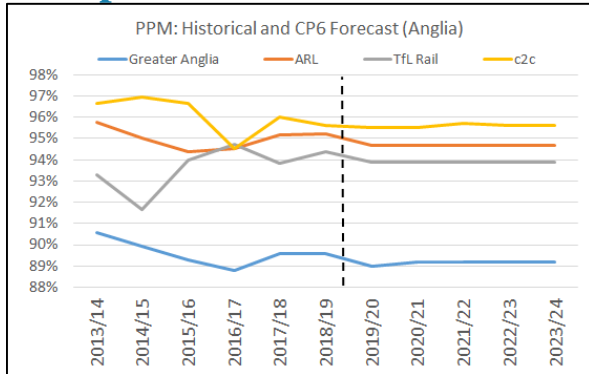


- Cancellation forecasts are not included in the LNW and Wales plans. Forecasts for CrossCountry in the FNPO plan are still “tbc”
- CP6 Year 1 targets all appear to be broadly in line with historical performance, with a couple of notable exceptions:
 - The target for GTR appears challenging compared to performance over the past 5 years. We assume this is to reflect the expected improvement once the Thameslink works are completed
 - The ScotRail CP5 outturn forecast (and CP6) requires notable improvement from today’s performance, and we note the CP6 forecast target is slightly lower than the target set by TS in ScotRail’s Franchise Agreement (1.6%)

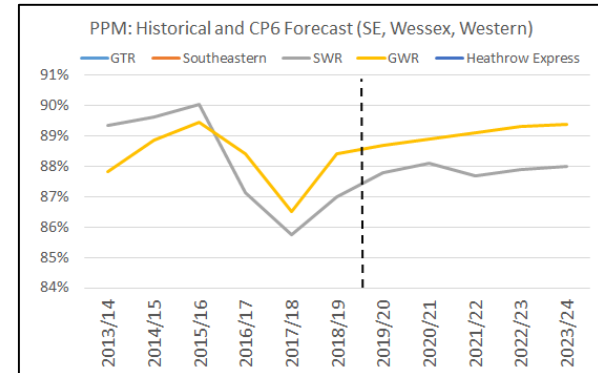
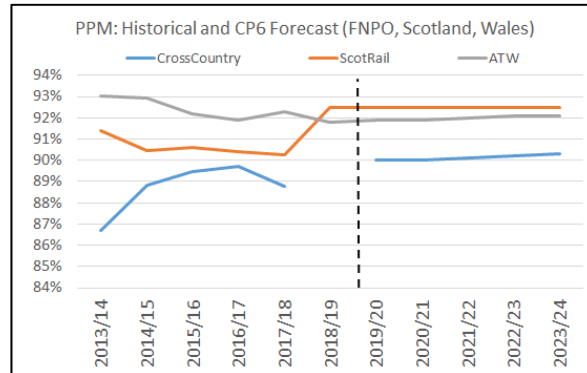


4. Historical Performance – NR/Customer Agreed Metrics: PPM

Comparison between routes

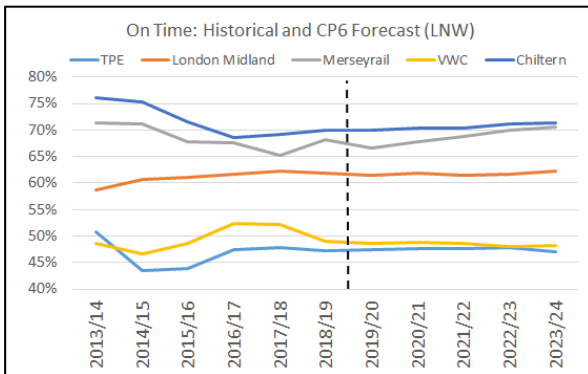
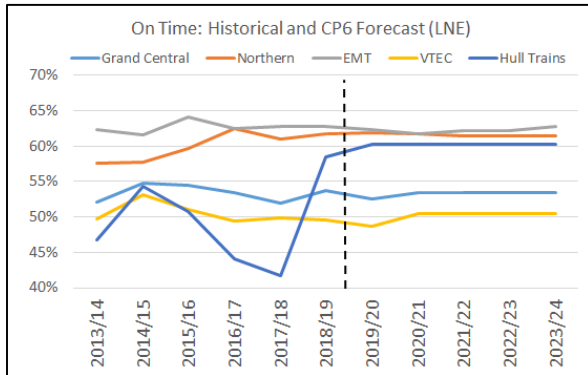
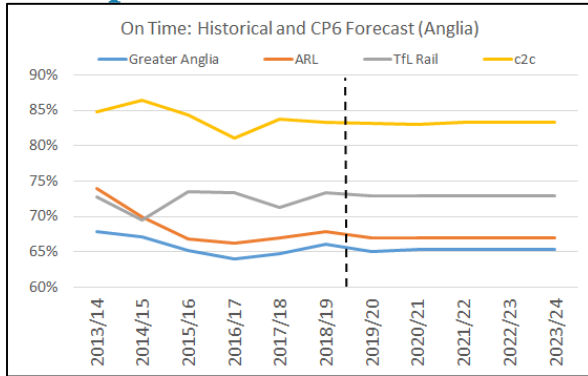


- PPM forecasts are not included in South Eastern route’s plans (SE, GTR), nor for Heathrow Express
- The ScotRail forecast looks challenging given current performance levels, but is a reflection of Transport Scotland’s HLOS target of 92.5% (and as specified in ScotRail’s Franchise Agreement)
- The CP5 outturn forecast for SWR, GWR and Hull Trains looks challenging given current (declining) performance levels. If notable improvement is not achieved in the next year, this will put the early years of CP6 at risk
- Note, no PPM CP5 outturn forecast provided for CrossCountry in the FNPO plan

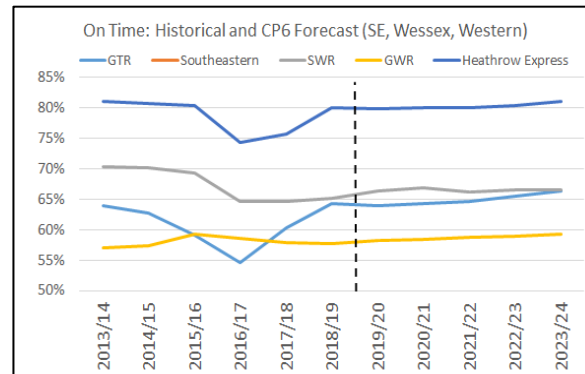


4. Historical Performance – NR/Customer Agreed Metrics: On Time

Comparison between routes

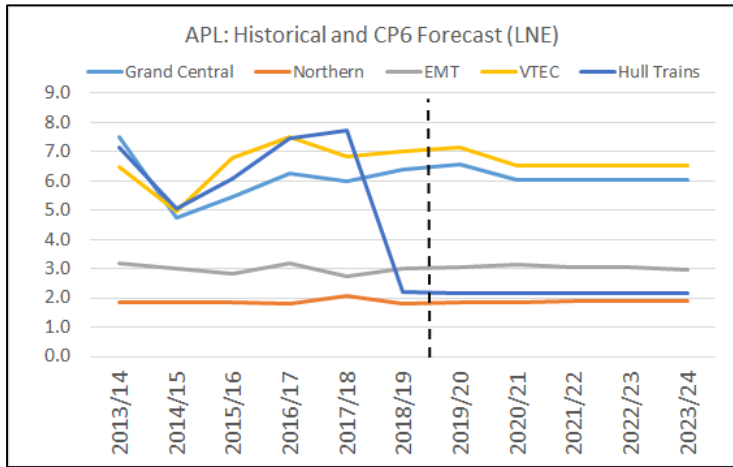


- On Time forecasts (based on proportion of trains arriving at each recorded station on time) are not included in the Scotland or Wales route plans, nor for the Southeastern TOC. Forecasts for CrossCountry in the FNPO plan are still “tbc”
- In each case, the CP6 trajectory is reflective of the CP5 outturn forecast. For most TOCs, the outturn forecast for CP5 appears sensible given recent performance levels
- One notable exception is Hull Trains where the average for last 5 years is 47%, while the end-CP5 target is 58.4% and the CP6 target is 60.3%
- As with cancellations, the GTR forecast is based on the On Time measure returning to the levels experienced pre-2015 by the end of CP5

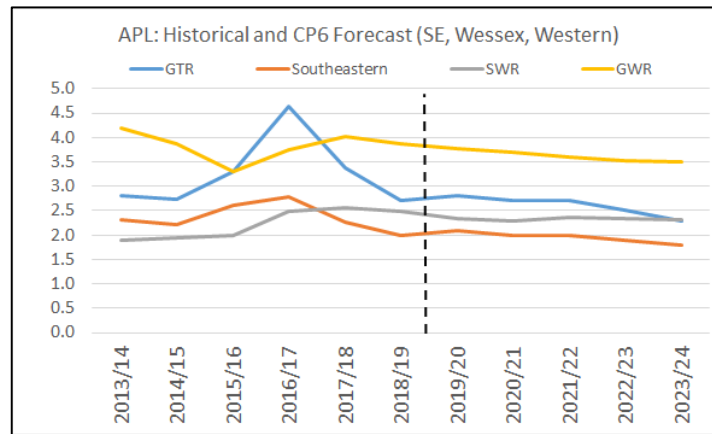
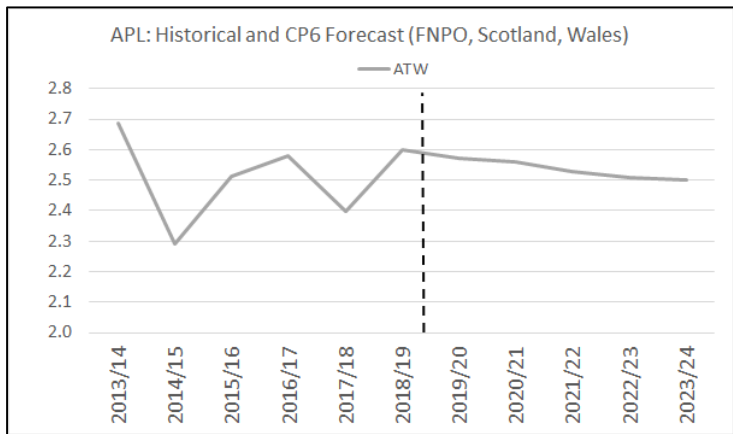


4. Historical Performance – NR/Customer Agreed Metrics: APL

Comparison between routes



- Average Passenger Lateness (APL) forecasts are not included in the Anglia, FNPO, LNW and Scotland plans
- Most CP6 targets look broadly in line with historical performance
- The notable exception is Hull Trains where we would suggest the CP5 outturn forecast (and subsequent CP6 figures) included in the draft plan are incorrect



Appendix A - Assessment of Route Strategic Plans

A.1	London North Eastern & East Midlands
A.2	Wessex
A.3	Wales
A.4	London North Western
A.5	Anglia
A.6	South East
A.7	Scotland
A.8	Western
A.9	Freight & National Passenger Operators

A.1 London North Eastern & East Midlands

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

Freight actions are high level / supportive / exploratory. Confusion over FDM-R target (95.7% in App H or 95.0% in Scorecard?).

Approach is to accommodate +15% traffic growth with marginal performance improvements; also to improve VTEC PPM + 2% but not evident in targets.

Unclear benefits and assumptions of Digital Railway on Kings Cross – Peterborough & Moorgate Line.

Evidence to support plans

The only analysis of performance is provided for the Supplemental Plan, with 4 packages of investment options delivering performance benefits.

Risks to delivery

A key risk is the lack of timetables for increased traffic for GTR, Northern, VTEC, TPE, open access operators.

Condition of some assets will deteriorate – unclear what impact they will have.

The Route’s plan to analyse GPS data to remove timetable allowances might adversely impact performance. Similarly, their plan to terminate short late trains could adversely impact cancellations.

Internal assurance

Only seen NPT assurance, graded as 3 out of 5

Level of customer agreement

Unclear, but targets don’t match franchise commitments

Overall view of plan

There is some confusion over the performance aims and targets, as well as the impact of Digital Railways. The only performance analysis is provided for the Supplemental Plan, making it difficult to judge if the base plan is reasonable. The plans to reduce timetable allowances and terminate short late trains might adversely impact performance metrics.

Criteria	FDM-R	Scorecard “top level” measures	Cancellations
Level of CP6 challenge vs historic performance	Yellow	Yellow	Blue
Approach & assumptions	Yellow	Red	Yellow
Evidence to support plans	Blue	Blue	Blue
Risks to delivery	Yellow	Yellow	Red
Customer agreement	Blue	Red	Blue
Internal assurance - process	Blue		
Evidence that increased funding will improve performance	Yellow		
Overall view of plan	Red		

A.2 Wessex

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

Reduce Service Affecting Failures, focus on Waterloo & Portsmouth line; improve operational recovery capability with TOC; new technology for predict & prevent maintenance; isolated traffic management assuming Digital Railway is funded (Feltham).

Unclear if targets include optional funding. Some inconsistent targets eg FDM-R; others are missing

Evidence to support plans

Analysis of final 2 years of CP5 performance. A waterfall chart shows impact of CP6 performance initiatives but unclear if this is consistent with earlier table. Largest impact is passenger growth (-4.5% on PPM) without explanation. There is no evidence on FDM-R or cancellations. There is no specific analysis of capacity bottlenecks vs growth.

Risks to delivery

Asset condition will deteriorate mitigated by more targeted maintenance, but could result in more failures and TSRs. Additional trains in Dec 18 and Dec 20 could increase reactionary delays. SWR plan to reduce some dwell times (which could explain the -4.5% above). Wessex assessment of risk is “on boundary of risk appetite”.

Train Performance Trajectories for PR18
18 June 2018
[PHASE 1 REPORT]

Internal assurance

Only seen NPT assurance, graded as 2 out of 5

Level of customer agreement

Falls short of SWR franchise commitment

Overall view of plan

With available funding, asset condition will generally deteriorate but with more targeted maintenance. Analysis of impact on performance is presented giving some confidence in targets. However, they are not agreed with SWR and make more conservative assumptions. Some inconsistencies noted on targets.

Criteria	FDM-R	Scorecard “top level” measures	Cancellations
Level of CP6 challenge vs historic performance	Insufficient information provided	Low confidence	Reasonably high confidence
Approach & assumptions	Reasonably high confidence gap	Low confidence	Insufficient information provided
Evidence to support plans	Insufficient information provided	Low confidence	Insufficient information provided
Risks to delivery	Some confidence	Low confidence	Low confidence
Customer agreement	Insufficient information provided	Reasonably high confidence gap	Reasonably high confidence gap
Internal assurance - process	Insufficient information provided		
Evidence that increased funding will improve performance	Low confidence		
Overall view of plan	Low confidence		

A.3 Wales

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

Managing performance risk by targeting critical assets (e.g. off track), improving incident response, predict and prevent maintenance, but some asset condition will slightly deteriorate. Improvements will be Port Talbot re-signalling, fewer level crossing failures & installing reliable axle counters. A new TM system will be installed and tested in CP5, but no performance benefit assumed for CP6.

Evidence to support plans

The plan states that "Trajectories are based on detailed modelling and are driven by initiatives associated with signalling, remote condition monitoring, operations that includes incident response and Operator improvement." No output from this modelling is presented.

Risks to delivery

There is little detail provided. Main risks mentioned are additional train service aspirations and interaction with Core Valleys Lines and insufficient renewal funding.

Level of customer agreement

No detail provided, although it is noted that the forthcoming Wales & Borders franchise change makes this difficult.

Internal assurance

Only seen NPT assurance, graded as 4 out of 5

Overall view of plan

It is difficult to judge without more analysis of forecast traffic, capacity bottlenecks, drivers of performance and the extent of the modelling undertaken. The main aim of the plan appears to be to maintain performance at broadly current levels by targeting renewals on critical assets. However, it is noted that the condition of some assets will deteriorate (slightly) throughout the Control Period which is a concern for the longer term.

Note that following discussions with the Route, there appears to have been detailed modelling and scenario testing, with extensive engagement with TfW but no sig-off. We have not reviewed these but note a key assumption is zero TOC traffic growth (+15% in 'worse than' targets).

Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Blue	Blue	Blue
Approach & assumptions	Yellow	Yellow	Blue
Evidence to support plans	Blue	Blue	Blue
Risks to delivery	Yellow	Blue	Blue
Customer agreement	Blue	Blue	Blue
Internal assurance - process	Blue		
Evidence that increased funding will improve performance	Yellow		
Overall view of plan	Blue		

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

The challenge is to accommodate traffic growth, new fleets & major timetable changes, facilitate HS2 works, and improve performance.

Approach is to improve timetable techniques, response to disruption, and becoming the innovation hub.

The tone is upbeat with risk mitigations and looking for opportunities.

Evidence to support plans

PPM trend graphs with commentary covering CP5 and CP6 are provided for each TOC.

There is no line of sight from asset plans, nor analysis of traffic growth / capacity bottlenecks.

Risks to delivery

A good list is provided showing timing and impact on each TOC.

It is unclear if the Marylebone “golden 5 mile” renewal plan is included in the base plan.

More analysis of HS2 works would help.

Internal assurance

Only seen NPT assurance, graded as 4 out of 5

Level of customer agreement

None of the joint performance activities are signed off. Franchise commitments will not be met for some TOCs.

Overall view of plan

A clear and focussed plan that appears to be realistic. Some performance analysis, increased line of sight to asset plans would help. A key concern is customer agreement, key omission is cancellations.

A welcome locally focussed description of freight plans rather than the more generic plans from FNPO.

Criteria	FDM-R	Scorecard “top level” measures	Cancellations
Level of CP6 challenge vs historic performance	Insufficient information provided	Reasonably high confidence	Insufficient information provided
Approach & assumptions	Some confidence	Some confidence	Insufficient information provided
Evidence to support plans	Insufficient information provided	Low confidence	Insufficient information provided
Risks to delivery	Some confidence	Some confidence	Insufficient information provided
Customer agreement	Insufficient information provided	Reasonably high confidence gap	Insufficient information provided
Internal assurance - process	Insufficient information provided		
Evidence that increased funding will improve performance	Low confidence		
Overall view of plan	Some confidence		

A.5 Anglia

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

The plan has a base position delivered within the proposed settlement and a proposal for an additional £178m spend on Digital Rail systems to provide additional capacity and performance improvements. There is a clear statement that the current funded position does not deliver TOC performance targets but no modelled calculations are provided to support this.

Evidence to support plans

The plans for infrastructure and operating are described but there is no explicit data breakdown that shows the impact of each of these will have on performance through CP6 based on an assumed CP5 exit.

Risks to delivery

Significant focus on the risk from increased services, passenger growth and new fleets. These are seen as increasing DPI and increased station delays. New fleets likely to have implementation risks. However no quantification is provided to understand the scale of the risks against the measures.

Level of customer agreement

All customers clearly state they do not agree with the current targets

Internal assurance

No evidence of local review. NPT grade at 2 out of 5

Overall view of plan

The plan has little numerical support to how numbers have been generated and the way that activities will contribute to the forecasts in the scorecards. The statement that funding will not deliver customer aspirations is not supported by any analysis and it is difficult to understand how they will get TOCs to sign up to targets given the current gap. The RSP makes a case for an additional Digital Rail fund but does not set out what performance impact this will have on performance targets. There is very little focus on cancellations. It is not clear how FDM has been calculated with the FNPO plan.

Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Reasonably high confidence	Some confidence	Some confidence
Approach & assumptions	Some confidence	Some confidence	Insufficient information provided
Evidence to support plans	Some confidence	Some confidence	Some confidence
Risks to delivery	Insufficient information provided	Some confidence	Insufficient information provided
Customer agreement	Insufficient information provided	Reasonably high confidence gap	Reasonably high confidence gap
Internal assurance - process	Insufficient information provided		
Overall view of plan	Some confidence		

A.6 South East

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

The targets are described as being within the constrained plan. Most of the discussion within the plan is around PPM impact but this doesn't figure in the scorecard so there is no direct analysis which sets out how the scorecard has been derived. No historical analysis of performance failures are described to support. There is no explicit analysis of off route GTR performance. It does state that the projections are based on detailed modelling but this hasn't been shared.

Evidence to support plans

Within appendix A, a breakdown of projected delay minute savings is provided although not actually broken down by operator. As no cause data of current performance is provided it is difficult to verify that the right issues are being tackled. No explicit risk impact in delay minutes discussed.

Risks to delivery

A good discussion on key risk areas such as Thameslink and passenger growth. No mention of SE franchise change and the potential impact of new trains or timetable changes (positive or negative). No impact on PPM provided for the discussed risks.

Internal assurance

No evidence of local review. NPT grade at 4 out of 5

Level of customer agreement

No evidence provided

Overall view of plan

The narrative through the plan is consistent and strongly argued - in essence that the constrained plan will deliver a small improvement to current performance but at the cost of long term sustainability and will see performance suffer badly in CP7. The plan includes a bid for an extra £166m for performance improvements that will deliver a 2% PPM improvement by the end of CP6. However there is a lack of data to support this setting out how this will challenge the base causes of poor performance. Little evidence of any TOC improvements are included and there is no mention of the impact of South Eastern refranchising.

Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Red	Yellow	Red
Approach & assumptions	Blue	Yellow	Blue
Evidence to support plans	Blue	Yellow	Blue
Risks to delivery	Blue	Yellow	Blue
Customer agreement	Blue	Blue	Blue
Internal assurance - process	Blue		
Overall view of plan	Yellow		

A.7 Scotland

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Overview of findings by Route

Approach and assumptions

The Scotrail target is the primary focus of the plan. The activity prioritisation sets out actions but no quantification sets out how they will be achieved against historical performance. The actions in Appendix A are very high level and give little detail.

Evidence to support plans

Within the prioritised list a series of actions are set out that are linked to other areas in the RSP, for example weather resilience. In the main these look sound but no analytical support to demonstrate that the current key causes are being addressed.

Risks to delivery

A reasonably comprehensive overview of risks for Scotrail is set out in section 4, However no analysis supports the likely impact to offset against the improvements.

Internal assurance

Main focus of the NPT review was on the risk to achieving the CP5 exit given current performance. Described plan as asset focused and the linkages to performance as being unclear

Internal assurance

No evidence of local review. NPT grade at 3 out of 5

Level of customer agreement

The plan is jointly signed by the Alliance Head of Performance

Overall view of plan

The exit point from CP5 presents the single greatest challenge. 92.5% PPM for Scotrail is the TfS target. The actions set out in the plan across assets and culture as examples are all basically sound but the lack of any quantification, gives insufficient visibility of the impact the plan will have. Surprisingly there is also little information on how the TOC will deliver improvements beyond new fleets (which will be hugely significant). The cancellation measure looks very challenging as well with little explanation as to how it will be delivered.

Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Insufficient information provided	Reasonably high confidence gap	Some confidence
Approach & assumptions	Insufficient information provided	Some confidence	Insufficient information provided
Evidence to support plans	Insufficient information provided	Some confidence	Insufficient information provided
Risks to delivery	Insufficient information provided	Some confidence	Insufficient information provided
Customer agreement	Insufficient information provided	Reasonably high confidence	Reasonably high confidence
Internal assurance - process	Insufficient information provided		
Overall view of plan	Some confidence		

A.8 Western

Overview of findings by Route

Approach and assumptions

This was one of the few plans to produce a very useful waterfall chart showing the relative impact of risks and improvement strategies to deliver the 89.4% PPM target for GWR. Whilst the detail behind the chart wasn't provided it is helpful to have an overall picture of the forecasts. There isn't an equivalent for other measures or for the HeX targets

Evidence to support plans

There is a very good summary of how the performance targets will be delivered with a simple model explaining the interaction between asset strategies, operations and timetable all set in a framework of improved culture. The use of the waterfall gave substance to how each of these would deliver proportionally the PPM target for GWR (although the numbers don't quite add up).

Risks to delivery

The Route is due to see big changes (IEP rollout, electrification, Crossrail start up, growth) all of which are predicted to threaten performance (-4.63%age points)

Level of customer agreement

No Evidence provided

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Internal assurance

The NPT report describes it as an asset plan with performance as an output rather than central to the plan. It does acknowledge the use of waterfalls but suggests more numeracy would be helpful. No visibility of local assurance. NPT grade at 2 out of 5.

Overall view of plan

The Plan does shows how the various elements have been brought together. Risk is a major focus given changes. Improvement plans are expected to deliver a 5.8% improvement giving an overall change of +1%. There is little mention of the impact on cross route TOCs in particular Crossrail. The assumption is that further modelling sits behind the plan to support the waterfall. There is no analysis aside from PPM for FGW. There is little inclusion of specific performance plans by operators.

Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Reasonably high confidence	Some confidence	Low confidence
Approach & assumptions	Insufficient information provided	Some confidence	Insufficient information provided
Evidence to support plans	Insufficient information provided	Some confidence	Insufficient information provided
Risks to delivery	Insufficient information provided	Some confidence	Insufficient information provided
Customer agreement	Insufficient information provided	Insufficient information provided	Insufficient information provided
Internal assurance - process	Insufficient information provided		
Overall view of plan	Low confidence		

A.9 FNPO

Overview of findings by Route Approach and assumptions

The Freight Plan sets out likely growth forecasts given the changing nature of the freight market and describes how the priority freight routes will be managed in conjunction with the routes. Its focus is obviously different to the other routes with a much greater emphasis on coordinating across the organisation. Similar analysis is provided for XC but little for Caledonian Sleeper.

Evidence to support plans

The performance section provides useful analysis on causes of poor performance and the impact of the changing market and the challenge it presents (coal was a high performing sector so the huge reduction in coal traffic puts pressure on delivery of the target). No impact analysis provided for plans and it is unclear how these sit with the other Route plans.

Risks to delivery

Whilst risks are described there isn't an estimation of the relative scale, impact and mitigations against them. The impact of the changing freight traffic mix is described.

Level of customer agreement

No evidence in the plan

Colour code for confidence rating
Reasonably high confidence
Some confidence
Low confidence
Reasonably high confidence gap
Insufficient information provided

Internal assurance

The summary in the NPT report states there is less performance focus than the Route plans with no asset focus. It highlights the lack of risk focus. It does raise the issue of how the FNPO will tackle the transmission of delay around the network. No evidence of Route based assurance. NPT grade at 3 out of 5.

Overall view of plan

The focus of the FNPO plan differs from the other routes unsurprisingly. The plan does contain some historical analysis for both XC and Freight which have been used to support the target setting. However, there is no quantification of the improvement plans and no oversight of the risks and their impact. It is unclear how the targets have been built up from route plans (or indeed if they have) and how the relative importance of initiatives sit. There is virtually no detail for Caledonian Sleeper.

Criteria	FDM-R	Scorecard "top level" measures	Cancellations
Level of CP6 challenge vs historic performance	Some confidence	Low confidence	Insufficient information provided
Approach & assumptions	Some confidence	Low confidence	Insufficient information provided
Evidence to support plans	Insufficient information provided	Insufficient information provided	Insufficient information provided
Risks to delivery	Insufficient information provided	Insufficient information provided	Insufficient information provided
Customer agreement	Insufficient information provided	Insufficient information provided	Insufficient information provided
Internal assurance - process	Insufficient information provided	Insufficient information provided	Insufficient information provided
Overall view of plan	Some confidence	Some confidence	Some confidence

Appendix B – Documents provided

No.	Filename	Description
1	SBPT206 Capacity and performance planning framework.pdf	PR13 document relevant as background to this review
2	SBPT230 Performance Plan Summary.pdf	PR13 document relevant as background to this review
3	SBPT3312 Performance Plan.pdf	PR13 document relevant as background to this review
4	SBPT3330 Freight Performance Measurement.pdf	PR13 document relevant as background to this review
5	14. Train Performance as submitted.xlsx	Central Performance Team Assessment of Route Plans - scoring
6	RF6 NPT Review of Route plans for ORR.zip	Central Performance Team Assessment of each Route Plan
7	Anglia - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
8	FNPO - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
9	London North Eastern and East Midlands - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
10	London North Western - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
11	Scotland - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
12	South East - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
13	Wales - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
14	Wessex - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
15	Western - Route Strategic Plan.pdf	Dec 2017 Route Strategic Plan
16	180125 Business planning process overview.pptx	Business Planning Process - presentation
17	RF6 BRT guidance.pdf	RF6 Business Planning Guidance version 1.0 (28 July 2017)
18	SBP Assurance Activity 25-01-2018.pptx	SBP Assurance Activity - by Central Performance Team
19	SFS - Operational Performance.pdf	Operational Performance - Short Form Strategy
20	Wales CP6 Performance trajectories slides reissued 050218.pdf	Wales Route slides - methodologies for performance trajectories
21	Wales Route CP6 Performance trajectory plan submission.xlsx	Wales Route - performance model
22	Wales Route Performance - MAA P10 to CP6 fishbone.pdf	Wales Route - fishbone analysis