Annex – Route scorecard train performance summaries

Annex to PR18 final determination supplementary document – scorecards and requirements

Route scorecard train performance summaries

1.1 This document is an annex to our [PR18 final determination supplementary document – Scorecards and requirements](#), published as part of our [PR18 periodic review](#).

1.2 These tables summarise our analysis of:

■ Network Rail's train performance proposals as part of PR18, including:

– the performance trajectories on the long-term route scorecards included in Network Rail's Route Strategic Plans (RSPs) in February 2018;

– Network Rail's subsequent targeted adjustments to these in July 2018; and

– its final proposals to us in its response to our draft determination in August 2018[1].

■ information provided to us by train and freight operators at different times during the PR18 process, including through the National Task Force (NTF)[2] and in response to our draft determination.

1.3 Our analysis has been supported by the independent reporter (Arup, supported by Winder Phillips). We have published [Arup's report supporting our draft determination](#) and the report supporting our final determination will be published [here](#) shortly.

1.4 The tables align the detail about train operators to their 'lead route', although most operators run services on multiple routes. The CRM-P[3] CP6 baseline trajectories were based on PPM[4] inputs and we have included these in the table. However, some operators are focused on measures such as right time arrivals (RTA) or time to 3, rather than PPM. This is reflected in the "Agreement of performance measures between Network Rail and operators" section of each table.

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[1] Network Rail provided us with a further 'final' set of proposed performance trajectories on 14 September 2018 which addressed some errors.

[2] [NTF](#) is the body through which the industry cooperates to improve performance.

[3] CRM-P stands for the consistent route measure – passenger performance.

[4] PPM stands for public performance measure.

Anglia route scorecard performance summary

Topic	Position

Operators for whom this is lead route	Anglia is the lead route for the following operators, all of which have performance measures on the Anglia route scorecard:
	
	  – c2c
	
	  – Greater Anglia (GA)
	
	  – Arriva Rail London (ARL) (London Overground)
	
	  – MTR Crossrail (TfL Rail)

Other operators included on route scorecard	No other operators were included on the scorecard.
	
	  – Anglia told us it does not intend to include CrossCountry on the scorecard. We remain concerned that the nature of CrossCountry's operations are such that there is a risk that each route fails to adequately consider its needs. We will be reflecting this in how we monitor and hold the route to account.
	
	  – Freight operators are represented on the scorecard by the inclusion of FDM-R[5].

Performance modelling/methodology	Anglia developed a bottom-up model based on historical performance, in conjunction with informed assumptions associated with future initiatives. It applied an adjustment for passenger growth based on train operating companies (TOC) characteristics.

CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
CRM-P CP6 baseline trajectory	Anglia CRM-P	1.44	1.44	1.43	1.43	1.43

CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
CP6 PPM input to CRM-P	Arriva Rail London	94.7%	94.9%	95.0%	95.0%	95.0%
	c2c	96.2%	96.2%	96.2%	96.2%	96.2%
	Greater Anglia	89.0%	89.2%	89.2%	89.2%	89.2%
	MTR Crossrail	93.9%	93.9%	93.9%	93.9%	93.9%

Topic	Position
Route confidence in performance trajectories based on modelling	Network Rail has confirmed the modelling of all performance trajectories has been based on a P50 level of confidence.

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[5] FDM-R stands for freight delivery metric – route.

Topic	Position
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – traffic/passenger growth (Crossrail and expected continued growth for Arriva Rail London, c2c and Greater Anglia) – new rolling stock (Greater Anglia and MTR Crossrail) – new timetable (expected Dec 2019), (improved Sectional Running Times (SRTs)
Agreement of performance measures between Network Rail and operators	The long-term scorecard included by the route in its RSP included performance measures which we understand have been agreed between the route and its customers. Each operator on the Anglia route has the following measures on the scorecard: – PPM – Cancellations – On Time We note that Greater Anglia has a franchise target for CaSL but that this measure is not included on the Anglia scorecard.
Agreement of performance trajectories between Network Rail and operators	Our understanding of the operator views below has been taken from responses we received to our draft determination consultation (August 2018). **Anglia route** told us that performance trajectories have been agreed with c2c and ARL (neither of whom responded to our draft determination) for CP6. Discussions continue with Greater Anglia and MTR Crossrail to reach agreement as part of Network Rail's annual business planning process. **Arriva Rail London (trajectory agreed)**: We did not receive a response to our draft determination consultation from the operator. However, its owning group, Arriva, told us it is concerned about how Network Rail has forecast PPM into CRM-P and the impact on benchmarks. **c2c (trajectory agreed)**: We did not receive a response to our draft determination consultation from the operator or its owning group. **Greater Anglia (trajectory not agreed):** We did not receive a response to our draft determination consultation from the operator. However, its owning group, Abellio, told us that the non-agreement of trajectories is due to them being unambitious and lacking engagement at an early stage.

Topic	Position
	MTR Crossrail (trajectory not agreed): The operator did not include comments on performance trajectories in its response to our draft determination consultation, and we did not receive a response from its owning group.

Anglia: CRM-P actuals and CP6 baseline trajectory CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)

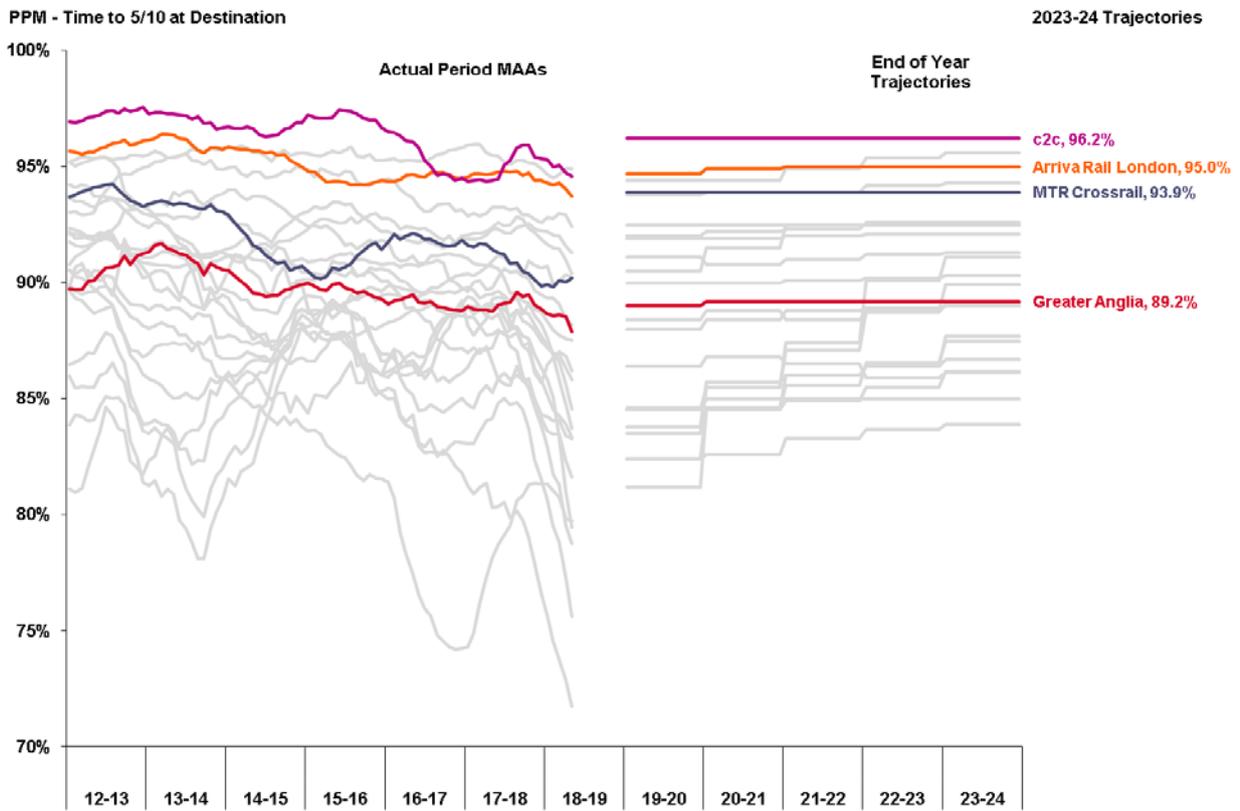**Anglia: TOC PPM inputs to CRM-P CP6 baseline trajectories, 2012-13 to 2023-24**

Figure shows trajectories for operators for which Anglia is the lead route.
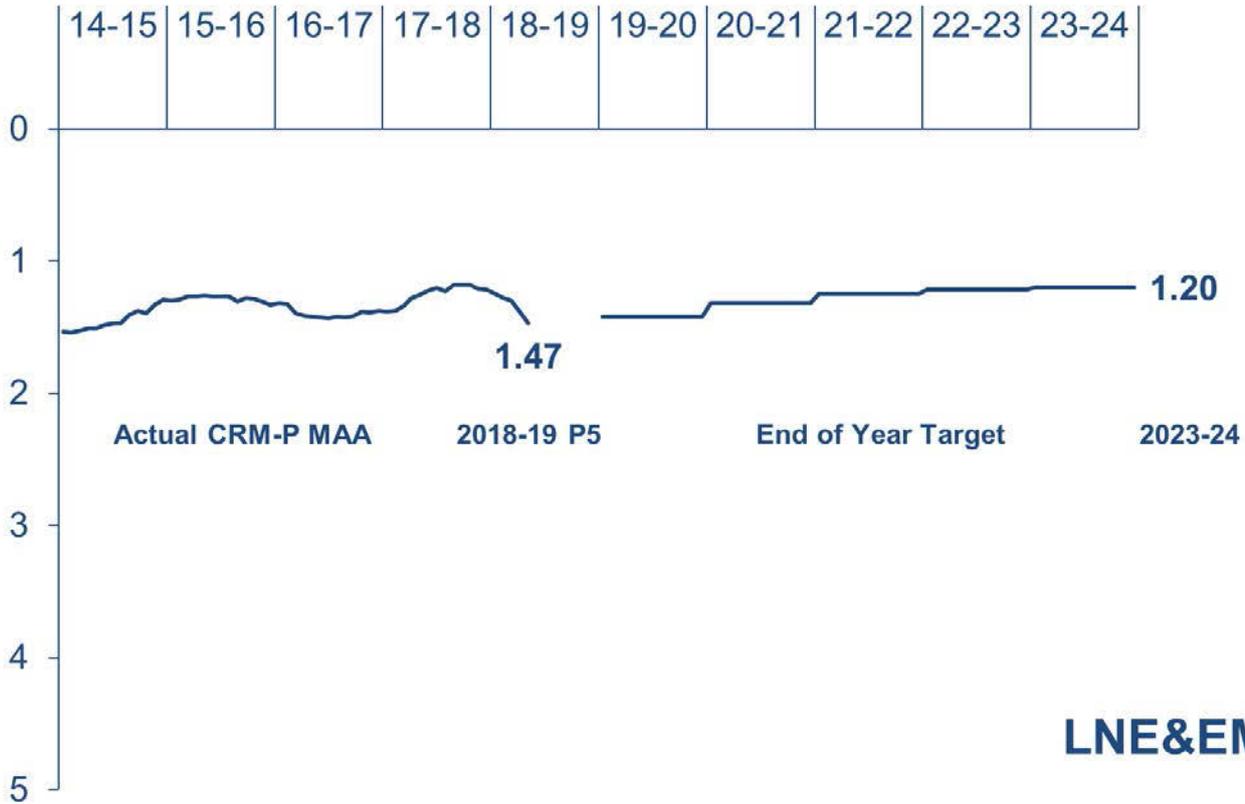
LNE&EM route scorecard performance summary

Topic	Position
Operators for whom this is lead route	LNE&EM is the lead route for the following operators, who all have performance measures on the LNE&EM route scorecard: – East Midland Trains (EMT) – Grand Central – Hull Trains – London North Eastern Railway Limited (LNER) – Northern
Other operators included on route scorecard	LNE&EM has told us the following operators will also be included on its route scorecard: – CrossCountry – Nexus (Tyne & Wear Metro) – Freight operators are represented on the scorecard by the inclusion of FDM-R.
Performance modelling/methodology	LNE&EM adopted a bottom-up, quantitative approach to forecasting performance trajectories. Delay forecasts were developed based on forecast incident count and the historical relationship between delay per incident (DPI) and the number of delay causing incidents for each operator. There was an additional structured assessment of the impacts of Thameslink delay. The independent reporter has told us it has not seen a fully updated version of the model since spring 2018.

CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	LNE&EM CRM-P	1.42	1.32	1.25	1.22	1.20

CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	EMT	91.1%	90.8%	91.0%	91.2%	91.3%
	Grand Central	83.8%	85.7%	86.0%	86.4%	86.7%
	Hull Trains	84.5%	85.0%	85.0%	85.0%	85.0%
	LNER	81.2%	84.6%	86.0%	86.4%	87.7%
	Northern	83.5%	85.5%	87.4%	90.1%	91.1%

Topic	Position
Route confidence in performance trajectories based on modelling	Network Rail has confirmed the modelling of performance trajectories has been based on a P50 level of confidence.

Topic	Position
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – timetable changes (ECML Dec 2019) – enhancement schemes – new rolling stock (EMT, Grand Central and LNER (fully introduced by end of yr1 CP6)) – line speed improvements – consolidating control in Derby and York Route Operations Centres (ROCs)
Agreement of performance measures between Network Rail and operators	The long-term scorecard included by the route in its RSP included performance measures which we understand have been agreed between the route and its customers. Each operator on LNE&EM route has the following measures on the scorecard: – PPM MAA – Average Passenger Lateness – NR-caused delay minutes by route – On Time at all recorded stations – Level of cancellations We note that two operators have a franchise target for CaSL but that this measure is not included on the LNE&EM route scorecard.
Agreement of performance trajectories between Network Rail and operators	It is our understanding that performance trajectories have not been agreed between LNE&EM route and its customers. Our understanding of the operator views below has been taken from responses we received to our draft determination consultation (August 2018). **LNE&EM route:** told us that it has continued to engage with customers but there remains a likelihood that agreement will only be reached on certain elements of the projections for CP6. **East Midlands Trains (trajectory not agreed):** we did not receive a response from the operator to our draft determination consultation. However, its owning group, Stagecoach, told us that it is not willing to agree the CP6 performance trajectories and had requested clarity on how the values for each of the assumptions underpinning the trajectory had been derived. **Grand Central (trajectory not agreed):** In its response to our draft determination consultation the operator told us that it has been unable to reach agreement with Network Rail on performance trajectories because it considers the method for translating CRM-P

Topic	Position
	from PPM is not accurate and that Network Rail followed a 'top-down' process to build the trajectories. Grand Central also told us that not all funded activities were reflected in the performance trajectories; and it had not seen appropriate analysis to evidence how the gap between CP5 and CP6 PPMs was bridged. Its owning group Arriva told us that it was concerned about how Network Rail has forecast PPM into CRM-P and the impact on benchmarks.
	Hull Trains (trajectory not agreed): We did not receive a response from the operator to our draft determination consultation. However, its owning group, First Group, told us that the performance trajectory is not agreed and discussions continue. In particular, there are discrepancies as to how Network Rail has allocated benefits of initiatives across operators on the route.
	Northern (trajectory not agreed): In its response to our draft determination consultation the operator told us that the forecast performance trajectory for CP6 fails to achieve the PPM targets in its franchise agreement. It also said that the methodology is limited and lacks supporting detail, such as Network Rail improvement initiatives. It said the quality of engagement from routes was inconsistent and it wants closer joint working. Its owning group Arriva told us it is concerned about how Network Rail has forecast PPM into CRM-P and the impact on benchmarks.
	LNER (trajectory not agreed): In its response to our draft determination consultation the operator told us that it is unable to agree a performance trajectory and believes that 88% PPM MAA is achievable by the end of CP6 based on current, funded initiatives.

LNE&EM: CRM-P actuals and CP6 baseline trajectory CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)

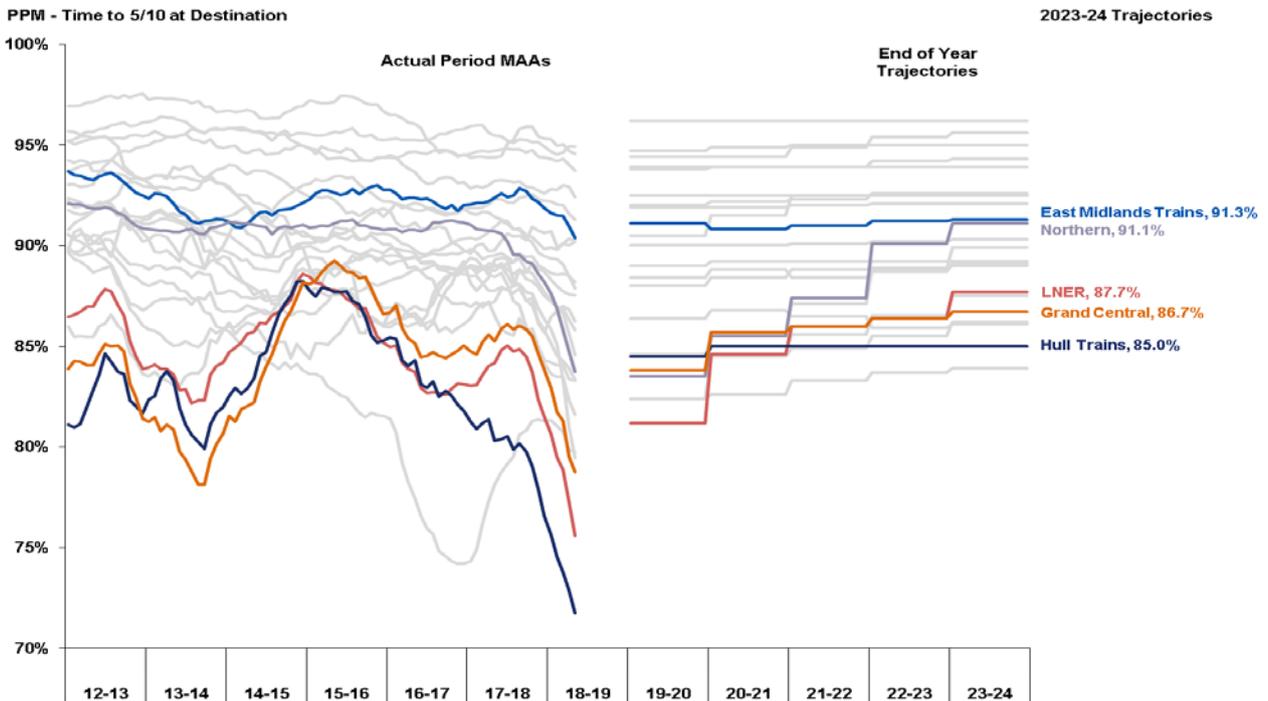**LNE&EM: TOC PPM inputs to CRM-P CP6 baseline trajectory, 2012-13 to 2023-24**

Figure shows trajectories for operators for which LNE&EM is the lead route.

LNW route scorecard performance summary

Topic	Position
Operators for whom this is lead route	LNW is the lead route for the following operators, all of which have performance measures on the LNW route scorecard: – Chiltern Railways – Merseyrail – TransPennine Express (TPE) – Virgin West Coast (VWC) – West Midlands Trains (WMT)
Other operators included on route scorecard	Four other operators were included on the LNW scorecard. These were: – Arriva Rail London – Caledonian Sleeper – CrossCountry – Northern – Freight operators are represented on the scorecard by the inclusion of FDM-R. We are not aware that any other operator has raised a concern about not being included on the LNW scorecard.
Performance modelling/ methodology	LNW adopted a bottom-up approach to the modelling which was heavily reliant on consultation with its five lead TOCs. The forecasting approach was based on an iterative process focused upon data, knowledge, experience and judgement. Review of existing data has allowed current and recent performance trends to be used to inform risks and opportunities for CP6. The route forecast has then been considered against the TOC aspirations.

CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	LNW CRM-P	1.70	1.62	1.58	1.56	1.53

CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	Chiltern	93.8%	93.9%	93.9%	94.2%	94.3%
	Merseyrail	94.4%	94.4%	94.9%	95.4%	95.6%
	TPE	82.4%	84.5%	84.9%	85.5%	86.2%
	VWC	86.4%	86.8%	86.5%	85.9%	86.1%

Topic	Position					
	WMT	88.4%	88.8%	88.4%	88.7%	89.1%
Route confidence in performance trajectories based on modelling	Network Rail has confirmed the modelling of performance trajectories has been based on a P50 level of confidence.					
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – HS2 construction – expected continued traffic/passenger growth – residual impact from May/Dec 2018 timetable changes – line speed improvements – degraded LUL infrastructure – new Chiltern franchise 2021 – new TPE franchise 2023					
Agreement of performance measures between Network Rail and operators	The long-term scorecard included by the route in its RSP included performance measures which we understand have been agreed between the route and its customers. Each operator for whom LNW is the lead route has the following measures on the scorecard: – PPM MAA – On Time MAA – Infrastructure Delay (track and non-track assets) Other operators for whom LNW is not the lead route have different measures which reflect their business interests on the route e.g. CrossCountry has right time arrivals at Birmingham New Street. We note that three operators have a franchise target for CaSL but that this measure is not included on the LNW route scorecard.					
Agreement of performance trajectories between Network Rail and operators	The trajectory for Merseyrail on the LNW route has been agreed. Our understanding of the operator views below has been taken from responses to our draft determination consultation (August 2018). **LNW route:** In its draft determination consultation response the operator said that it had worked hard on establishing realistic and credible performance trajectories for CP6. It has continued to engage with its customers and has agreed the performance trajectory for CP6 with Merseyrail. **Chiltern Railways (trajectory not agreed):** we did not receive a response to our draft determination consultation from the operator. However, its owning group Arriva told us it is concerned about how					

Topic	Position
	Network Rail has forecast PPM into CRM-P and the impact on benchmarks.
	Merseyrail (trajectory agreed): we noted in our draft determination that this trajectory has been agreed between Network Rail and Merseyrail. We did not receive a response to our draft determination consultation from the operator or its owning group.
	TPE (trajectory not agreed): we did not receive a response to our draft determination consultation from the operator. However, its owning group First Group told us that the development of performance trajectories continues to be a source of frustration.
	VWC (trajectory not agreed): in its response to our draft determination consultation Virgin West Coast told us it has been unable to reach agreement with Network Rail on its performance trajectories for CP6. Performance has deteriorated significantly this year and it considers the exit target for CP5 is unlikely to be met which may further debase the trajectory.
	WMT (trajectory not agreed): we did not receive a response to our draft determination consultation from the operator. However, its owning group Abellio told us that the non-agreement of trajectories is due to them being unambitious and lacking engagement at an early stage.

LNW: CRM-P actuals and CP6 baseline trajectory, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-2

LNW: TOC PPM inputs to CRM-P CP6 baseline trajectories, 2014-15 to 2023-24
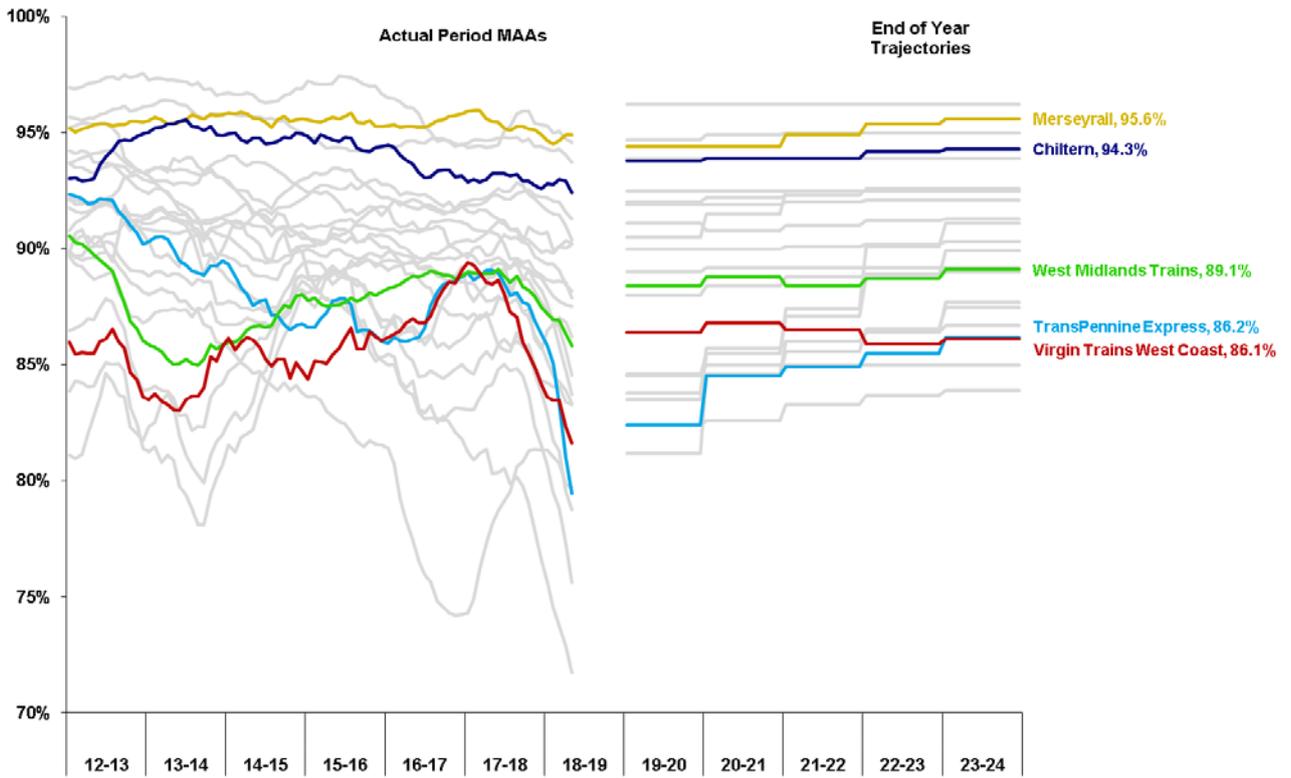

Figure shows trajectories for operators for which LNW is the lead route.

Scotland route scorecard performance summary

Topic	Position
Operators for whom this is lead route	Scotland is the lead route for Abellio ScotRail, which has performance measures on the Scotland route scorecard.
Other operators included on route scorecard	The following operators were also included on the Scotland route scorecard: – Caledonian Sleeper – CrossCountry The Scottish government also set a High Level Output Specification (HLOS) target for Caledonian Sleeper, for whom the Freight and National Passenger Operator route (FNPO) is the lead route. Freight operators are represented on the scorecard by the inclusion of FDM-R and other operational freight measures. We are not aware that any operator has raised a concern about not being included on the Scotland route scorecard.
Performance modelling/ methodology	The Scotland route has a top-down target in the HLOS which it is seeking to meet through implementing proposals in the Donovan Report. A model has not been provided by the Scotland route for review, however, the independent reporter understands that the benefits of high-level initiatives have been estimated for each year of CP6 and an overall judgement of risk has been applied to the forecast.

CP6 HLOS trajectory (Abellio ScotRail PPM & Caledonian Sleeper right time arrivals)	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	Abellio ScotRail[6]	92.5%	92.5%	92.5%	92.5%	92.5%
	Caledonian Sleeper	80.0%	80.0%	80.0%	80.0%	80.0%

CRM-P CP6 baseline trajectory[7]	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	Scotland CRM-P	1.06	0.96	0.89	0.89	0.88

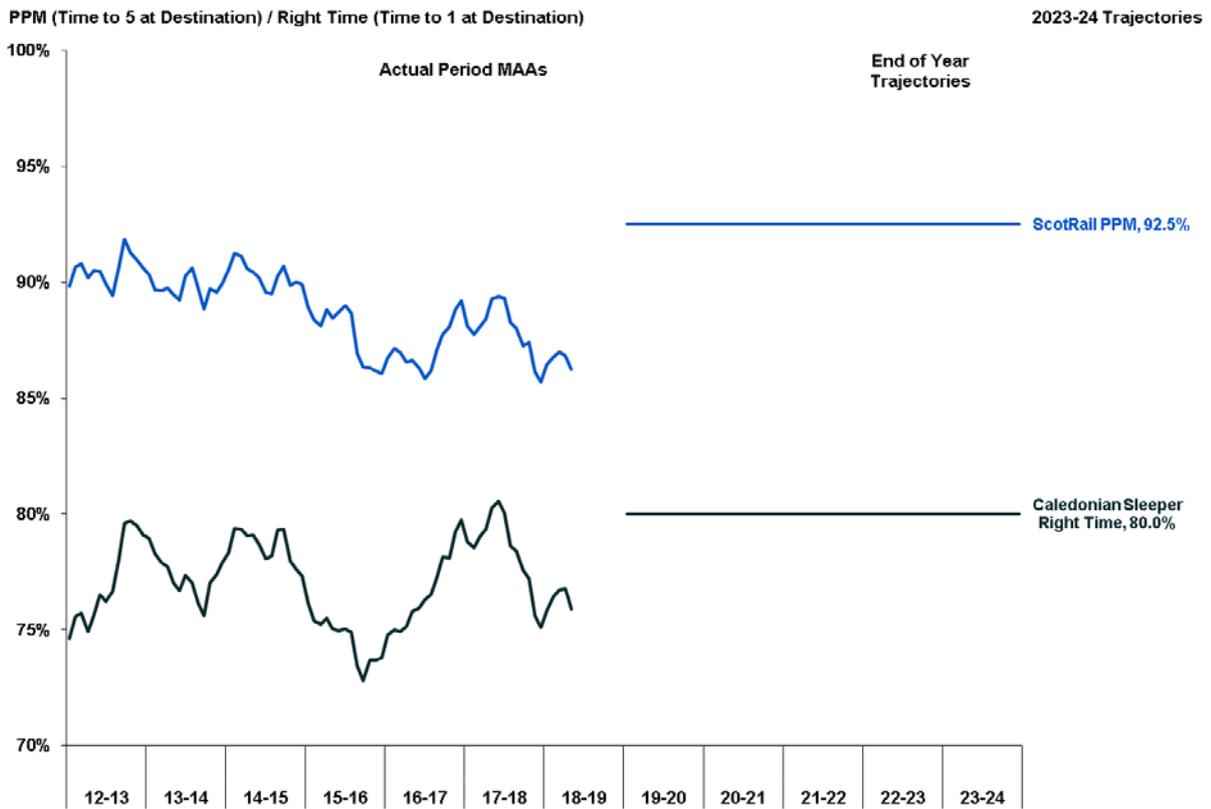| **CP6 PPM input to CRM-P**	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	Abellio ScotRail[8]	90.5%	91.5%	92.5%	92.5%	92.5%

[6] The figures for Abellio ScotRail PPM are the Transport Scotland HLOS figures.

[7] The CRM-P CP6 baseline trajectory uses different PPM input figures than those which reflect the requirements of the Transport Scotland HLOS.

[8] The figures for Abellio ScotRail PPM are the Transport Scotland HLOS figures.

Topic	Position					
	Caledonian Sleeper	92.5%	92.5%	92.5%	92.5%	92.5%

Topic	Position
Route confidence in performance trajectories based on modelling	Abellio ScotRail: The route has advised that it does not think it will meet the HLOS target in years 1 and 2 of the control period. It intends to implement the recommendations of the Donovan report to support achievement of the HLOS targets in CP6. Caledonian Sleeper (FNPO lead route): see FNPO table for PPM target.
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – traffic growth (an expectation of 1.9% during CP6) / expected passenger growth – new fleet (ScotRail) – asset improvement programme (AIP)
Agreement of performance measures between Network Rail and operators	The Scotland route has top-down HLOS targets for ScotRail and Caledonian Sleeper. We discuss this in more detail in the Scotland performance section of our supplementary document on scorecards. Other operators for whom Scotland is not the lead route have different measures which reflect their business interests on the route e.g. CrossCountry has right time departures from Edinburgh Waverley.
Agreement of performance trajectories between Network Rail and operators	The Scotland route has top-down HLOS targets for ScotRail and Caledonian Sleeper. We discuss this in more detail in the Scotland performance section of our supplementary document on scorecards.

Scotland: operator targets reflecting HLOS requirements, 2012-13 to 2023-24

PPM (Time to 5 at Destination) / Right Time (Time to 1 at Destination)   2023-24 Trajectories

Actual Period MAAs   End of Year
                                            Trajectories

100%

95%

                                                                        ScotRail PPM, 92.5%

90%

85%

80%   Caledonian Sleeper
                                                                        Right Time, 80.0%

75%

70%

| 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 |

Scotland: CRM-P actuals and CP6 baseline trajectory, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)
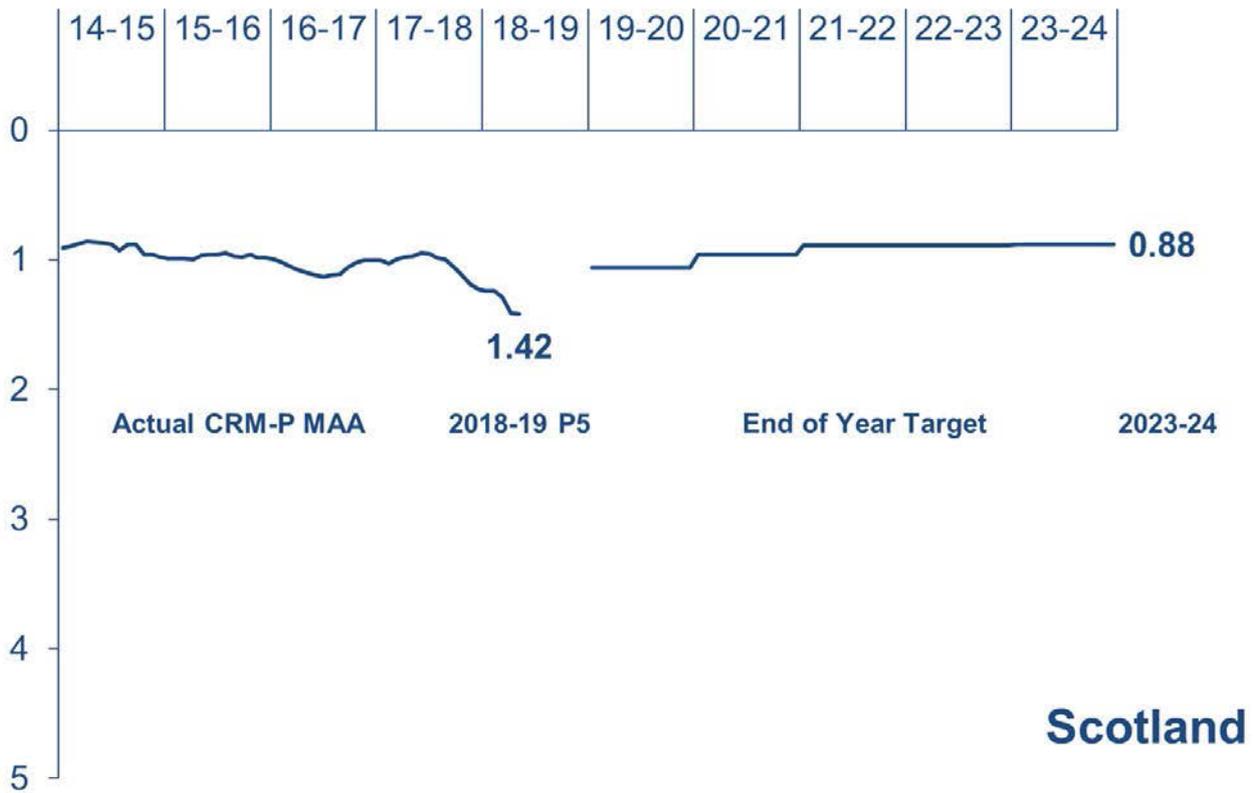
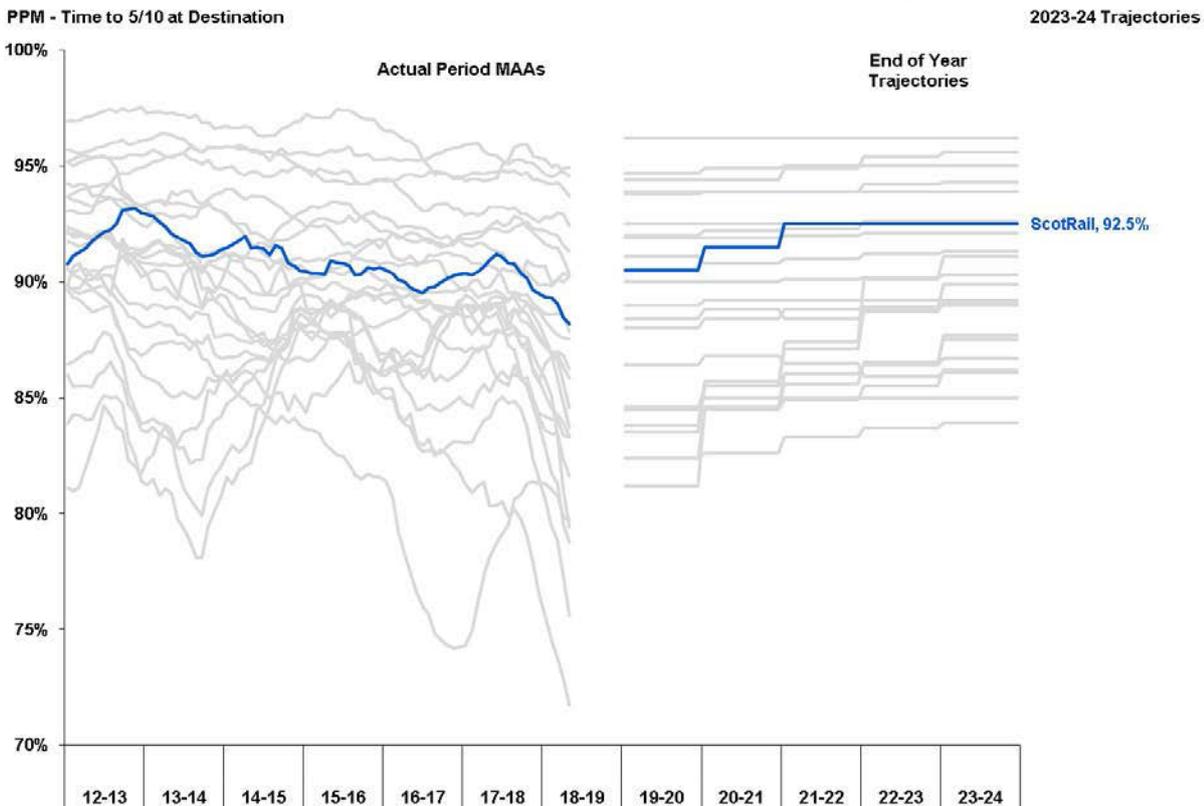**Scotland: TOC PPM inputs to CRM-P CP6 baseline trajectory, 2012-13 to 2023-24**

Figure shows trajectories for operators for which Scotland is the lead route.

South East route scorecard performance summary

Topic	Position
Operators for whom this is lead route	South East is the lead route for the following operators, both of which have performance measures on the South East route scorecard: – Govia Thameslink Railway (GTR) – Southeastern
Other operators included on route scorecard	Freight operators are represented on the scorecard by the inclusion of FDM-R. No other operators were included on the scorecard. We are not aware that any operator has raised a concern about not being included on the South East route scorecard.
Performance modelling/methodology	A Monte Carlo simulation model using random sampling to estimate the expected delay minutes given a number of performance initiatives, and converted to PPM using regression modelling.

CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	South East CRM-P	3.03	2.98	2.88	2.84	2.81

CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	GTR	82.4%	82.6%	83.3%	83.7%	83.9%
	Southeastern	88.0%	88.4%	88.8%	88.9%	89.0%

Topic	Position
Route confidence in performance trajectories based on modelling	Network Rail has confirmed that the modelling of performance trajectories has been based on a P50 level of confidence.
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – new timetable (in 2019, following completion of the Thameslink programme) – traffic/passenger growth (Thameslink and expected continued growth) – asset age and reliability – end of, and potential restructure of, the GTR franchise
Agreement of performance measures between Network Rail and operators	The long-term scorecard included by the route in its RSP included performance measures which we understand have been agreed between the route and its customers. Each operator has the following measures on the scorecard:

Topic	Position
	– Average Passenger Lateness – Level of cancellations / CaSL* In addition: – GTR has an On Time metric – Southeastern has Time to 3 * We have made comments in our supplementary document on scorecards about the importance of clearly defining measures; these are in fact two different measures. We expect the route to address this in its future scorecards.
Agreement of trajectories between Network Rail and operators	The trajectories have not been agreed for GTR and Southeastern. Our understanding of the operator views below has been taken from responses to our draft determination consultation (August 2018). **South East:** GTR and Southeastern understand, support, and have been fully collaborated with, during the process of analysing and formulating the CP5 exit position and the CP6 trajectory. The route recognises that whilst it has put forward its best plan for the funding available, it does not deliver the level of train performance passengers deserve. **GTR (trajectory not agreed):** in its response to our draft determination consultation, GTR told us that it has been fully engaged on performance trajectories. It cannot currently support the forecast PPM or CP6 exit position as there is not a significant improvement in PPM during CP6. We did not receive a response from its owning group Govia. **Southeastern (trajectory not agreed):** in its response to our draft determination consultation, the operator told us that it understands the quantification, assumptions and model but that it does not support the low trajectory that the route is aiming to deliver. We did not receive a response from its owning group Govia.

South East: CRM-P actuals and CP6 baseline trajectory, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)

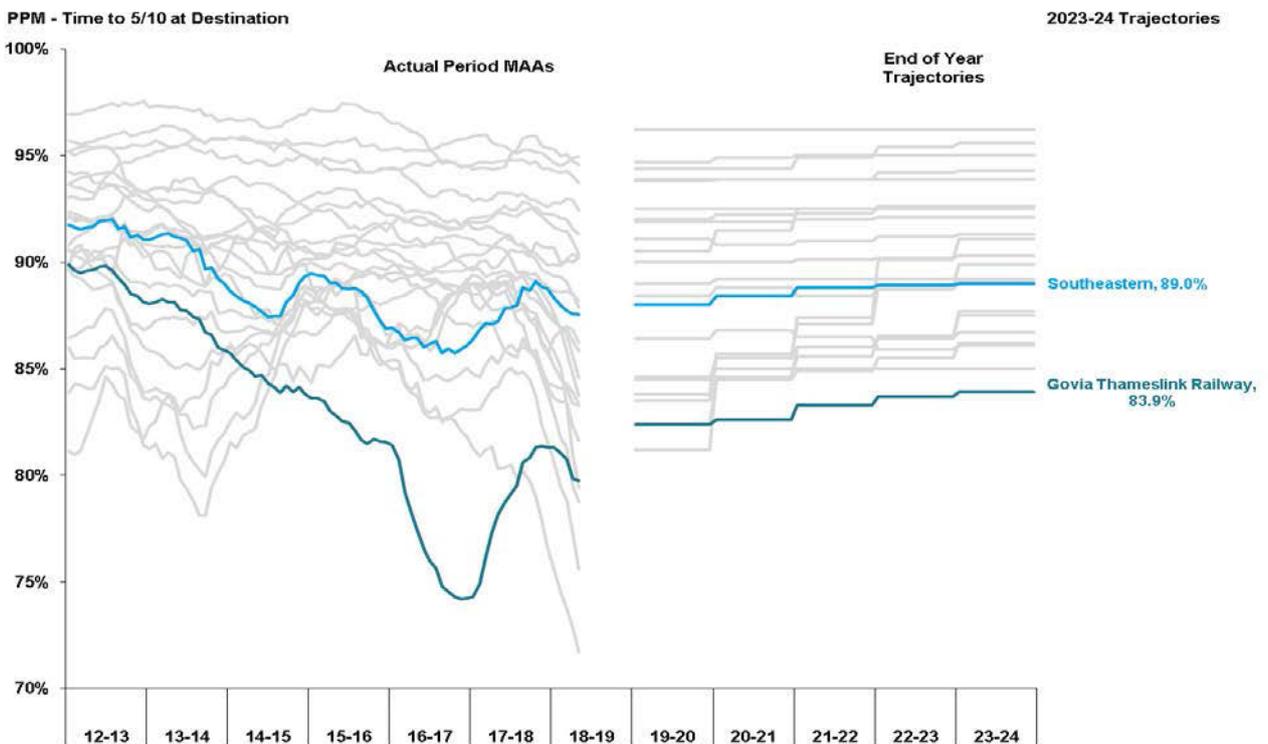**South East: TOC PPM inputs to CRM-P CP6 baseline trajectories, 2012-13 to 2023-24**

Figure shows trajectories for operators for which South East is the lead route.

Wales route scorecard performance summary

Topic	Position
Operators for whom this is lead route	Wales is the lead route for the Transport for Wales Rail Service, which has performance measures on the Wales route scorecard. On 15th October 2018, KeolisAmey took over the Wales & Borders franchise.
Other operators included on route scorecard	The following operators were also included on the Wales route scorecard: – CrossCountry – Great Western Railway (GWR) Freight operators are represented on the scorecard by the inclusion of FDM-R. We are not aware that any operator has raised a concern about not being included on the Wales route scorecard.
Performance modelling/ methodology	The Wales route CP6 performance model is based on a bottom-up method that quantifies each initiative in turn, using a statistical forecasting method to inform its target. Detailed modelling was undertaken to assess factors, based on 5 years of historic data.

CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	Wales CRM-P	1.59	1.58	1.55	1.53	1.52

CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	Transport for Wales Rail Service	91.9%	91.9%	92.0%	92.1%	92.1%

Topic	Position
Route confidence in performance trajectories based on modelling	Network Rail has confirmed that the modelling of performance trajectories has been based on a P50 level of confidence.
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – new franchise (Oct 2018) – new timetable (Dec 2019) – additional service and interaction with Valley lines – passenger growth forecast to continue across the network (5% across CP6)

Topic	Position
Agreement of performance measures between Network Rail and operators	Given the refranchising, the Wales route agreed its RSP with Transport for Wales; TfW's letter of agreement did not expressly address the scorecard. The route has included the following measures on the scorecard for the Transport for Wales rail franchise: – PPM – Average Passenger Lateness Other operators for whom Wales is not the lead route have different measures which reflect their business interests on the route e.g. GWR has right time departures leaving Wales route at the Severn Tunnel junction.
Agreement of performance trajectories between Network Rail and operators	Given the refranchising, the Wales route agreed its RSP with Transport for Wales; TfW's letter of agreement did not expressly address the scorecard.

Wales: CRM-P actuals and CP6 baseline trajectory, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)

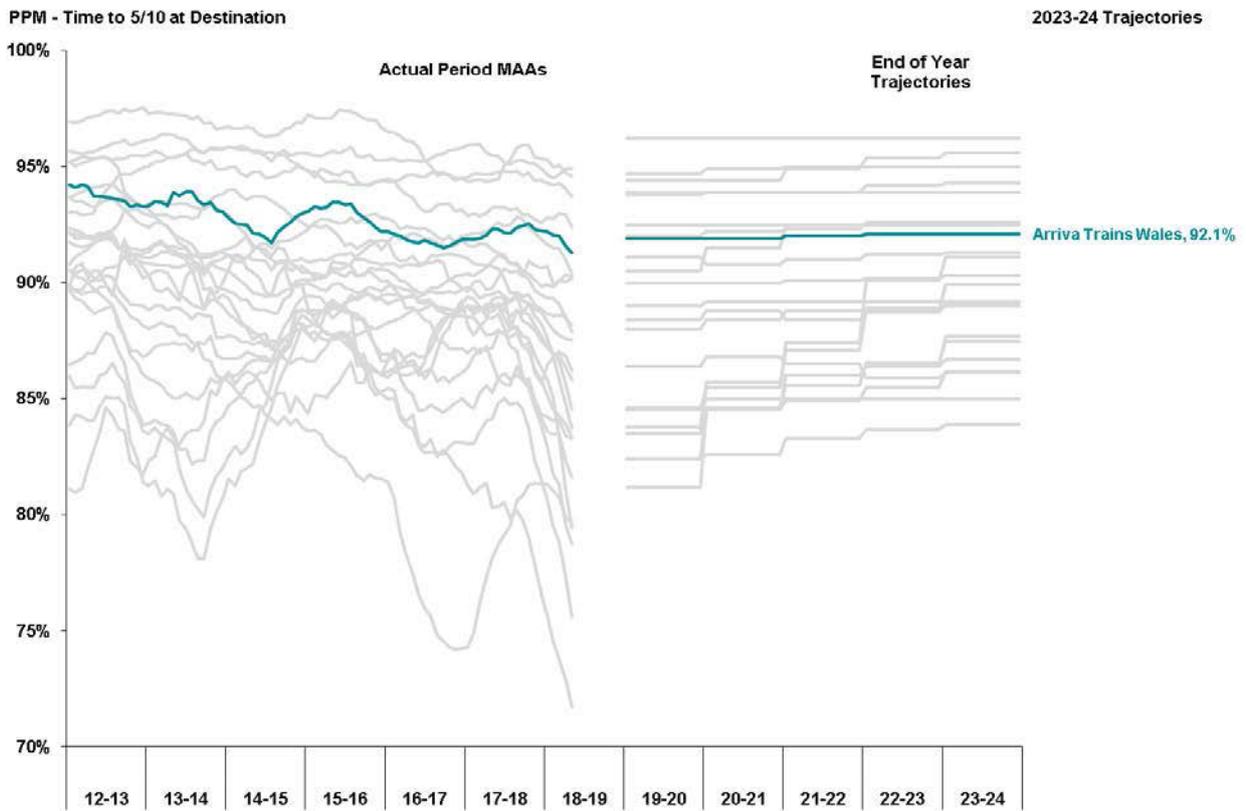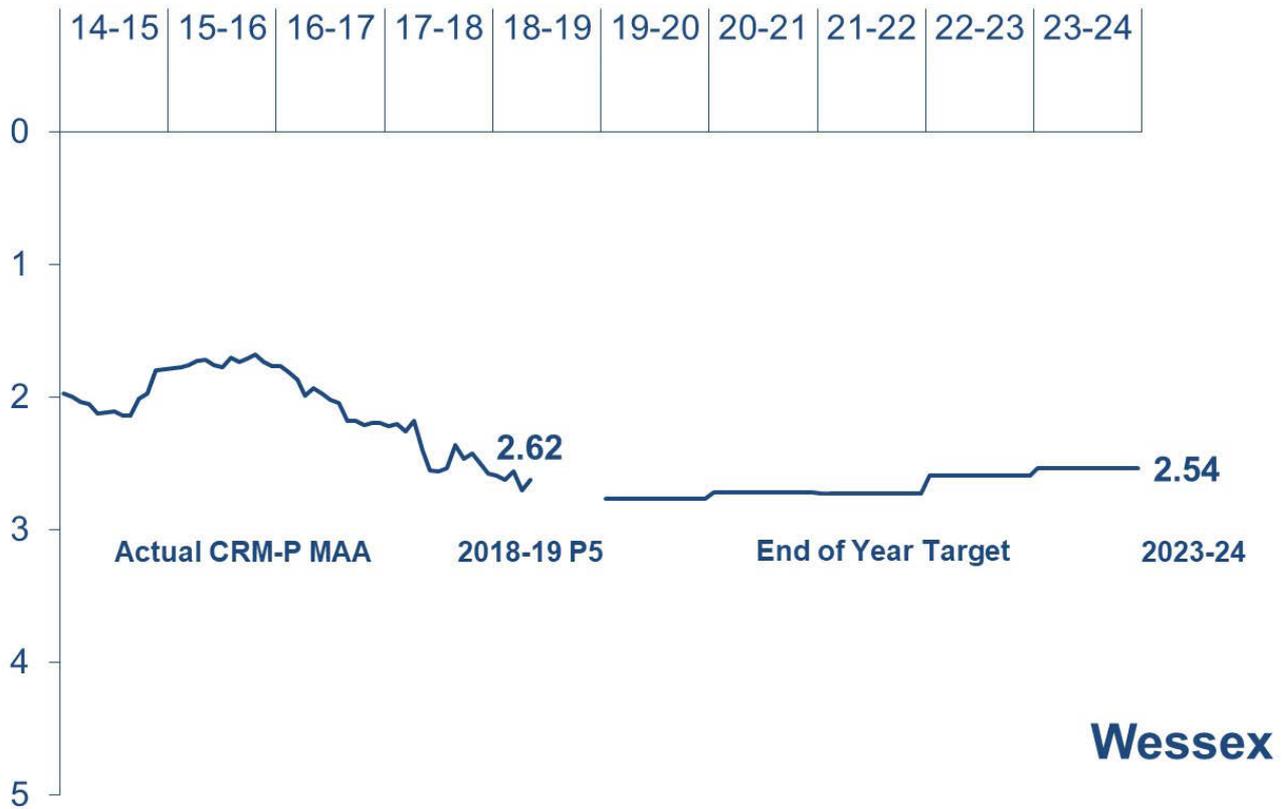**Wales: TOC PPM inputs to CRM-P CP6 baseline trajectory, 2012-13 to 2023-24**

Figure shows trajectories for operators for which Wales is the lead route.

Wessex route scorecard performance summary

Topic	Position
Operators for whom this is lead route	Wessex is the lead route for South Western Railway (SWR), which has performance measures on the Wessex route scorecard.
Other operators included on route scorecard	The following additional operators were included on the Wessex route scorecard: – CrossCountry – Great Western Railway – Govia Thameslink Railway Freight operators are represented on the scorecard by the inclusion of FDM-R. We are not aware that any operator has raised a concern about not being included on the Wessex route scorecard.
Performance modelling/methodology	Time-series model of PPM, taking into account historical and current performance, and adjusted based on the assumed impact of risks and opportunities on PPM during CP6.

CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	Wessex CRM-P	2.77	2.72	2.73	2.59	2.54

CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	SWR	84.6%	84.6%	85.6%	86.5%	87.5%

Topic	Position
Route confidence in performance trajectories based on modelling	Network Rail has confirmed that the modelling of performance trajectories has been based on a P50 level of confidence.
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – new timetable (originally expected Dec 2018 & Dec 2020) – expected passenger growth – Feltham re-signalling scheme – surburban fleet change (Dec 2020)
Agreement of performance measures between Network Rail and operators	The Wessex route has agreed the following measures for South Western Railway: – PPM – Level of cancellations – Network Rail delay minutes affecting SWR on Wessex route

Topic	Position
	– Average Passenger Lateness – On time at all recorded stations Other operators for whom Wessex is not the lead route have different measures which reflect their business interests on the route e.g. Great Western Railway has PPM for the North Downs Line. **CrossCountry** raised a concern with us before we published our draft determination regarding the definition of the measure for right time arrivals at Reading. It told us this had been changed and the route now suggested that the measure would only include delays up to the last recording point on Wessex rather than right time arrivals at Reading. **FNPO** route told us in its response to our draft determination consultation that Wessex route had agreed to measure right time arrivals at Reading rather than at the route boundary.
Agreement of performance trajectories between Network Rail and operators	**South Western Railway:** told us that the route and the operator are both clear that agreement has been reached on the methodology and approach to the trajectory but that the two parties have not agreed the trajectory due to the misalignment between the forecast and the franchise agreement. **SWR (trajectory not agreed):** we did not receive a response from the operator to our draft determination consultation. However, its owning group, First Group, told us it had already reached a position with Wessex route where it has 'agreed to disagree' as the trajectory is not what it considers to be realistically achievable.

Wessex: CRM-P actuals and CP6 baseline trajectory, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)

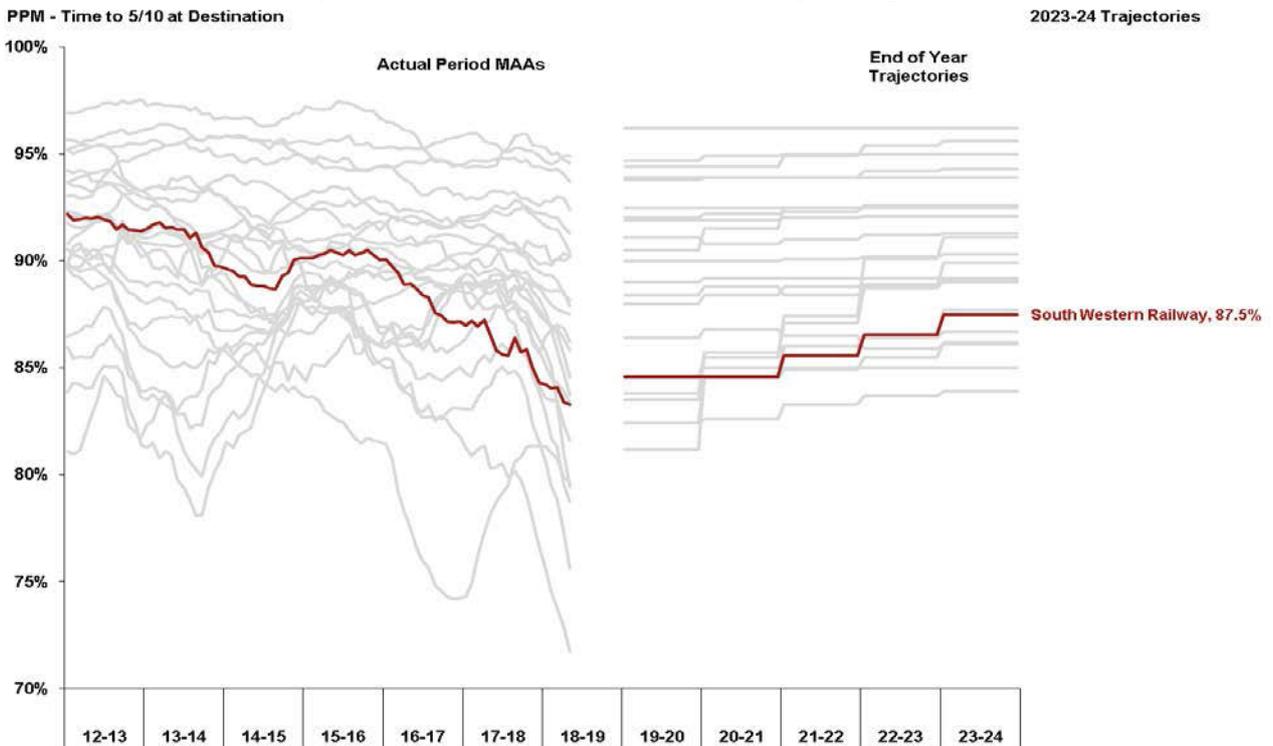**Wessex: TOC PPM inputs to CRM-P CP6 baseline trajectory, 2012-13 to 2023-24**

Figure shows trajectories for operators for which Wessex is the lead route.

Western route scorecard performance summary

Topic	Position					
Operators for whom this is lead route	Western is the lead route for the following operators, who all have performance measures on the Western route scorecard: – Great Western Railway (GWR) – Heathrow Express					
Other operators included on route scorecard	In addition the following operators were included on the Western route scorecard – CrossCountry – MTR Crossrail (TfL Rail) Freight operators are represented on the scorecard by the inclusion of FDM-R. We are not aware that any operator has raised a concern about not being included on the Western route scorecard.					
Performance modelling/methodology	The trajectory is generated by overlaying the expected risks and benefits throughout CP6 to the CP5 exit value. The model is built up from the net change in delay minutes from the risks/benefits and converted to PPM for each year.					
CRM-P CP6 baseline trajectory	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
	Western CRM-P	2.03	1.96	1.85	1.74	1.70
CP6 PPM input to CRM-P	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
	GWR	84.5%	85.5%	87.1%	88.8%	89.9%
	HEx	92.0%	92.2%	92.3%	92.6%	92.6%
Route confidence in performance trajectories based on modelling	Network Rail has confirmed that the modelling of performance trajectories has been based on a P50 level of confidence.					
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train operators, or the independent reporter Arup: – HS2 enabling works – Traffic/passenger growth (due to Crossrail, and expected continued growth) – new/refranchising of GWR (Dec 2020)					

Topic	Position
Agreement of performance measures between Network Rail and operators	The long-term scorecard included by the route in its RSP included performance measures which we understand have been agreed between the route and its customers. Each operator has the following measures on the scorecard: – Punctuality at all recorded station stops – Level of cancellations – NR-caused delay minutes In addition, Great Western Railway has the following measures: – PPM North Downs Line – Average Passenger Lateness Heathrow Express has the following measure: – right time at destination Other operators for whom Western is not the lead route have different measures which reflect their business interests on the route e.g. CrossCountry has right time departures at Reading. In addition, TfL Rail has PPM, level of cancellations and punctuality at all recorded station stops.
Agreement of performance trajectories between Network Rail and operators	**Western route:** The trajectory for GWR on the Western route has been agreed. **Great Western Railway (trajectory agreed):** we did not receive a response to our draft determination consultation from the operator. Its owning group First Group's draft determination response on 14 August told us that Network Rail had proposed a CP6 exit of 89.2% PPM but that it had identified a number of TOC-related schemes that, subject to funding, would improve this number to 90.6%. At that time Network Rail had not agreed to alter the trajectory. We were subsequently provided with an email exchange dated 29 August, in which Western route and GWR agree the PPM trajectory above, with a CP6 exit of 89.9%. **Heathrow Express:** We did not receive a response to our draft determination consultation from the operator. GWR will operate HEx under a management contract from 2018 until 2028.

Western: CRM-P actuals and CP6 baseline trajectory, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)

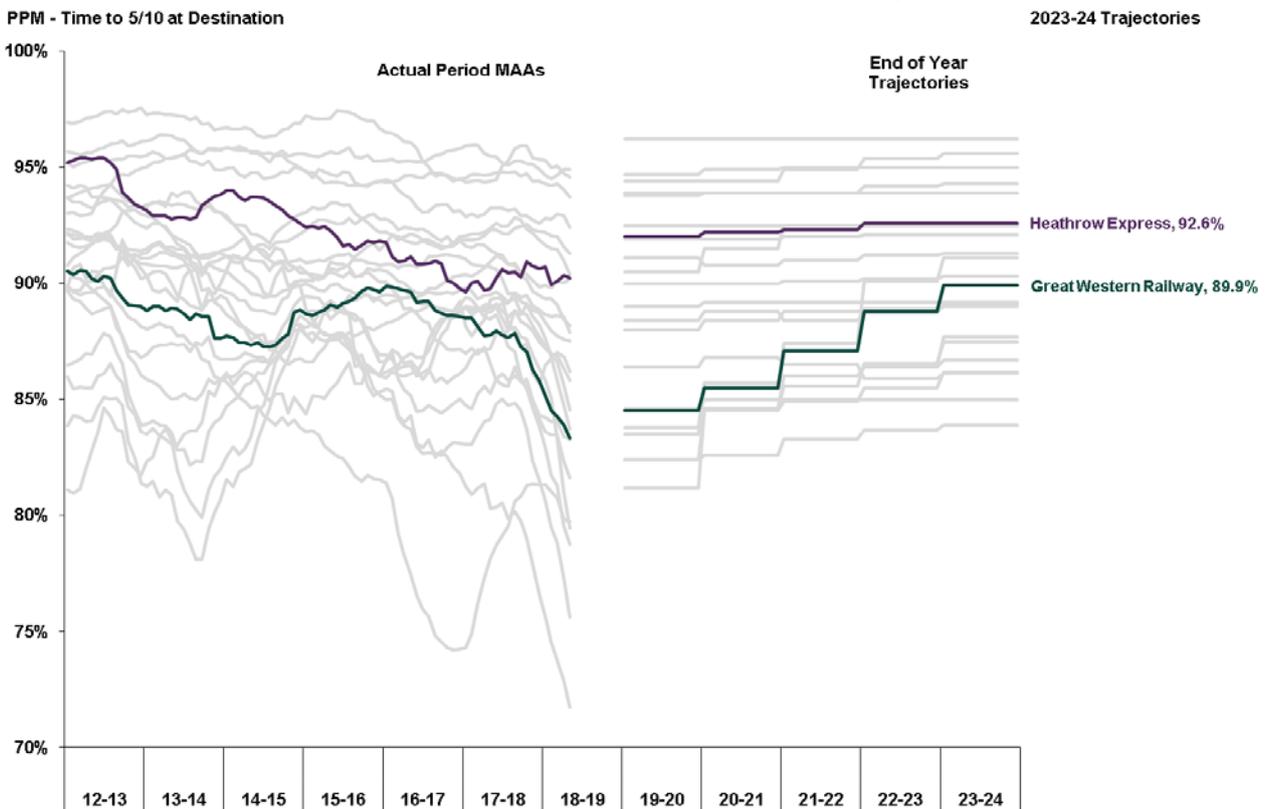## Western: TOC PPM inputs to CRM-P CP6 baseline trajectory, 2012-13 to 2023-24

Figure shows trajectories for operators for which Wessex is the lead route.

FNPO route scorecard performance summary

Topic	Position
Operators for whom this is lead route	FNPO is the lead route for the following operators, who all have performance measures on the FNPO scorecard: – CrossCountry – Caledonian Sleeper – all freight operators – who do not have specific scorecard performance targets but are reflected through FDM
Other operators included on route scorecard	Freight operators are represented on the scorecard by the inclusion of FDM-R (and a number of other freight-focused measures). No other operators were included on the scorecard. No operator has expressed a concern to us about not being included on the FNPO route scorecard.
Performance modelling/ methodology	No performance model has been provided for review by FNPO. Limited detail and methodology for the routes assessment of changes across CP6 has been shared with CrossCountry. Caledonian Sleeper has a top down target set as part of the Transport Scotland HLOS.

	Operator	Yr1	Yr2	Yr3	Yr4	Yr5
CP6 PPM input to CRM-P modelling	CrossCountry PPM	90.0%	90.0%	90.1%	90.2%	90.3%
	Caledonian Sleeper PPM	92.5%	92.5%	92.5%	92.5%	92.5%

	Measure	Yr1	Yr2	Yr3	Yr4	Yr5
Other relevant measures	GB FDM CP6 baseline trajectory	94.0%	94.0%	94.0%	94.0%	94.0%
	Caledonian Sleeper right time arrivals target	80.0%	80.0%	80.0%	80.0%	80.0%

Topic	Position
Route confidence in performance trajectories based on modelling	Network Rail has confirmed that the modelling of performance trajectories has been based on a P50 level of confidence.
Key risks and opportunities on route in CP6	The following risks and opportunities were identified during the PR18 process by Network Rail, train and freight operators, or the independent reporter Arup:

| Topic	Position
	– passenger and freight growth impacting on availability of train paths – enhancements
Agreement of performance measures between Network Rail and operators	The long-term scorecard included by the route in its RSP included performance measures which we understand have been agreed between the route and its customers. These include specific measures that reflect the CrossCountry and Caledonian Sleeper franchises. It also includes a measure of PPM for charter operators. A number of freight measures are included which are specific to the freight industry.
Agreement of performance trajectories between Network Rail and operators	FNPO route told us that FDM trajectories were agreed between freight operators and Network Rail. **Freightliner**: In its draft determination response, Freightliner noted our acceptance of the trajectory but told us that it remained disappointed and felt a higher target was achievable. **CrossCountry:** In its draft determination response, the operator told us that it had been unable to agree the trajectory due to build-up from the forecast CP5 exit position and problems with the methodology used by FNPO to assess geographical route impacts on its PPM. Its owning group Arriva raised very strong concerns about FNPO's ability to secure appropriate focus on CrossCountry's needs from the geographical routes. **Caledonian Sleeper:** we noted in our draft determination that this trajectory has been agreed between Network Rail and Caledonian Sleeper, reflecting the requirements of the HLOS. We did not receive a response to our draft determination consultation from the operator or its owning group.

FDM-R CP6 baseline trajectories for each route

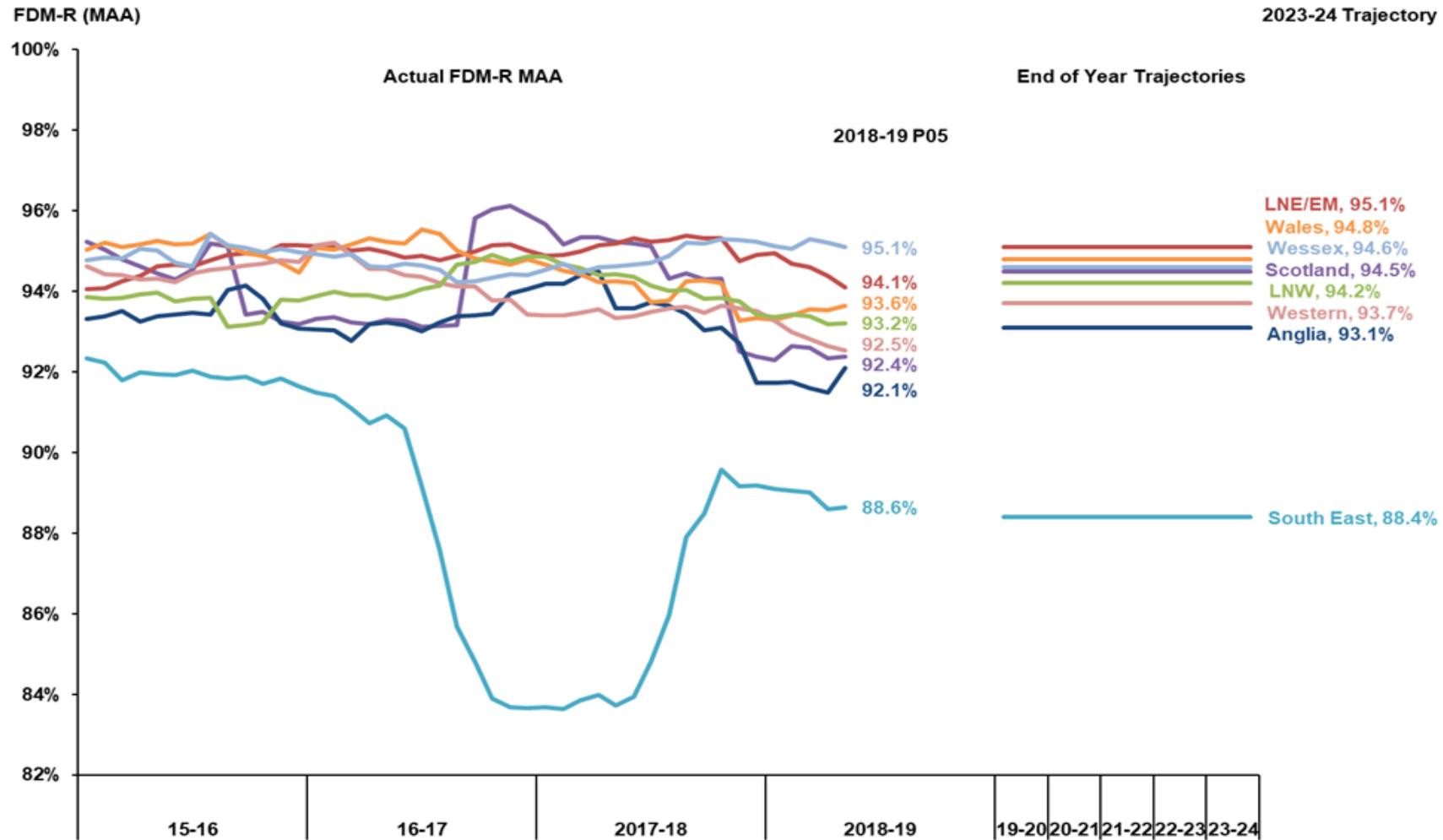| Route	FDM-R CP6 baseline trajectory (for each year of CP6)
Anglia	93.1%
LNE&EM	95.1%
LNW	94.2%
Scotland	94.5%
South East	88.4%
Wales	94.8%
Wessex	94.6%
Western	93.7%

FNPO: TOC PPM inputs to CRM-P CP6 baseline trajectories, 2012-13 to 2023-24
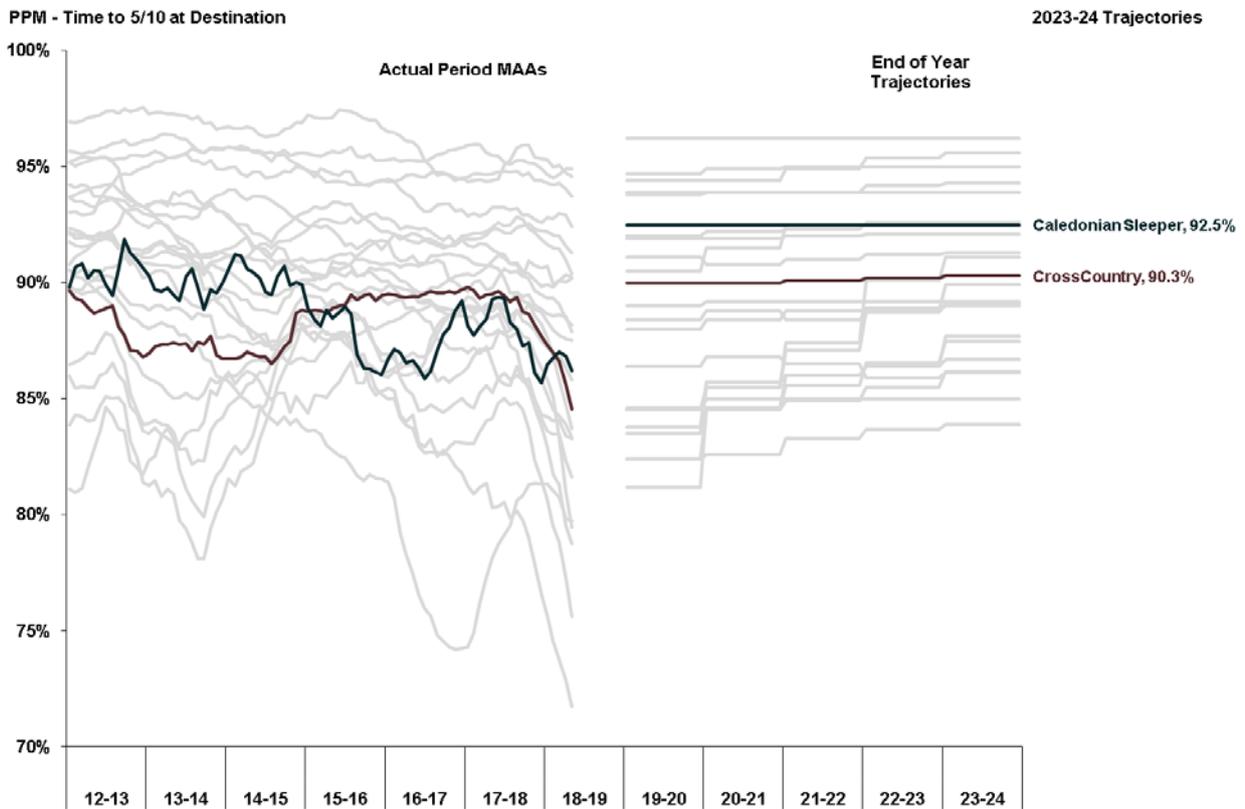
Great Britain: FDM actuals and targets, CP5 (2014-15 to 2018-19) and CP6 (2019-20 to 2023-24)
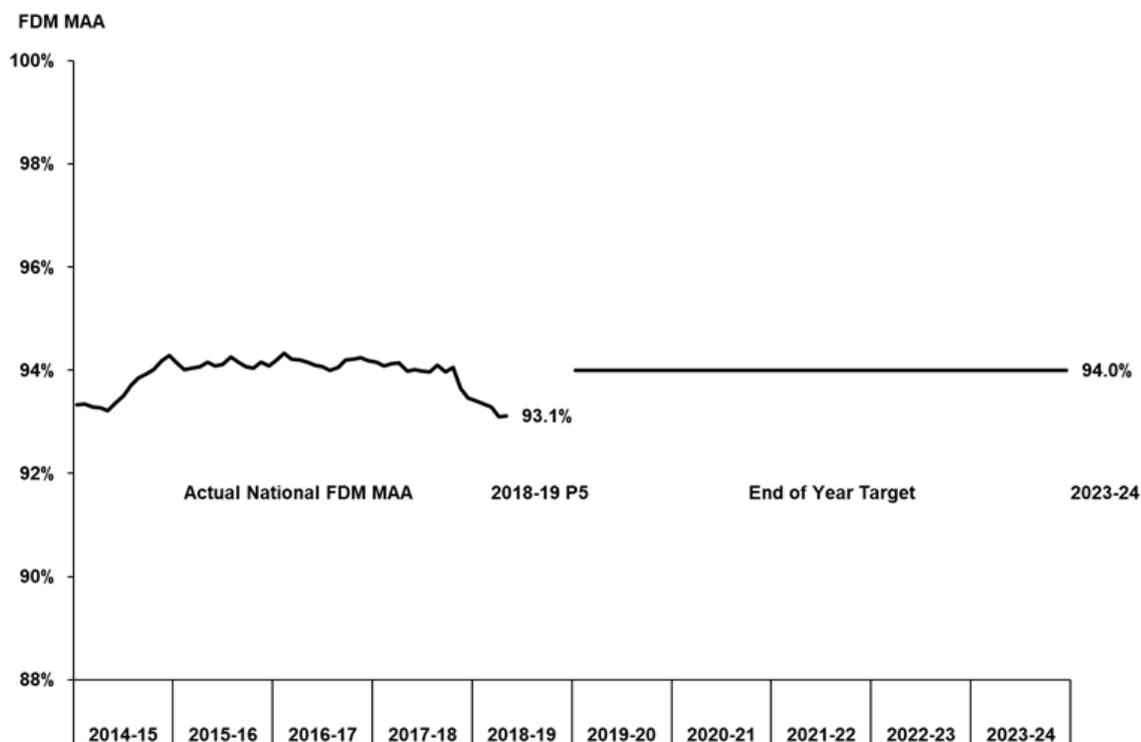
FDM-R CP6 baseline trajectories, 2015-16 to 2023-24[9]

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[9] The above chart shows the CP6 exit position of 94.5% FDM-R for Scotland route. The CP6 baseline trajectory for Scotland route is set out in the Scotland summary of conclusions and route settlement document and reflects the HLOS requirement.