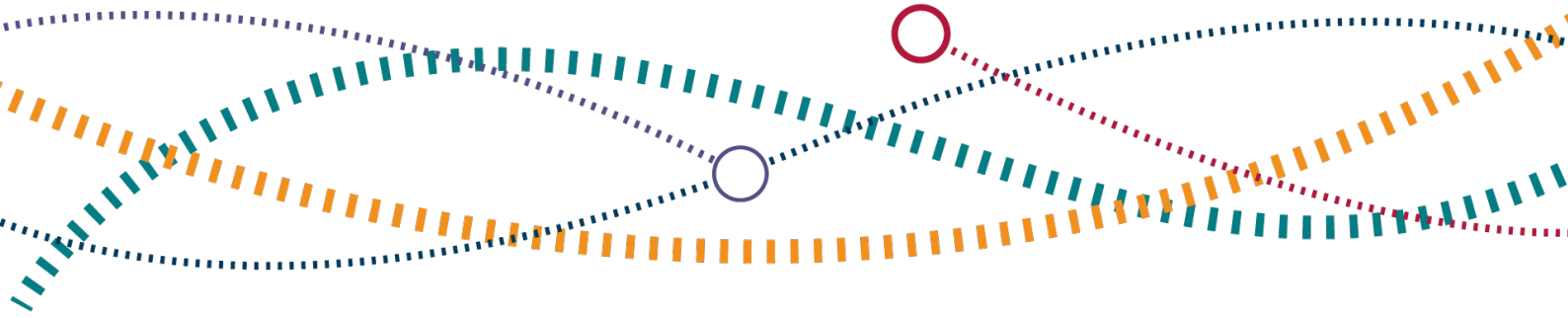
PR23 draft determination:

Supporting document – outcomes

15 June 2023



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About this document

This technical assessment of outcomes is one of five supporting documents of our draft determination for the 2023 periodic review (PR23).

PR23 will determine what the infrastructure manager for the national rail network, Network Rail, is expected to deliver with respect to its operation, support, maintenance and renewal (OSMR) of the network during control period 7 (CP7), which will run from 1 April 2024 to 31 March 2029, and how the available funding should be best used to support this.

This strongly influences:

- the service that passengers and freight customers receive and, together with tax payers, ultimately pay for; and
- the charges that Network Rail's passenger, freight and charter train operator customers pay to access its track and stations during CP7.

Our draft determination sets out:

- our review of Network Rail's strategic business plan (SBP); and
- decisions on its proposed outcome delivery and its planned expenditure to secure the condition and reliability of the network;
- changes to access charges and the incentives framework; and
- relevant policies on managing change and the financial framework.

In addition to **this document**, we have also published as part of our draft determination:

Document type	Details
Executive summaries of our determination	Our key proposals from our draft determination for: • England & Wales • Scotland

Overviews of our determinations	What Network Rail will need to deliver and how funding will be allocated in: • England & Wales • Scotland
Consolidated decisions	A summary of our draft decisions across Great Britain
Introduction	An overview of PR23 and background to our draft determination
Settlement documents	Detailed draft decisions for each of: • Scotland • Eastern region • North West & Central region • Southern region • Wales & Western region • System Operator
Supporting documents	Technical assessments of: • Health and safety • **Outcomes** • Sustainable and efficient costs • National Functions • Other income
Policy positions	How we intend to regulate Network Rail during CP7 in relation to: • Financial framework • Access charges • Schedules 4 & 8 incentives regimes • Managing change

Responding to the consultation on our draft determination

We are consulting on our draft determination and welcome comments from stakeholders on any of our documents which form the draft determination on or before 31 August 2023.

Responses should be submitted in electronic form to our inbox: PR23@ORR.gov.uk. We request stakeholders provide their response using this proforma.

We intend to publish all responses on our website alongside our final determination in October 2023. Annex A to our proforma document sets out how we will treat any information provided to us, including that which is marked confidential.

Next steps

After taking account of stakeholder responses, we expect to issue our final determination on Network Rail's delivery and funding for CP7 by 31 October 2023.

We expect to issue our review notices by December 2023 and, subject to Network Rail's acceptance, issue notices of agreement and review implementation notices. These will give effect to the decisions made during PR23 in time for CP7 to commence from 1 April 2024 and for Network Rail to develop its plans for delivery.

Executive summary

The outcomes framework for control period 7 (CP7, which will run from 1 April 2024 to 31 March 2019) sets the requirements that Network Rail needs to deliver for the funding it receives. It will also be one of our key tools for monitoring Network Rail's compliance with its licence, as set out in our proposed Holding to Account policy for CP7.

We consulted and subsequently concluded on the CP7 outcomes framework in 2022. This framework includes a small number of top-tier 'success measures' that will be the headline indicators we will use to publicly hold Network Rail to account in CP7, see Table 1. We are setting baseline trajectories for each success measure and each region in this determination. The baseline trajectories quantify the performance levels that we expect Network Rail to deliver, in line with the England & Wales, and Scotland High Level Output Specifications (HLOSs) and available funding.

Table 1. Success measures - CP7 outcomes framework

Outcome area	Success measures
Train performance: passenger	On Time Cancellations Scotland train performance measure (Scotland only)
Train performance: freight	Freight Cancellations
Asset sustainability	Composite Sustainability Index (CSI)
Efficiency and financial performance	Financial Performance Measure (FPM) (opex/capex split) Efficiency (£)
Environmental sustainability	Carbon emissions scope 1 and 2 Biodiversity Units
Freight growth	Freight net tonne kilometres moved

Our baseline trajectories for each success measure are informed by the forecasts Network Rail provided in its strategic business plan (SBP) and our analysis, including: independent reporter reviews; comparison to historical data; and evidence from our ongoing engagement and monitoring. Our draft decisions seek to ensure that Network Rail is held to account against performance levels which are consistent with the aims set out in the England & Wales, and Scotland HLOSs. Our success measure baseline trajectories for

each year of CP7 are set out in Annex B and the relevant settlement document for each of Network Rail's regions.

Train performance

Passengers and freight customers expect trains to be reliable and run on time. Whole industry train performance is important for maintaining and improving satisfaction for those using the railway and Network Rail must play its part in delivering it. Train performance has been a continued focus for us during control period 6 (CP6, which runs from 1 April 2019 to 31 March 2024) and we will continue to hold Network Rail to account by setting:

(a) ambitious but realistic regional trajectories for CP7, consistent with the England & Wales HLOS; and

(b) 'Scotland train performance measure' (as described in Chapter 3 of this document) baseline trajectories in line with the targets specified in the Scotland HLOS.

England & Wales

We recognise that accurately forecasting whole industry train performance is challenging for Network Rail. It depends on the contributions of train operators as well as Network Rail and is impacted by several external factors, such as changes in passenger demand following the pandemic and extreme weather events. Network Rail has responded to this uncertainty by presenting train performance forecasts in the form of ranges for each region in England & Wales. We consider our baseline trajectories for each region should take the form of point estimates to set clear expectations for Network Rail.

Recognising the difficulty in accurately forecasting train performance, we are applying an appropriate level of flexibility in how we hold Network Rail to account for its contribution to train performance (as proposed in our recently published 'holding Network Rail to account policy consultation' and our PR23 draft determination: policy position on managing change).

For the On Time success measure in Eastern, Southern and Wales & Western regions, we consider the most challenging (upper) limits of Network Rail's forecasts are an ambitious yet realistic level of performance, with performance held at current levels or better in the CP7 baseline trajectories. We consider that the range Network Rail proposed for North West & Central region is insufficiently challenging and so we are setting a more stretching baseline trajectory for CP7.

We do not consider Network Rail's regions' Passenger Cancellations forecasts are ambitious, especially when compared with historic performance. We are setting a more stretching trajectory for all regions of 2.3%.

Our assessment of each region's Freight Cancellations forecasts found the ambitious yet realistic level is closely aligned to the most challenging end of Network Rail's forecast ranges. Therefore, we are setting the CP7 baseline trajectory at these levels.

Network Rail needs to work with other industry parties to identify innovative improvements to support improving whole industry performance in the medium and longer term. To support this, we propose a performance improvement and innovation fund (PIIF) of £40 million, which builds on a similar dedicated fund in CP6. We provide more information on our proposals for the CP7 PIIF in our PR23 draft determination: supporting document on sustainable and efficient costs.

Scotland

The Scotland HLOS includes a focus on train performance and expects Network Rail Scotland to deliver a passenger train performance target of 92.5% in each year of CP7. Recognising the importance of this target to the Scottish Government, we have:

(a) added the 'Scotland train performance measure' as a success measure in our CP7 outcomes framework; and

(b) set the baseline trajectory for this success measure at 92.5% for each year of CP7.

This will be the primary measure we use for monitoring and reporting on Network Rail's contribution to passenger train performance in Scotland during CP7. Meeting the Scotland train performance measure baseline trajectory, aligned with the HLOS, will require a cross-industry effort to achieve a significant improvement compared with historical performance. As part of our draft determination, we propose a targeted train performance fund that will support Network Rail in making its contribution towards the Scottish Ministers' stretching performance challenge. We propose that funding is split between asset renewals and operational interventions, for example working collaboratively with train operators.

The Scotland HLOS also specifies that Freight Cancellations and Lateness (FCaL) does not exceed 5.5% during CP7. We will monitor Network Rail and report publicly against this requirement during the control period.

In addition to the Scotland train performance measure and FCaL, we will use On Time, Passenger Cancellations and Freight Cancellations trajectories to make regional

comparisons across the Great Britain network and to provide consistent stretch in the performance incentives regime.

Asset sustainability

Network Rail is proposing to conduct fewer renewals during CP7 in comparison to CP6. We are satisfied that the constrained funding does not need to result in undue concerns for asset safety or performance during CP7, if risks are fully assessed and managed. However, our review process has identified that the needs of some key assets have not been sufficiently prioritised. We are therefore proposing a re-allocation of expenditure towards core renewals, which is relatively modest in the context of Network Rail's plan. This proposed reallocation of expenditure aims to manage asset sustainability to deliver better safety and ultimately, train performance outcomes than Network Rail's original plan. For our draft determination, we have made adjustments to Network Rail's regions' forecast CSI, based on these proposals to re-allocate expenditure to core renewals.

Efficiency and financial performance

Network Rail's forecast efficiencies in the risk-adjusted England & Wales plan are £3.20 billion during CP7. After careful scrutiny of the plans, including 'top-down' and 'bottom-up' assessments, we consider this forecast will be stretching but deliverable. For Scotland, Network Rail is proposing to deliver £429 million of efficiencies during CP7 (£380 million of efficiencies delivered by Network Rail Scotland and £49 million of efficiencies allocated from national functions). Our assessment (including evidence from CP6) is that this will be a challenging target. We are setting baseline trajectories for each region in line with Network Rail's forecasts.

We expect Network Rail to include regional efficiency forecasts in its CP7 delivery plan, which are aligned with the baseline trajectories we set in the determination. We will monitor Network Rail's regions' delivery of efficiencies, against these baselines in its CP7 delivery plan.

Network Rail has included a Financial Performance Measure (FPM) forecast of zero for every year of CP7, for each region. This means its net financial performance would be aligned to the assumptions in its delivery plan for income and controllable costs and after making adjustments for delivery. We agree this is the appropriate baseline to measure FPM against during CP7 and are setting this as the baseline trajectory.

Success measures related to other HLOS priorities

Both England & Wales and Scotland HLOSs include requirements regarding freight growth (freight net tonne kilometres moved), with Scottish Government setting a target of 8.7% growth during CP7 and UK Government setting an expectation that Network Rail's plans should include a stretching but realistic freight growth target. We consider that Network Rail's proposed freight growth forecasts are robust and recognise the important role of rail freight in achieving broader economic and environmental outcomes. We will use these forecasts as the basis for our CP7 baseline trajectories. We expect Network Rail to set out clear plans to work with the industry to achieve the baseline trajectories for freight growth, aligning with long term strategy being developed for freight growth.

Both HLOSs also set requirements for Network Rail to improve environmental outcomes. We are setting the success measure baseline trajectories for Carbon Emissions (scope 1 and 2) using Network Rail's forecasts for all regions except for Southern. Southern's forecast was insufficiently challenging, so we have increased its level of stretch to align with other regions. For biodiversity (Biodiversity Units), we adjusted Scotland's and Southern's forecasts to align with other regions' forecasts, as these did not include adequate stretch compared to other regions.

Outcome areas with no success measures

There are several other important outcome areas where Network Rail needs to deliver outcomes for the funding it receives, to meet the expectations of its customers and end users of the railway. Examples of these outcome areas include accessibility and network capability. However, these areas do not always lend themselves to Network Rail being held to account primarily using specified measures and forecasts, as this approach could incentivise the wrong behaviours. Therefore, we have set out details of our approach to holding Network Rail to account for these outcome areas as part of this document.

Following our review of the SBP, we have added Network Rail's System Operator's (SO) Strategic Projects as a supporting measure. One of these projects is the Industry Timetable Technical Strategy (ITTS), where we expect the SO to set out clear obligations and milestones in its CP7 delivery plan. This is one of the largest projects delivered by the SO. It aims to deliver timetable technology improvement that should enhance current capability and enable the delivery of a more reliable, more resilient, higher-performing timetable that has fewer defects.

Network capability and availability are two areas where we have not specified measures. Instead, we are planning to increase the data we collect and engagement with Network Rail, to take a more proactive approach to monitoring these areas. We are continuing our

approach to monitoring customer satisfaction and accessibility but are considering improvements that can be made during CP7 with potential changes due to rail reform in mind.

1. Introduction

1.1 The purpose of our outcomes draft determination is to:

- set clear expectations of what Network Rail should deliver in CP7;
- describe how we will monitor Network Rail's performance across a diverse, but connected, range of outcome areas; and
- provide our assessment of Network Rail's CP7 plans for outcomes.

1.2 Our outcomes draft determination is the product of:

- follow on from our PR23 policy framework: Conclusions on the measures in our CP7 outcomes framework, published in December 2022 ('December 2022 technical conclusions');
- development work which has taken place since we published our 'December 2022 technical conclusions';
- review of outcomes requirements in both the England & Wales High Level Output Specification (HLOS) and Scotland HLOS, published in December 2022 and February 2023 respectively;
- assessment of Network Rail's England & Wales SBP and Scotland interim SBP, received in February 2023; and
- evaluation of alignment between Network Rail's SBP and our 'December 2022 technical conclusions' and outcomes requirements in both HLOSs.

1.3 Table 1.1 summarises the key outcomes decisions we are making as part of this draft determination. All the decisions we have described in this document, such as setting baseline trajectories for success measures, are draft decisions. We will finalise these decisions in our final determination.

Table 1.1 Draft determination outcomes decisions

Decision area	Further information
1. Baseline trajectories for success measures	The baseline trajectories quantify our expectations of what Network Rail is required to deliver in CP7.

Decision area	Further information
	Our decisions on the level of each baseline trajectory are informed by our assessment of Network Rail's regional forecasts in the SBP, including the approach and methodology used, assumptions made and engagement with stakeholders.
2. Alignment with expectations and requirements in HLOSs	We have assessed if Network Rail's outcome forecasts in the SBP are aligned with the expectations and requirements described in the England & Wales and Scotland HLOSs.
3. Changes to success and/or supporting measures in the outcomes framework	Most of the measures in our outcomes framework were confirmed in our 'December 2022 technical conclusions'. However, consideration has been given to other measures prominent in HLOSs, the SBP and development work which has taken place since our conclusions were published.
4. Supporting measures in Network Rail's CP7 delivery plan	Whilst not determining supporting measure forecasts requirements in the draft determination, we expect Network Rail to provide a forecast of each measure in its delivery plan.
5. Additional assurance monitoring	We are not specifying additional assurance measures as part of PR23. However, we have outlined areas of additional assurance monitoring to hold to account effectively, including where there are specific HLOS outcome requirements.

Context

CP7 outcomes framework

1.4 We described our CP7 outcomes framework in our 'December 2022 technical conclusions'. The outcomes framework is a tiered approach comprising success measures, supporting measures and additional assurance which we will hold the infrastructure manager, Network Rail, to account for in CP7. This is summarised in Figure 1.1.

Figure 1.1 CP7 outcomes framework

Tier 1: Success measures	Headline indicators used to publicly hold the infrastructure manager to account
Tier 2: Supporting measures	Basket of supporting measures to provide a more holistic view of performance
Tier 3: Additional assurance	Other information we use to hold the infrastructure manager to account

1.5 A summary of how we will use the framework to set and monitor performance expectations is given in Table 1.2.

Table 1.2 Summary – how we will use the outcomes framework to monitor performance

Framework measure	How we will use it to monitor performance
Tier 1: Success measures	• We will set a baseline trajectory in our determination, primarily by region, by assessing Network Rail's annual forecasts for each success measure. • We will publicly report performance against the baseline trajectory for each measure to provide a reputational incentive. • A robust change control process will be applied to allow any changes to success measures or updates to baseline trajectories where there is a material change in circumstances. ORR will have a prior approval role.
Tier 2: Supporting measures	• Network Rail will publish its forecasts for each supporting measure in its annual delivery plans. • Network Rail will publicly report on performance against these forecasts and we will also use this information to support our public reporting. • Network Rail will have flexibility to change supporting measure forecasts using internal change control. ORR might choose to review Network Rail's internal change control processes to determine if it is considering wider impacts, funder requirements and stakeholder views.
Tier 3: Additional assurance	• Additional assurance data and information requirements will be defined on an ongoing basis, including after the PR23 determination. • Depending on the type of information required, Network Rail may set forecasts for these measures. • ORR may use this information to facilitate its assessment of Network Rail's licence compliance and public reporting.

1.6 In our 'December 2022 technical conclusions' we confirmed 11 outcome areas and our emerging position on the measures in our CP7 outcomes framework. As part of our draft determination, we have considered if we should make any changes to the measures in the outcomes framework, in light of the requirements in the HLOSs and our assessment of Network Rail's SBP.

1.7 Our decisions regarding the success and supporting measures for each outcome area are described in the following chapters. The success measures in our CP7 outcomes framework are listed in Table 1, in the executive summary of this document.

Related policy consultations

1.8 We will hold Network Rail to account for its delivery of all outcome areas under our Holding to Account Policy. We recently closed our 'holding Network Rail to account policy consultation' and we are now considering responses. This policy sets out more information on how we will monitor against the measures and trajectories in CP7 and the approach we will take if we have concerns about Network Rail's performance. This includes a set of non-exhaustive indicative criteria which provides transparency around the types of factors we place weight on when considering whether to launch an investigation into whether Network Rail has breached its licence.

1.9 During CP7 a robust change control process will be applied to facilitate potential changes to the measures in the outcomes framework or updates to baseline trajectories where there is a material change in circumstances. We expect these types of changes to be rare as we wish to maintain as much certainty as possible on our performance expectations over CP7. More information on this can be found in our PR23 draft determination: policy position on managing change.

Health and safety

2.1 Health and safety monitoring and enforcement is one of the most important functions for ORR. The England & Wales HLOS, whose requirements apply across the entire Great Britain network, emphasises the importance of strong health and safety performance. Network Rail included details of initiatives and investment in response to these requirements in its SBP.

2.2 Following our review of Network Rail's SBP, we are not proposing any changes to the health and safety measures in the outcomes framework. We now expect Network Rail to forecast all supporting measures in its CP7 delivery plan: Fatalities and Weighted Injuries (FWI) for workforce, passengers and public; Train Accident Risk Reduction (TARR); and Personal Accountability for Safety (PAFS).

2.3 After considering the HLOSs, Network Rail's SBP and previous consultation feedback, we will focus on the following areas in CP7 as part of our additional assurance: level crossings; security and signalling strategy implementation; Risk Management Maturity Model (RM3); Precursor Indicator Model (PIM); and signals passed at danger (SPADs).

2.4 We also have our PR23 draft determination: supporting document on health and safety setting out the findings from our health and safety review of Network Rail's SBP.

Context

2.5 In our 'December 2022 technical conclusions' we confirmed that we would not have any success measures for health and safety in our outcomes framework. This was to avoid confusion between Network Rail's delivery of CP7 outcomes and its obligation to comply with health and safety legislation.

2.6 We concluded that we would use three supporting measures. These were: Fatalities and Weighted Injuries (FWI) for workforce passengers and public, which is a weighted measure of fatalities and non-fatal injuries; Train Accident Risk Reduction (TARR), which measures the achievement of key risk reduction activities planned in the year; and Personal Accountability for Safety (PAFS), which measures the number of breaches in 'life saving rules' and high potential events.

2.7 As health and safety is not a devolved policy area, the majority of HLOS outcome requirements come from the England & Wales HLOS and apply across the entire Great Britain network.

2.8 The England & Wales HLOS emphasises that the safe operation of the railway should continue to be a priority in CP7. Although there are no specified measures, the HLOS emphasises the importance of strong performance in the areas of: track worker safety; suicide and trespass prevention; level crossing safety; and countering security threats such as crime, terrorism, natural disasters, physical and cyber-attack.

2.9 Both the England & Wales and Scotland HLOSs emphasise the need for weather resilient infrastructure to achieve positive safety outcomes. The Scotland HLOS also requires the development of a Scottish signalling strategy.

Assessment of Network Rail's plans

2.10 All regions submitted forecasts for FWI (workforce) and TARR in their plans. For FWI (workforce), these indicate improved performance across each year of the control period. For both England & Wales and Scotland, this equates to a 15% reduction by the end of the control period from the end of CP6. For TARR, all regions forecast a consistent attainment level of 95% across all years. Except for the Wales & Western region (90%), this was the same as CP6 year 5 (95%).

2.11 Consistent with HLOS requirements, the SBPs augment forecasts by including details on initiatives and investment to improve performance related to: track worker safety, suicide and trespass, level crossing safety and asset resilience. However, plans in areas such as track worker safety and level crossings lacked detail and this is discussed in our PR23 draft determination: supporting document on health and safety.

2.12 On security and signalling strategy, the England & Wales SBP highlights the risk-based security strategy for CP7 and associated £55 million investment. Similarly, Network Rail Scotland's interim SBP references a £10 million capital investment, part of which is to deliver against the security strategy. Network Rail Scotland also outline that 'Signalling Scotland's Future' is an industry framework that has been created to establish a signalling strategy for Scotland with a first milestone of the strategy to be available in March 2024.

2.13 The England & Wales SBP outlines how the Risk Management Maturity Model (RM3) helps manage health and safety risks, identifies areas for continuous

improvement and provides a benchmark for year-on-year comparison. RM3 is used as a key tool for measuring and assuring Network Rail's health and safety performance.

2.14 Network Rail Scotland's interim SBP highlights the Precursor Indicator Model (PIM) dashboard, which weights wrong-side failures, as an important tool. The interim SBP also outlines that reductions in train accident risk have been achieved in relation to signals passed at danger (SPADs). This is when trains pass a stop signal when not allowed to do so.

Conclusions

2.15 As we stated in our 'December 2022 technical conclusions' it is vital that in CP7 Network Rail continues to evidence rigorous safety standards and risk mitigation to keep rail workers, users and the general public safe. Safety is also an important part of funders' HLOSs.

2.16 Network Rail is inspected and performance assessed each year through a wide range of ORR interventions. These are reported in our Annual Report of Health and Safety on Britain's Railways. ORR's Health and Safety Regulatory Strategy also sets out how we robustly monitor and assess the performance of duty holders. This approach will continue throughout CP7.

2.17 Forecasts for all three health and safety supporting measures, shown in Table 2.1 below, will be provided in the delivery plan for each region, England & Wales and Great Britain, and for each year of CP7. In line with what has been indicated in the early forecasts in the SBPs, we expect health and safety outcomes to be at least maintained throughout CP7 from CP6. These outcomes must be consistent with the delivery of a safe and legally compliant railway.

Table 2.1 Health and safety – CP7 outcomes framework

Tier	Measure
1: Success measures	• None, as there are clear obligations under health and safety legislation
2: Supporting measures	• Fatalities and Weighted Injuries (FWI) for workforce, passengers and the public • Train Accident Risk Reduction (TARR) • Personal Accountability for Safety (PAFS)

2.18 The HLOSs and the SBP, as well as previous consultation feedback, point to other areas which will form part of our additional assurance monitoring. These include: level crossings; security and signalling strategy implementation; RM3; PIM; and SPADs. With respect to PIM, we agree with the Rail Safety Standards Board (RSSB) that it acts as a useful 'outcomes-based' complement to the 'activity-based' TARR.

2.19 It is recognised that health and safety outcomes in CP7 will, in significant part, be shaped by risk-assessed investment in asset condition and that this is a priority for funders. This issue is discussed more broadly in the asset sustainability section of this document as well as both the PR23 draft determination: supporting document on health and safety, and the PR23 draft determination: supporting document on sustainable and efficient costs.

Train performance

3.1 Train performance is vital to the industry's passengers and freight customers. We aim to incentivise and support the rail industry to deliver the best possible outcomes for passengers and freight customers during CP7.

3.2 Both the England & Wales and Scotland HLOSs include several requirements relating to train performance which reflect the prominence both the UK and Scottish governments place in this area.

3.3 For passenger train performance our monitoring in CP7 will focus on whole industry measures, with On Time and Cancellations for each region in England & Wales, and the Scotland train performance measure (an adjusted version of ScotRail Trains Ltd. Public Performance Measure) in Scotland. We will also monitor Time to 15, Delay minutes per 1000 miles train travel and Average Passenger Lateness (APL) relative to the forecasts produced by Network Rail in its delivery plan.

3.4 Our monitoring of freight train performance will focus on levels of Freight Cancellations in each region. We will also use Freight Cancellations and Lateness (FCaL), and Arrivals to 15 (A2F) measures to support our monitoring in this area.

3.5 We will monitor Network Rail's performance relative to the baseline trajectories we have set which are included towards the end of this chapter. Network Rail provided forecast ranges in its SBP for each passenger and freight train performance success measure. We consider that the central point of these ranges did not demonstrate sufficient ambition in delivering for passengers. We have set baseline trajectories for these measures which are more challenging than the central point of Network Rail's forecast ranges. Our trajectories also set the clear expectation that train performance experienced by the end user should be improved in CP7, compared with current performance.

3.6 We will continue to use a variety of tools to monitor Network Rail's delivery of train performance in CP7. This includes monitoring the measures above together with a range of existing industry measures and undertaking regular and ad hoc data analysis to help understand performance. This is supported by regular engagement with Network Rail regions, SO, and other industry stakeholders including passenger and freight train operators.

Passenger train performance: Context

3.7 Train performance is vital to the industry's passengers and freight customers. Research by Transport Focus has shown that, second only to value for money of train tickets, the reliability and punctuality of services matters most to rail passengers.

3.8 Freight operators place great importance on moving goods for their customers reliably and punctually.

3.9 We aim to incentivise and support the rail industry to deliver the best possible train performance outcomes for passengers and freight customers given the available funding. Network Rail is responsible for around half of all delay to passenger and freight services, and so it has a key role in helping to deliver reliable and punctual services.

3.10 For CP7, we are improving our CP6 approach to monitoring Network Rail's delivery of train performance. As far as possible, we will focus on using existing whole-industry measures that are simple and easy to understand to monitor Network Rail's performance. We are doing this to drive the industry to collaborate to deliver the best outcomes for passengers and freight users. We will focus our monitoring on a small number of train performance success measures and set baseline trajectories against which to monitor performance of these measures. In addition, we will monitor the performance of a range of supporting measures against Network Rail's own forecasts of these measures. We will retain our monitoring of Network Rail attributed delays (in CP6 we have used the consistent region measure for passenger services or CRM-P) as a supporting measure.

3.11 In our 'December 2022 technical conclusions', we confirmed that our CP7 success measures for passenger train performance would be On Time and Cancellations. On Time is the percentage of recorded station stops arrived at early or less than one minute after the scheduled arrival time. The Cancellations measure is the percentage of planned passenger trains which either did not run their full planned journey or did not call at all their planned station stops. The measure is a score which weights full cancellations as one and part cancellations as half. We concluded that the supporting measures were Delay minutes, Time to 15 and Average Passenger Lateness (APL). We highlighted that the Performance management maturity measure would continue to be monitored as part of our additional assurance.

3.12 We also stated that we would align our outcomes framework to reflect train performance requirements set out in the HLOSs.

3.13 As set out in our 'December 2022 policy conclusions', while the focus of our CP7 train performance monitoring will be at a Network Rail region level, we will also make use of train performance data by operator, including open access operators, to support our wider monitoring. We expect Network Rail to continue to agree and maintain joint performance strategies with train operators where required by the Network Code and to share these strategies with us. This will allow us to make informed decisions on any action we take to improve a region's delivery of train performance to all operators and will ensure poor performance for individual operators cannot be masked by wider performance of the region.

Passenger train performance: Assessment of Network Rail's plans

3.14 The England & Wales HLOS sets out several requirements for Network Rail relating to passenger train performance in CP7. These include:

- there must be a strong and resolute industry focus on punctuality and reliability;
- Network Rail must take steps to minimise disruption, particularly sustained disruption; and
- Network Rail must work closely with industry partners to determine the appropriate metrics and ambitious yet realistic targets for each part of the network, which represent value for money and align with train operator plans.

3.15 The Scotland HLOS states that, for passenger services, the outputs of the network will be maintained in such a manner as to:

- enable ScotRail Trains Limited (ScotRail) to meet an adjusted ScotRail Public Performance Measure (PPM) target of 92.5%;
- enable the Caledonian Sleeper operator to meet its Right Time targets and/or any other performance requirements defined for sleeper services between the publication of the HLOS and the start of CP7; and
- recognise the performance requirements of other operators on the Scottish network.

3.16 The adjusted version of ScotRail PPM that is referenced in the Scotland HLOS is adjusted where delays are caused by the need for speed restrictions during periods of severe weather, or where trains have been delayed to permit connections from other late running trains or ferries. To clearly distinguish this measure from (non-adjusted) ScotRail PPM, we refer to it as the Scotland train performance measure.

3.17 As part of its SBP, Network Rail included a forecast for the Scotland train performance measure and regional forecasts for On Time and Cancellations. Its forecasts for regions in England & Wales were presented as ranges with lower and upper points. Network Rail set out two main reasons for taking this approach.

- Firstly, historic data showed that forecasting performance was usually inaccurate. Network Rail provided a chart which presented forecast versus actual performance over the last 15 years to support this.
- Secondly, Network Rail stated that there is great uncertainty over how busy the network will be in CP7. It added that as network busyness is closely correlated with performance levels, this uncertainty makes forecasting very difficult.

3.18 While we understand these points, we believe it is important to set clear expectations for train performance levels over CP7. We recognise the uncertainties which make forecasting CP7 performance difficult and the need to be flexible in our monitoring and holding to account approach.

3.19 Network Rail's SBP highlights other headwinds that will affect train performance. These include the threat posed by industrial relations issues, extreme weather related to climate change and High Speed 2 (HS2) (whose interfaces with Wales & Western, and North West & Central regions are likely to have a negative impact on performance during construction). Network Rail also highlights that asset reliability is likely to decrease as constrained funding means it is planning lower expenditure on renewals in CP7.

3.20 In response to these headwinds, Network Rail has programmes of work aimed at improving performance. Its plans include new tools to manage incident response and service recovery, with new investment in the Industry Train Service Recovery programme. Network Rail is looking to have these in place by the start of CP7 or shortly after. It also plans to improve performance through its 21st Century Operations programme which seeks to improve railway operations capability.

3.21 Network Rail's plans did not include a clear explanation of how it will use the Performance Improvement Management System (PIMS) and the Risk Management Maturity Model for Performance (RM3P) frameworks in CP7. While we note references in some regional plans, we expected Network Rail to include more information on how these will be used. PIMS was developed by Network Rail on behalf of the industry during CP6, as the framework through which to manage train performance. The RM3P is a key PIMS product. Given the whole-industry nature of delivering train performance, it is important that all parties collaborate to improve it. Across all regions, the PIMS framework is central to how Network Rail will work with industry to bring focus to track, train, people and external factors to manage and improve train performance.

3.22 As part of our assessment of Network Rail's train performance forecasts we have analysed a range of evidence. We have:

- scrutinised Network Rail's CP7 plans, including for the five regions and System Operator (SO) and held listening and challenge sessions with Network Rail to help understand the reasoning behind its forecasts;
- assessed historic data and trends to inform our view on how ambitious yet realistic Network Rail's plans are; and
- appointed an Independent Reporter (Arup) to examine Network Rail's train performance forecasts in greater detail.

3.23 Network Rail has provided us with its high-level approach to setting its train performance forecasts and the assumptions it has made which underpin its plans e.g. on passenger traffic and passenger demand levels in CP7. Network Rail has reached its forecasts using a mixed approach involving analysis of historical data and trends, 'bottom-up' analysis and modelling of its planned activities and 'top-down' judgements.

On Time

3.24 Network Rail has included regional On Time range forecasts for CP6 exit and each year of CP7. Our understanding is that the forecasts for England & Wales regions were produced using inputs provided by the regions based on the activities within their plans. Support was provided by the SO to combine these inputs using a central model and the outputs were shared with the regions. These forecasts were updated to capture uncertainty and ambition. Network Rail was unable to provide any calculations or quantified assumptions to explain how these updates were made. Network Rail included high-level 'waterfall' charts for each region in

England & Wales in its plans. These set out the planned activities which support the forecasts.

3.25 Network Rail stated in its plans that its On Time point forecasts for Scotland were produced separately using regression analysis based on its Scotland train performance measure forecasts. We have received no evidence on how this regression analysis was undertaken including what data was used to undertake the analysis and what assumptions have been made. Network Rail has told us that its On Time forecast for Scotland does not appear to align with the level of challenge of its Scotland train performance measure forecast due to the different impact that trains being held to enable connections has on these two measures.

3.26 Network Rail's CP7 On Time forecasts vary by region when compared to recent (2022-23) levels of performance. For example, North West & Central, and Network Rail Scotland forecast CP7 performance to be below recent levels in CP7 whereas Wales & Western is forecasting On Time performance to be above recent levels. The range forecasts are generally above performance achieved during control period 5 (CP5, which ran from 1 April 2014 to 31 March 2019), except for North West & Central where forecast CP7 performance is broadly aligned with the On Time performance achieved during CP5.

3.27 Our assessment of these On Time range forecasts is that they are pessimistic. We consider that improved levels of performance should be deliverable in CP7. We did not view the top of Network Rail's range to be sufficiently stretching in some regions when compared with historical performance or the forecasts made for other regions.

Cancellations

3.28 Network Rail's CP7 regional passenger Cancellations range forecasts for England & Wales were produced by its SO using historical data and operator-level CP6 year 5 (2023-24) forecasts provided by Network Rail regions. The disaggregation of the Cancellations measure by region is currently in development. Network Rail used a 'proxy' regional cancellations dataset (based on aggregated train operator level data) to inform its SBP range forecasts. The ranges are based on analysis of the variability of historical data. Network Rail has assumed that the range forecasts for each year of CP7 are at the same level as at CP6 exit. Network Rail's Cancellations forecasts for CP7 for each region are broadly aligned with current performance levels, although the ranges Network Rail has used to present its forecasts demonstrate the uncertainty around them. Network Rail Scotland included a point forecast for each year of CP7 as part of its interim SBP. There is a

lack of information in Network Rail Scotland's plans on how this forecast was produced.

3.29 Our assessment of these Cancellations forecasts is that they are pessimistic. The mid-points of these range forecasts present a deterioration in the performance of this measure relative to most years in CP5 and CP6 and appear conservative given they broadly reflect the current high levels of cancellations, with train operator traincrew issues being a significant factor relating to this. These views are supported by the work undertaken by the Independent Reporter in this area. We expect Network Rail to contribute to improved (reduced) cancellation levels during CP7 broadly in line with better levels seen in historical years.

Scotland train performance measure

3.30 The Scotland HLOS sets out a requirement for a Scotland train performance measure score of 92.5% in each year of CP7. Network Rail Scotland's interim SBP 'Baseline Outcome' forecasts for this measure are 91.5% in year 1 of CP7, rising to 92.5% in years 4 and 5. These forecasts for years 1 to 3 are below the Scotland HLOS requirement of 92.5%. Network Rail Scotland's interim SBP included its plan to achieve its Scotland train performance measure forecasts in CP7.

3.31 The factors that underpin this performance improvement include benefits from the introduction of a new traffic management system at Edinburgh, from reduced autumn delay, and from continued lower passenger numbers following the pandemic.

3.32 Network Rail Scotland's interim SBP includes two additional forecasts for the Scotland train performance measure: 'Accelerated Outcome' and 'Fast Outcome'. These forecasts are dependent on unconfirmed plans and/or funding. In addition to these forecasts, we have also received updated forecasts from Network Rail, which are slightly different to those previously provided and we understand work is ongoing in this area.

3.33 Our assessment of Network Rail Scotland's train performance measure forecast for CP7 is that it is stretching. This view was supported by the Independent Reporter.

3.34 A summary of Network Rail's CP7 regional and England & Wales forecasts for On Time, Cancellations and Scotland train performance measure is included towards the end of this chapter together with our conclusions on the baseline trajectories we are setting Network Rail for CP7.

Other areas

3.35 All regions have engaged with stakeholders, including operators, on the development of their plans. For further details see our PR23 draft determination: settlement documents.

Passenger train performance: Conclusions

3.36 We expect performance levels to improve in CP7 to deliver better outcomes for both passenger and freight users. In general, Network Rail's train performance forecasts are pessimistic and lack ambition.

3.37 For train performance in Scotland, our view is that the HLOS requirement to achieve a Scotland train performance measure score of 92.5% in each year of CP7 is likely to be particularly challenging.

3.38 Following our 'December 2022 technical conclusions', we have added the Scotland train performance measure to our outcomes framework as a success measure. This has been added to reflect the prominence it is given in the Scotland HLOS and it will be the primary focus of our passenger train performance monitoring in Scotland. Further work and engagement is needed with Network Rail Scotland and with Transport Scotland to clarify the exact definition of this measure and how it will be calculated.

3.39 Confirmation of the passenger train performance success and supporting measures we will use to monitor and hold Network Rail to account in CP7 is presented in the table below. Each of these measures is defined in Annex A.

Table 3.1 Passenger train performance – CP7 outcomes framework

Tier	Measure
1: Success measures	• On Time • Cancellations • Scotland train performance measure (Scotland only)
2: Supporting measures	• Delay minutes per 1000 miles train travel (track/train split) • Time to 15 • Average Passenger Lateness (APL)

3.40 As explained earlier in this chapter, whilst the focus of our CP7 train performance monitoring for holding Network Rail to account will be on the measures in the table above, we will also use a range of other information to help understand train performance. We will focus on Network Rail's delivery of train performance at a region level, but we will also make use of joint performance strategies and train performance data by operator, including open access operators, to support our wider monitoring. This will allow us to make informed decisions on any action we should take to improve a region's delivery of train performance to all operators and will ensure poor performance for individual operators cannot be masked by wider performance of the region.

3.41 We have set the baseline trajectories for all success measures as point values (rather than ranges) for each year of CP7 to provide clarity of the performance levels we will monitor Network Rail against. For the On Time and Scotland train performance measure trajectories we have presented the CP7 year 5 point of the trajectory only for each region. We have included the forecasts Network Rail provided in its SBP for comparison.

3.42 For the Cancellations measure we have set flat trajectories (i.e. at same level for each year of the control period) for each region in England & Wales and Scotland.

3.43 The full trajectories and Network Rail forecasts (i.e. performance levels for each year of the control period) for each success measure are set out in Annex B of this document. Details of how the Schedule 8 performance regime baselines are aligned with our train performance trajectories will be confirmed in our final determination.

On Time

Table 3.2 On Time ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 year 5

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (CP7 year 5)	70.8%	63.9%	68.9%	64.8%	67.9%	72.6%
Network Rail SBP forecast range (CP7 year 5)	68.4% to 70.8%	60.0% to 62.5%	66.0% to 68.9%	63.2% to 64.7%	65.2% to 67.5%	68.0%

3.44 We have set the On Time baseline trajectories at a level which we consider is ambitious yet realistic after considering Network Rail's forecasts and its plans, the assumptions it has made (particularly around passenger demand and traffic levels) and historical performance levels.

3.45 For the North West & Central On Time trajectory, we have set a trajectory above Network Rail's forecast range. To set North West & Central's trajectory, we compared Network Rail's regional forecasts with the best performance achieved during CP5. We found that North West & Central's CP7 year 5 forecast was the least challenging on this basis. The minimum difference between the best performance during CP5 and the top of Network Rail's range forecasts for other regions was 2.3 percentage points (pp). As a result we have set North West & Central's trajectory at CP7 year 5 as the best performance it achieved in CP5 plus 2.3 pp.

3.46 For Scotland, we undertook regression analysis to produce an On Time trajectory that had a consistent level of challenge with Network Rail Scotland's forecast of the Scotland train performance measure.

Cancellations

Table 3.3 Cancellations ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 years 1 to 5

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (years 1 to 5)	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
Network Rail SBP forecast range (years 1 to 5)	2.7% to 3.8%	3.2% to 4.5%	3.1% to 4.3%	2.8% to 3.8%	3.0% to 4.1%	3.3% improving to 3.0%

3.47 We have set the Cancellations baseline trajectories at 2.3% for each region in England & Wales and Scotland and for each year of CP7. This level is the lowest regional historical average using data from 2014-15 to 2019-20 and 2021-22. Data from 2020-21 (pandemic impacted) and 2022-23 (traincrew issues) were excluded from these historic averages. We expect Network Rail to contribute to these improved (reduced) cancellation levels during CP7 broadly in line with better levels seen in previous years.

3.48 In our final determination, in addition to On Time and Cancellations baseline trajectories for each region and England & Wales as a whole, we intend to include trajectories for Great Britain. These will be aligned with regional trajectories and we will work with Network Rail to produce these. We are including trajectories for Great Britain to provide an overview of our performance expectations and to inform any future changes to trajectories (e.g. due to changes in geographical boundaries).

3.49 We expect Network Rail to include On Time and Cancellations CP7 point forecasts (by year) for National Passenger Operators (Caledonian Sleeper and CrossCountry) in its delivery plan. This will provide us with additional assurance that Network Rail is focused on the delivery of train performance to all passenger operators. We expect Network Rail to engage with these operators to set point forecasts that are aligned with and support corresponding regional baseline trajectories we have set.

Scotland train performance measure

Table 3.4 Scotland train performance measure ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 years 1 to 5

	Scotland
ORR baseline trajectory (years 1 to 5)	92.5%
Network Rail SBP forecast (years 1 to 5)	91.5% improving to 92.5%

3.50 Network Rail Scotland's interim SBP forecast of the Scotland train performance measure was 91.5% in year 1, followed by 92.0% in year 2, 92.3% in year 3 and 92.5% in years 4 and 5.

3.51 While we recognise that there are some significant risks, our decision is that we have set the Scotland train performance measure baseline trajectory at the HLOS target of 92.5% for each year of CP7. The obligation on Network Rail is to achieve the target to the greatest extent reasonably practicable having regard to all relevant circumstances. ScotRail will need to work with Network Rail and deliver its contribution if this whole industry target is to be achieved.

3.52 The Scotland train performance measure will be the primary focus of our passenger train performance monitoring in Scotland.

Other areas

3.53 We expect Network Rail to clearly set out its assumptions about the contributions of operators to whole-industry performance delivery to inform our final determination.

3.54 For passenger train performance we expect to see forecasts in Network Rail's delivery plan for: Delay minutes per 1000 miles train travel (track/train split); Time to 15; and APL for each region, England & Wales and Great Britain, and for each year of CP7. We expect Network Rail to monitor and report on these measures during CP7.

3.55 To support Network Rail's delivery of the train performance baseline trajectories we have set, we propose a Performance Improvement and Innovation Fund (PIIF) in England & Wales, similar to the fund established in CP6. We propose operations expenditure of £40 million in CP7 for this initiative. This should be focussed on collaborative, cross-industry solutions with the aim of improving train performance between train operators and Network Rail. In Scotland, we propose that a targeted performance fund is set up. It would only apply in Scotland and should be funded from any remaining unallocated funding once Network Rail Scotland has considered our other proposals to increase expenditure on core renewals and risk provision. We propose this fund is split between asset renewals and operational interventions, for example, working collaboratively with train operators. Further information on these funds can be found in the PR23 draft determination: supporting document on sustainable and efficient costs.

Freight train performance: Context

3.56 The punctuality and reliability of freight services is important to freight operators and their customers. It is an essential enabler for the targeted growth in freight on rail in CP7.

3.57 We want Network Rail to deliver a high-quality service to freight operators and their customers. Feedback on our consultation in July 2022 on the freight performance measures we should use to monitor and hold Network Rail to account in CP7 showed that stakeholders consider the reliability of freight services to be the most important element of freight train performance. We therefore confirmed that Freight Cancellations would be our success measure for freight train performance in our 'December 2022 technical conclusions'.

3.58 To avoid duplication at success measure level we outlined that we would use Freight Cancellations and Lateness (FCaL) as a supporting measure. This is very

similar to the Freight Delivery Metric (FDM) used during CP6. We also confirmed we would use Arrivals to 15 (A2F), recognising the impact that delays to freight services can have.

Freight train performance: Assessment of Network Rail's plans

3.59 The England & Wales HLOS sets expectations for both passenger and freight train performance stating that:

- Network Rail must work closely with industry partners to determine the appropriate metrics and ambitious yet realistic targets for each part of the network, which represent value for money and align with train operator plans.

3.60 The Scotland HLOS states that:

- Network Rail must provide capability to ensure that the Freight Cancellations and Lateness (FCaL) metric does not exceed 5.5%.

3.61 In its SBP, Network Rail provided CP7 range forecasts for the Freight Cancellations measure for each region in England & Wales. It provided range (rather than point) forecasts for this measure for the same reasons outlined above for passenger train performance forecasts. Network Rail Scotland provided point forecasts for Freight Cancellations and FCaL for each year of CP7.

3.62 Network Rail also provided FCaL range forecasts for Great Britain, primarily for informing the draft Schedule 8 performance benchmarks we are setting for Network Rail.

3.63 The forecasts Network Rail provided in its SBP for Freight Cancellations were based on a changed methodology which also included some significantly retimed trains which are not counted in the existing Freight Cancellations measure. The way the national measure is disaggregated to a Network Rail region (or route) level has also changed (based on train kilometres travelled within region/route). We understand that Network Rail is planning to make similar changes to the way FCaL is disaggregated from national to regional level from the start of CP7. Network Rail discussed these changes with us shortly before submitting its SBP. We have since engaged with freight train operators and discussed further with Network Rail. The freight train operators did not support the inclusion of the retimed trains in the Freight Cancellations measure, but were content with the changes to the way the national measure is disaggregated.

3.64 Network Rail's Freight Cancellations forecasts for England & Wales are based on four year historical averages from 2017-18 to 2019-20 and 2021-22. We understand that 2020-21 and 2022-23 data were excluded from this average given exceptional circumstances in those years relating to the pandemic and industrial action. Ranges were produced from these central forecasts by subtracting 5% (bottom of range, lowest level of cancellations) and adding 75% (to derive the top of Network Rail's ranges, highest level of cancellations). For each region, the ranges are the same in each year of CP7. For Scotland, Network Rail has taken a different approach, using point forecasts presenting a small improvement in the level of freight cancellations over CP7.

3.65 As with our assessment of passenger train performance forecasts, we undertook a number of steps in our assessment of the Freight Cancellations forecasts:

- we scrutinised Network Rail's CP7 plans, including for the five regions and SO and held listening and challenge sessions with Network Rail to help understand the reasoning behind its forecasts;
- we assessed historic data and trends to inform our view on how ambitious yet realistic Network Rail's plans are; and
- We appointed an Independent Reporter to examine Network Rail's train performance forecasts in greater detail.

3.66 There is a lack of detail in Network Rail's plans on how its Freight Cancellations forecasts will be achieved in CP7. Its methodology implies that recent historical performance averages (excluding more exceptional periods of performance) will be maintained in CP7. Network Rail's plans do not provide evidence about how Freight Cancellations in CP7 will be impacted by factors such as network usage, passenger train performance or freight growth.

3.67 There is a lack of detail on how Network Rail has produced its Freight Cancellations point forecasts for Scotland. It has stated that the forecast was developed using the same approach taken for regions in England & Wales. However, our own analysis suggests this is not the case as the forecast is less challenging than a four year calculated historic average.

3.68 A summary of Network Rail's CP7 forecasts for Freight Cancellations and our conclusions on the baseline trajectories for CP7 are included towards the end of this chapter.

3.69 Network Rail Scotland's forecast for FCaL is 6.1% in year 1 of CP7, falling to 5.5% in years 4 and 5. These forecasts for years 1 to 3 do not meet the Scotland HLOS requirement of 5.5%.

3.70 Network Rail has not provided details of how it has produced its FCaL point forecasts for Scotland. It has stated that the forecast was developed using historical averages, but it has not provided further detail on how these averages were used to derive its FCaL forecasts.

Freight train performance: Conclusions

3.71 In CP7 we expect Network Rail to deliver the level of reliability, as measured by Freight Cancellations, that we set out in this determination.

3.72 Confirmation of the freight train performance success and supporting measures we will use to monitor and hold Network Rail to account in CP7 are presented in the table below. Each of these measures is defined in Annex A.

Table 3.5 Freight train performance – CP7 outcomes framework

Tier	Measure
1: Success measures	• Freight Cancellations
2: Supporting measures	• Freight Cancellations and Lateness (FCaL) • Arrivals to Fifteen (A2F)

3.73 In our 'December 2022 technical conclusions' we recognised the clear message from respondents on the importance and impact of freight cancellations on the industry. We also recognise that we cannot lose focus on delays caused to freight services. As a result, our monitoring in this area will use our supporting measures (FCaL and A2F) to ensure that levels of delays to freight services are tracked alongside cancellations.

3.74 Regarding Network Rail's planned changes to the Freight Cancellations measure from the start of CP7, we were persuaded by the freight train operators' objections to including some retimed trains in the measure. We are content with Network Rail's planned change to how the national measure is disaggregated. As a result, we have set our Freight Cancellations trajectories so that no retimed trains are counted within the measure, but it is disaggregated using train kilometres rather

than train count. We expect Network Rail to monitor and report the Freight Cancellations measure to us on this basis during CP7.

3.75 Table 3.6 below presents our decisions on the baseline trajectory for the Freight Cancellations measure. We will monitor and hold Network Rail to account against these trajectories during CP7.

3.76 For the same reasons we have set out in the passenger train performance section above, we have set the trajectory as points in each year of CP7 rather than using ranges.

Table 3.6 Freight Cancellations ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 years 1 to 5

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (years 1 to 5)	1.3%	1.0%	2.0%	1.5%	1.2%	1.3%
Network Rail SBP forecast range (years 1 to 5)	1.5% to 2.8%	1.0% to 1.9%	2.2% to 4.0%	1.6% to 3.3%	1.4% to 2.6%	2.2% improving to 2.0%

3.77 In addition to the trajectories in the table above we are also setting a Freight Cancellations trajectory for Great Britain of 1.2% in each year of CP7. We will hold the SO to account against this trajectory given its strategic role in overseeing freight activity on the network.

3.78 We have set the baseline trajectories for each region in England & Wales (and in total) using the calculated approach taken by Network Rail to produce the bottom end of its range forecasts (where cancellations are lowest). We undertook this calculated approach after removing the significantly retimed journeys Network Rail had included in the historical data it used to derive its forecasts. We consider that these levels are ambitious yet realistic after considering Network Rail's own forecasts and plans, the assumptions it has made (particularly around passenger demand and traffic levels) and historical performance levels.

3.79 We have set the baseline trajectory for Scotland and Great Britain in a way that is consistent with how trajectories have been set in England & Wales (5% below a four year historic average), following the removal of significantly retimed journeys

from the dataset Network Rail used to derive its range forecasts in England & Wales.

3.80 In line with the Scotland HLOS, we expect Network Rail to deliver FCaL performance of 5.5% or less in each year of the control period. The obligation on Network Rail is to achieve the target to the greatest extent reasonably practicable having regard to all relevant circumstances. Given this Scotland HLOS requirement, we will place more focus on FCaL performance in Scotland as part of our monitoring and holding to account approach.

3.81 For freight train performance we expect to see forecasts in Network Rail's delivery plan for FCaL and A2F for each region, England & Wales and Great Britain, and for each year of CP7. We expect Network Rail to monitor and report on these measures during CP7.

Asset sustainability

4.1 Network Rail's planning and management of its infrastructure assets is essential to deliver their greatest value over the course of their operational lives.

4.2 We will use Network Rail's Composite Sustainability Index (CSI), which measures the percentage change in asset remaining life, as our headline success measure of asset sustainability for each region in CP7. Network Rail is forecasting a modest decline in CSI during CP7. This reflects that it is planning to undertake fewer renewals of core assets in comparison to CP6, due to constrained funding.

4.3 We are proposing an increase to Network Rail's core renewals expenditure, as part of our wider assessment of Network Rail's SBP, to mitigate potential risks to asset performance during CP7 and future control periods. We have adjusted Network Rail's regional CSI forecasts for our CP7 baseline trajectory reflecting this proposed increase in renewals expenditure.

4.4 We are complementing CSI with a selection of supporting measures. These give a broader view of Network Rail's performance, allowing us to monitor if it is effectively managing the sustainability of its assets in line with its obligations under the network licence and HLOSs. These supporting measures include indicators of asset reliability, such as Service Affecting Failures (SAFs) and delivery against key activities, including examinations of structures.

Context

4.5 In this chapter, we discuss the outcomes that Network Rail needs to deliver in CP7 to demonstrate it is managing the rail infrastructure assets sustainably, within its funding constraints.

4.6 This chapter should be read alongside our PR23 draft determination: supporting document on sustainable and efficient costs. This reviews whether the projected expenditure in the SBP is appropriate for Network Rail to manage the infrastructure in line with its obligations under its licence and the requirements described in the England & Wales and Scotland HLOSs.

4.7 In our 'December 2022 technical conclusions' we confirmed the continued use of the Composite Sustainability Index (CSI) as the headline success measure for asset sustainability in CP7. We also confirmed a range of supporting measures,

not all fully defined, on how well Network Rail is managing the condition and performance of the assets.

Assessment of Network Rail's plans

4.8 The England & Wales HLOS expects that the consideration of long-term asset sustainability should constitute a central part of Network Rail's planning for CP7 and includes several requirements regarding improved resilience to climate change. The Scotland HLOS requires Network Rail to adopt a strategy which is focussed on safety, reliability, resilience, sustainability and value for money. Further details on the requirements regarding resilience are referred to in our PR23 draft determination: supporting document on sustainable and efficient costs.

4.9 The CP7 outcomes framework for asset sustainability provides the suite of measures for us to monitor Network Rail's delivery of its obligations regarding the sustainability of the network, as described in its licence and the government HLOSs for CP7. Our PR23 draft determination: supporting document on sustainable and efficient costs reviews how asset sustainability has been considered in Network Rail's planning of its activities and associated costs.

4.10 Network Rail is forecasting a modest decline in asset condition in CP7. It is therefore important we have a clear set of requirements and supporting measures to monitor effectively Network Rail's compliance with its licence during the control period.

Assessment of Network Rail's CSI forecast

4.11 CSI is the headline asset sustainability success measure in our CP7 outcomes framework. We are setting the baseline trajectory for this measure as part of our determination. The baseline trajectory sets the level of asset sustainability that we expect each Network Rail region to achieve in CP7.

4.12 CSI measures the percentage change in the remaining life of Network Rail's infrastructure assets. A lower value means a loss in asset condition and a higher value indicates improved asset condition. Further information on CSI can be found in the PR23 draft determination: supporting document on sustainable and efficient costs.

4.13 Network Rail calculates and reports CSI using a number of bespoke models, the outputs of which are combined to produce the CSI forecast. It is based on the renewals plan for each region and changes slowly with time, meaning an end of control period trajectory is more appropriate than a year-on-year profile. In PR18

we decided to use the start of CP5 CSI calculation as the benchmark against which change was reported in CP6. We consider it is appropriate to reset the baseline to exit of CP6 for the next control period.

4.14 Network Rail has forecast the change in CSI during CP7 for each region. For England & Wales regions, Network Rail has included forecasts for the 'risk adjusted plan' and 'full plan' scenarios. It proposed regions' forecasts associated with the risk adjusted plan should be used to set the success measure trajectory baselines. We agree this is the more realistic scenario and have used it as the starting point for our assessment of Network Rail's forecast, as we consider the forecast risk provision in the full plan is insufficient.

4.15 Our wider assessment of Network Rail's SBP has shown that the needs of some core assets in each of Network Rail's regions have not been sufficiently prioritised. We consider that up to £0.6 billion additional funding should be allocated to core assets (£0.55 billion in England & Wales and £0.05 billion in Scotland). Further information can be found in our PR23 draft determination: supporting document on sustainable and efficient costs.

4.16 We have made an adjustment to each region's CSI CP7 year 5 forecast, to reflect the increases in each region's core renewals expenditure that we consider is required, compared to the risk adjusted plan. We calculated this adjustment by:

(a) taking the difference in core renewals costs between the full plan and the 'risk adjusted plan, for each region;

(b) taking the difference in forecast CSI between the full plan and the risk adjusted plan, for each region;

(c) using the above information to estimate the spend required to deliver a one percentage point increase in CSI, for each region; and

(d) using the above information to estimate the impact of our recommended increase in core renewals expenditure for each region.

4.17 Further information on this adjustment can be found in our PR23 draft determination: supporting document on sustainable and efficient costs. As a result of this adjustment, the regional CSI baseline trajectory (CP7 change, relative to CP6 exit) is shown in Table 4.2 alongside the forecasts proposed by Network Rail in its SBP.

4.18 We have used a relatively simple calculation to adjust CSI. We expect Network Rail to respond to our draft determination with a more accurate forecast.

Asset sustainability supporting measures

4.19 CSI is a slow-moving measure. It is reported annually and forecasts relate to the end of each control period. As such, we have chosen supporting measures to review how well Network Rail is maintaining the condition and performance of the assets which can be tracked more frequently than CSI. This includes the Composite Reliability Index (CRI), which provides a shorter-term assessment of asset reliability and performance.

4.20 Our supporting measures for asset sustainability were listed in our 'December 2022 technical conclusions' document and we expect Network Rail to forecast each supporting measure in its CP7 delivery plan. These supporting measures included measures of 'delivery against high priority areas'. We have defined these measures further in Table 4.1 and Annex A of this supporting document.

4.21 We have added Service Affecting Failures (SAFs) as a supporting measure following our review of the SBP. Network Rail presented this as one of the key forecasts of asset performance in its plans and we consider it is an effective indicator of asset performance. It is also a useful indicator to demonstrate the contribution of infrastructure reliability to train performance.

4.22 Network Rail's regions' submissions included weather resilience and climate change adaptation (WRCCA) plans. We have found these largely meet the requirements of the England & Wales and Scotland HLOSs. However, we do require additional detail on: the outputs to be delivered by the work listed in the WRCCA plans; the residual risk; and how this will be managed. Further information of our assessment of the costs associated with these plans can be found in our PR23 draft determination: supporting document on efficient and sustainable costs.

4.23 We expect Network Rail to complete further development of its WRCCA plans for CP7 and include dated actions. These should be aligned with each region's plans and key WRCCA deliverables should therefore be identified in the CP7 delivery plan. Network Rail's delivery of these activities will be a supporting measure in our CP7 outcomes framework. We are also discussing with Network Rail the additional assurance each region can provide, such as a resilience-focussed effective volumes measure, so we can monitor that each region is delivering its obligations in this area.

4.24 Maintaining accurate asset data is essential to plan effectively and manage the long-term sustainability of the network. Network Rail's SBP does not include commitments on how it will maintain asset data quality in CP7. We expect Network Rail to set out a clear asset data strategy in its response to our draft determination. It should then reflect this strategy in timebound commitments in its CP7 delivery plan. We will monitor delivery of these commitments as a supporting measure during the control period.

Conclusions

4.25 We will use CSI as our headline success measure to monitor if Network Rail is effectively planning and delivering the maintenance and renewal of its assets to maintain the long-term efficiency and performance of the network, within its funding constraints.

4.26 In addition to CSI, we will use a series of supporting measures to provide a rounded picture of Network Rail's compliance with its obligations in this area. We have added SAFs to our supporting measures, following review of the SBP where Network Rail provided forecasts. It is an effective faster-moving indicator of asset reliability and its contribution to train performance.

4.27 The complete list of success and supporting measures for asset sustainability are given in Table 4.1.

Table 4.1 Asset sustainability – CP7 outcomes framework

Tier	Measure
1: Success measures	• Composite Sustainability Index (CSI)

2: Supporting measures	• Composite Reliability Index (CRI)
	• Service Affecting Failures (SAFs)
	• Delivery against high priority areas:
	  ○ Lineside vegetation – compliance
	  ○ Structures examinations – site examination and reporting compliance
	  ○ Earthworks examinations – non-compliance
	  ○ Buildings examinations – detailed and visual examinations
	  ○ Drainage examinations – compliance
	  ○ Maintenance – plan vs. actual volume hours
	  ○ Resilience and adaptation – key WRCCA activities
	• Asset data quality – timebound obligations to meet asset data standards

4.28 Our wider assessment has identified that the needs of some core assets in each of Network Rail's regions have not been sufficiently prioritised, as described in our PR23 draft determination: supporting document on sustainable and efficient costs. We consider more expenditure on core renewals is required. We have made adjustments to Network Rail's CSI forecasts, reflecting this increased spend on core renewals, making our trajectory more challenging for some regions.

4.29 Table 4.2 summarises the CSI baseline trajectories we expect Network Rail to deliver in CP7, relative to the end of CP6, alongside Network Rail's forecasts. A negative change in CSI indicates a deterioration in asset condition.

Table 4.2 CSI (change in CP7) ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 year 5

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (CP7 year 5)	−2.9pp	−3.5pp	−2.7pp	−2.5pp	−3.0pp	−3.4pp
Network Rail SBP forecast (CP7 year 5)	−2.9pp	−3.5pp	−3.0pp	−3.1pp	−3.1pp	−3.4pp

4.30 In our final determination, in addition to CSI baseline trajectories for each region and England & Wales as a whole, we intend to include trajectories for Great Britain. These will be aligned with regional trajectories and we will work with Network Rail to produce these. We are including Great Britain trajectories to provide an overview of our performance expectations and to support any future changes to trajectories (e.g. due to changes in geographical boundaries).

Efficiency and financial performance

5.1 Network Rail's delivery of efficiency and financial performance is essential to minimise the cost of the railway to its end users and taxpayers while delivering required outcomes. The importance of this area is emphasised in both the England & Wales and Scotland HLOSs.

5.2 We will continue our CP6 approach to monitoring this area in CP7, as it has proved effective, and allows us to incorporate lessons learnt from previous control periods.

5.3 Network Rail proposed an England & Wales efficiency of £3.2 billion in its risk adjusted plan. We propose to maintain Network Rail's overall efficiency challenge of at least £3.2 billion in England & Wales (for the risk-adjusted plan) and £429 million for Scotland (of which £380 million is attributable to regionally incurred expenditure). Therefore, we are setting efficiency baseline trajectories for each region in line with Network Rail's forecasts. We expect Network Rail to align the regional forecasts in its CP7 delivery plan with the trajectories in our determination.

Context

5.4 We monitor efficiency and financial performance to ensure value for money, to support the delivery of efficiency improvements and to minimise the cost of the railway for passengers, freight customers and taxpayers while delivering required outcomes.

5.5 In this chapter we confirm the measures we will use to monitor efficiency and financial performance in CP7. We also confirm the baseline trajectories for the two success measures in this area.

5.6 Network Rail's delivery of efficiency improvements in the first three years of CP6 has been good. However, its wider financial performance has missed its target as Network Rail underperformed financially across the first three years of CP6.

5.7 We confirmed that the Financial Performance Measure (FPM) and efficiency are success measures in our 'December 2022 technical conclusions'. These are supported by the Fishbone analysis of cost drivers and three leading indicators of efficiency delivery: booking of disruptive access; workbank planning; and efficiency plan quality.

5.8 Our PR23 draft determination: supporting document on sustainable and efficient costs, sets out our analysis of Network Rail's costs in detail. It also provides further detail of Network Rail's financial performance in CP6 and how this could impact on its CP7 forecasts.

Assessment of Network Rail's plans

5.9 The UK Government and Scottish Ministers have emphasised the importance of Network Rail delivering efficiency improvements, as described throughout both HLOS documents.

5.10 We consider the outcomes framework for this outcome area provides the right set of measures to effectively monitor Network Rail's performance against the relative HLOS requirements. The balance of headline measures, focussed on funders' priorities, and supporting measures (including leading indicators), has proved successful in monitoring Network Rail's financial performance and delivery of efficiencies in CP6. Our review of the SBP has not identified any need for changes to our outcomes framework for financial performance and efficiency for CP7.

5.11 We are setting the CP7 baseline trajectory for two success measures for this outcome which are the Financial Performance Measure (FPM) and efficiency.

Financial Performance Measure

5.12 FPM will compare Network Rail's income and expenditure to its CP7 delivery plan. The efficiency improvements that regions are expected to achieve will be embedded in the financial assumptions in their CP7 delivery plans. FPM adjusts for the amount of work done and excludes income and expenditure that is not controllable by Network Rail. This includes network grants, fixed track access charges, traction electricity income and costs, and business rates. Our CP6 regulatory accounting guidelines explain further how FPM is calculated.

5.13 Network Rail has included an FPM forecast of zero for every year of CP7, for each region. In essence, this means its net financial performance would be aligned to the assumptions in its delivery plan for income and controllable costs and after making adjustments for delivery. We agree this is the appropriate baseline to measure FPM against during CP7 and are setting this as the FPM baseline trajectory.

Efficiency

5.14 Our assessment was informed by a range of information, such as targeted assurance reviews, benchmarking, evidence from our ongoing CP6 monitoring and comparisons with other regulated network industries.

5.15 Network Rail included a forecast of efficiency for each region in its SBP and we are setting regional baseline trajectories in our determination. We will monitor Network Rail against the efficiency baseline trajectories in its CP7 delivery plan for each region, provided that these trajectories are aligned with the conclusions in our final determination.

5.16 We find Network Rail's targeted efficiency improvements in CP7 from the CP6 exit position of 10% in operational expenditure and 15% in capital expenditure as credible. Under the risk-adjusted England & Wales plan this would generate at least £3.2 billion; we consider this is stretching yet achievable. The Scotland efficiency target is £380 million efficiency for direct costs and £429 million when including its share of efficiencies in the network wide cost allocation. Although this is achievable, it is particularly stretching.

5.17 Further information about our assessment is described in our PR23 draft determination supporting document on sustainable and efficient costs. This also includes our assessment of headwinds, tailwinds and inflation, which will all impact Network Rail's CP7 costs in addition to efficiency.

Conclusions

5.18 We will continue our CP6 approach for monitoring Network Rail's efficiency and financial performance. We will use two success measures to monitor and report publicly on Network Rail's financial performance and efficiency. These are augmented by a set of supporting measures that we expect Network Rail to forecast in its CP7 delivery plan. The supporting measures provide additional information on the robustness of Network Rail's efficiency plans and leading indicators of its readiness to deliver its activities efficiently.

5.19 The measures in the outcomes framework for this outcome area are listed in Table 5.1.

Table 5.1 Efficiency and financial performance – CP7 outcomes framework

Tier	Measure
1: Success measures	• Financial Performance Measure (FPM) (opex/capex split) • Efficiency (£)

2: Supporting measures	• Fishbone analysis of cost drivers
	  ○ Leading indicators of efficient delivery
	  ○ Booking of disruptive access
	  ○ Workbank planning
	• Efficiency plan quality

5.20 We are setting the FPM baseline success measure trajectories as zero for every year of CP7 (Table 5.2). In summary, this means its net financial performance would be aligned to the assumptions in its CP7 delivery plan, for income and controllable costs and after making adjustments for delivery.

Table 5.2 FPM ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 years 1 to 5

	Eastern	North West & Central	Southern	Wales & Western	Scotland
ORR baseline trajectory (years 1 to 5)	0	0	0	0	0
Network Rail SBP forecast (years 1 to 5)	0	0	0	0	0

5.21 We have set the efficiency requirements at the same level as Network Rail proposed in its SBP for the risk-adjusted plan for each England & Wales region and its Scotland plan.

5.22 We expect Network Rail to include regional efficiency forecasts in its CP7 delivery plan, which are aligned with our baseline trajectories. We will monitor Network Rail's regions' delivery of efficiencies, against these baselines in its CP7 delivery plan.

Table 5.3 Efficiency ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 year 5

£ million, 2023-24 prices	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (CP7 year 5)	992	890	781	569	3,232	429
Network Rail SBP forecast (CP7 year 5)	992	890	781	569	3,232	429

Environmental sustainability

6.1 There is an increased focus on environmental sustainability and delivering sustainable development of the railway.

6.2 Both the England & Wales and Scotland HLOSs include several requirements relating to environmental sustainability. These requirements represent a step-up in government expectations of delivery in this area to contribute to meeting legislative requirements.

6.3 Our monitoring in CP7 will focus on levels of Carbon emissions scope 1 and 2 and Biodiversity Units relative to the corresponding baseline trajectories we have set which are included towards the end of this chapter. We will also monitor the One Planet Indicator (OPI), Carbon emissions scope 3 and Air quality at stations relative to the forecasts produced by Network Rail in its delivery plan. Further detail on these measures is provided below and in Annex A.

6.4 Our requirements relating to asset sustainability outcomes are included in Chapter 4 of this document. The chapter includes the measures we will use to monitor climate change resilience delivery and the expectations we have in this area for CP7. A more detailed assessment of Network Rail's plans relating to both asset and environmental sustainability and our related expectations can be found in the PR23 draft determination: supporting document on sustainable and efficient costs.

Context

6.5 In recent years, there has rightly been an increased focus on environmental sustainability and delivering sustainable development of the railway. There are clear legislative requirements relating to climate change and more specifically to deliver net zero carbon emissions in Scotland by 2045 and in England & Wales by 2050. The railway in England & Wales is also expected to conserve and enhance biodiversity in line with the Environment Act 2021, including the current Government Environmental Improvement Plan, and to contribute to environmental targets set out in the Rail Environment Policy Statement.

6.6 To support progress in this area, ORR's approach has been to work closely with Network Rail to develop appropriate measures and monitoring of environmental sustainability performance. We have encouraged Network Rail to set balanced and appropriate performance expectations to contribute towards legislative requirements and deliver government priorities. These include decarbonisation

activities and actions to improve biodiversity to meet longer-term government priorities. We have also encouraged Network Rail to consider resource consumption and air quality performance requirements, which align to short-term legislative and government priorities.

6.7 In our 'December 2022 technical conclusions' we confirmed that in CP7, Carbon emissions scope 1 and 2 and Biodiversity Units measures would be our success measures for environmental sustainability. We outlined that these would be supported by the One Planet Indicator (OPI), Carbon emissions scope 3 and Air quality at stations as our supporting measures.

6.8 The Carbon emissions scope 1 and 2 measure is as defined under the Greenhouse Gas Protocol. Scope 1 emissions are all direct emissions from the activities of Network Rail or under its control including fuel (oil, gas) combustion on site such as gas boilers for heating and fuel for fleet vehicles. Scope 2 emissions are all indirect emissions arising from the generation of electricity purchased and used by Network Rail.

6.9 The Biodiversity Units measure is defined by Natural England's Biodiversity Metric 3.0. The measure is a habitat-based approach used to assess an area's value to wildlife. It uses habitat classification, condition and strategic importance to calculate a biodiversity unit value.

6.10 We also highlighted that there may be scope during the control period to promote OPI to a success measure once we have more confidence in the stability of the measure.

Assessment of Network Rail's plans

6.11 The England & Wales HLOS includes the following requirements relating to environmental sustainability:

- the Secretary of State expects that Network Rail will make progress on the goals of moving towards a low-emissions railway and pursuing decarbonisation objectives;
- this includes the consistent measurement and management of whole life carbon for all schemes (construction, renovation and maintenance) according to industry standards and guidance. Schemes are expected to set and monitor reductions against baselines;

- Network Rail is expected to conserve and enhance biodiversity in line with the Environment Act 2021 including the current Government Environmental Improvement Plan and environmental targets; and
- due regard must also be paid to the requirements set out in the Rail Environment Policy Statement.

6.12 The Scotland HLOS states that:

- Scottish Ministers require Network Rail to continue to improve data accuracy on carbon emissions, in particular Scope 3 data, to enable continuous carbon emissions reductions;
- during CP7, Scottish Ministers expect Network Rail to continue to deliver a sustainability strategy which makes progress towards net zero including the Scottish Government interim and subsequent climate change targets (2030 and 2045 respectively); and
- Scottish Ministers also expect Network Rail to work in partnership with Scottish Rail Holdings, ScotRail and other external stakeholders to deliver its net zero objectives.

6.13 There are further environmental sustainability requirements in both the England & Wales and Scotland HLOSs for areas including social value, circular economy and working with stakeholders. Further information on our assessment of these areas can be found in our PR23 draft determination: supporting document on sustainable and efficient costs.

6.14 Network Rail's SBP includes regional forecasts for the two environmental sustainability success measures in our outcomes framework: Carbon emissions scope 1 and 2 and Biodiversity Units. These forecasts are assessed and summarised below.

Decarbonisation

6.15 Network Rail's forecasts for Carbon emissions scope 1 and 2 for England & Wales were presented as percentage point changes in tonnes of carbon dioxide (CO_2) in each region and in each year of CP7 relative to the start of CP7 with a 2018-19 baseline. In Scotland, carbon forecasts were presented as a percentage change in each year relative to 2018-19.

6.16 From our review of Network Rail's plans, supporting information and follow up discussion and correspondence, we understand that Network Rail's Technical

Authority (TA) produced guidance on the forecasts for both success measures which it shared with all regions in England & Wales and Scotland. Whilst some regions adopted these forecasts, other regions decided to set their own forecasts. Our understanding is that the TA forecasts were set on a 'top-down' basis to meet the Network Rail Science Based Targets for scope 1 and 2 emissions by 2029, to demonstrate biodiversity 'net gain', and to meet the requirements of the England & Wales and Scotland HLOSs.

6.17 For Carbon emissions scope 1 and 2, the level of detail varies on how each region has set its CP7 forecasts. Network Rail's plans provided insufficient information on the activities that need to be undertaken to achieve these forecasts and the related carbon reduction. For some regions, plans include a high-level 'waterfall' chart which sets out the planned activities which support the forecasts. Where this information was provided, in some cases gaps/shortfalls to meet forecasts were identified.

6.18 The forecasts in Southern's risk-adjusted plans for carbon emissions scope 1 and 2 are significantly less challenging than the forecasts provided by other regions. The region has stated this is the result of a conservative forecasting approach due to the nature of introducing new initiatives.

6.19 Three of the four regions within England & Wales aligned their plans with the government requirement of updating their fleet to Zero Emission Vehicles (ZEVs) by December 2027. Southern region identified funding to support its ZEV fleet but did not make it clear in its plans that it was committed to the government requirement. In Network Rail's Route Services plans, delivery of this requirement is identified as a risk. Investment in ZEVs was also a significant element of Network Rail Scotland's plans.

6.20 Carbon emissions scope 3 is a supporting measure in our outcomes framework. There is a lack of information in Network Rail's plans on its strategy, actions and expectations for the reduction of scope 3 emissions with no specific commitments for reducing 'infrastructure carbon' by the end of CP7. Network Rail's plans do not include its approach to improving data quality, in particular for scope 3 data. This is a concern. Scope 3 emissions are the largest contributor of Greenhouse Gas (GHG) emissions from the railway. There is some evidence that enabling activities in England & Wales are being put in place to support reduction in scope 3 carbon emissions, but an overarching strategy, programme plan and CP7 milestones are not evident in any of Network Rail's plans. We expect this to be addressed in Network Rail's delivery plan.

6.21 Network Rail Scotland's plans identified offsetting additional emissions to make it 'carbon neutral' by the end of CP7. Our preference is that Network Rail achieves carbon emission reductions by seeking opportunities through better practices and designs, rather than offsetting.

6.22 There are a range of other energy reduction, renewable energy and alternative power sourcing initiatives identified by the regions In Network Rail's plans. Further detail is needed on these activities and the scope 1 and 2 emission reductions they will achieve. The England & Wales plans indicate a high-level commitment to source 100% of non-traction energy from renewable sources by 2030, which will reduce scope 2 emissions.

Biodiversity

6.23 Network Rail's forecasts for the Biodiversity Units success measure in England & Wales and Scotland were presented as percentage point changes in Biodiversity Units in each region and in each year of CP7 relative to the start of CP7 with a 2019-20 baseline.

6.24 For Biodiversity Units forecasts, there is insufficient detail across Network Rail's plans of the works that will be undertaken to achieve the improvements in biodiversity forecast for each region. We recognise that the Biodiversity Units measure is very new. The forecasts set are 'top-down' and there is uncertainty around these until further data are available. No 'bottom-up' detail was provided on the activities that are planned to be undertaken to deliver the forecasts.

6.25 The forecasts in Southern's risk-adjusted plans for the Biodiversity Units measure are less challenging than the forecasts provided for other regions. The region has stated this is the result of a conservative forecasting approach due to the nature of introducing new initiatives.

6.26 Similarly, Biodiversity Units forecasts for Scotland are less challenging than the forecasts provided for other regions. There is a lack of information in the plans to support this.

6.27 Southern and Eastern regions referenced offsetting for biodiversity in their plans, although it was unclear where this offsetting will take place. To achieve improved biodiversity, we expect Network Rail to seek opportunities through better lineside practices and scheme designs, rather than offsetting. If offsetting is required, our preference is to see this undertaken on the railway estate. If Network Rail plans to use projects outside the rail corridor for offsetting, then clarity would also be

required on the benefit to the railway and the long-term maintenance commitments of external projects.

Other areas

6.28 In addition to the Carbon emissions scope 3 measure, there are two further supporting measures in this outcome area. These are OPI, and Air quality at stations.

6.29 There is insufficient information in Network Rail's plans on the use of OPI during CP7. We understand that this metric is in development, but we will require significantly more detail in Network Rail's delivery plan.

6.30 The Rail Environment Policy Statement outlines policy commitments to improve air quality in priority locations across the rail network identified under the DfT-funded Clean Air Research (CLEAR) programme, and also states that the DfT will undertake an extensive review of air quality regulations, railway standards and guidelines applicable to the railway. As part of this review, the DfT intends to set targets for levels of Particulate Matter ($PM_{2.5}$, PM_{10}) and Nitrogen dioxide (NO_2) for all parts of the network that the public can access, with the ambition of meeting these targets by the end of 2030.

6.31 At present, there is insufficient information in Network Rail's plans regarding actions for improving air quality for the CLEAR programme and how Network Rail will play a role in improving air quality. We also expect Network Rail to incorporate requirements set out by the UK Government. We expect further detail on this in its delivery plan, including details of how progress will be reported.

Conclusions

6.32 We expect Network Rail to deliver environmental sustainability outcomes in CP7 which include contributing to meeting legislative requirements and government priorities for England & Wales and Scotland. These include decarbonising the railway and its value chain, improving air quality, biodiversity on its estate, and reducing consumption of resources. We expect this increased emphasis on environmental sustainability in CP7 to be supported by wider environmental performance measures, and robust monitoring and reporting.

6.33 Confirmation of the environmental sustainability success and supporting measures we will use to monitor and hold Network Rail to account in CP7 is presented in the table below. Each of these measures is defined in Annex A.

Table 6.1 Environmental sustainability – CP7 outcomes framework

Tier	Measure
1: Success measures	• Carbon emissions scope 1 and 2 • Biodiversity Units
2: Supporting measures	• One Planet Indicator (OPI) • Carbon emissions scope 3 • Air quality at stations

6.34 In our 'December 2022 technical conclusions' we stated that the inclusion of the Biodiversity Units measure (as defined by Natural England's Biodiversity Metric 3.0) in our outcomes framework provides continuity for CP7 given this measure was used to establish the baselines in Network Rail's State of Nature report. We will also use any other measures of biodiversity used by Network Rail in CP7 to support our wider monitoring in this area.

6.35 The tables below present our decisions on the baseline trajectories for the two success measures in this outcome area. We will monitor and hold Network Rail to account against these trajectories during CP7.

6.36 The full trajectories and Network Rail's forecasts (i.e. performance levels for each year of the control period) for each success measure are set out in Annex B of this document.

Decarbonisation

Table 6.2 Carbon emissions scope 1 and 2 (change in CP7) ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 year 5

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (CP7 year 5)	−20.0pp	−21.0pp	−20.0pp	−20.0pp	−20.3pp	−21.2pp
Network Rail SBP forecast (CP7 year 5)	−20.0pp	−21.0pp	−11.0pp	−20.0pp	−18.4pp	−46.2%

Note: The Network Rail SBP forecast (year 5) for Scotland was provided on a different basis to forecasts for regions in England & Wales. The Scotland forecast is relative to 2018-19 and the forecasts for regions in England & Wales represent the 'CP7 change' relative to the start of CP7 with a 2018-19 baseline.

6.37 We have set the baseline trajectories for the Carbon emissions scope 1 and 2 measure on the same basis used by Network Rail to present its SBP forecasts for regions in England & Wales i.e. 'CP7 change' relative to the start of CP7 with a 2018-19 baseline. Network Rail's SBP forecasts for Scotland were presented relative to 2018-19. To set the trajectory for Scotland, we have subtracted Network Rail's CP6 year 5 forecast (-25%) from its CP7 year 5 forecast. The resulting trajectory is broadly in line with those for other regions in England & Wales.

6.38 We have set the Carbon emissions scope 1 and 2 trajectories for Eastern, North West & Central and Wales & Western in line with Network Rail's SBP forecasts for these regions. We believe these forecasts are sufficiently stretching and align with legislative requirements and government expectations.

6.39 We have set the Carbon emissions scope 1 and 2 trajectory for Southern to be the same as Wales & Western. We note there is some uncertainty in this developing area, but there is a lack of evidence in Network Rail's plans to explain why the forecast for Southern is less challenging than for other regions. We take the view that Southern's trajectory should be broadly aligned to Network Rail's own technical guidance to achieve the required outputs in this area.

6.40 We have set the Carbon emissions scope 1 and 2 trajectory for England & Wales as a simple average of the four regional trajectories in England & Wales for each year of CP7. We expect Network Rail to calculate trajectories for England & Wales and Great Britain using weighted averages of the regional trajectories (based on absolute changes). We will confirm these trajectories in our final determination. We are including these trajectories to provide an overview of our performance expectations and to inform any future changes to trajectories (e.g. due to changes in geographical boundaries).

6.41 We expect Network Rail's delivery plan to include supporting information for all regions on the activities and corresponding volumes that Network Rail plans to undertake in CP7 to meet its trajectories.

6.42 We have commissioned an Independent Reporter study which is currently reviewing Network Rail's forecasts for Carbon emissions scope 1 and 2. We expect the findings of this study to be available by summer 2023 and will reflect these in our final determination.

6.43 We expect Network Rail's delivery plan will include a clear strategy, including milestones, for how scope 3 carbon emission reductions will be achieved during CP7, including forecasts for 'scope 3 emissions' and 'infrastructure carbon'. This

should also include detail to show how workstreams have been prioritised in accordance with the Institute of Environmental Management and Assessment (IEMA) 'Greenhouse Gas Management Hierarchy'.

6.44 Network Rail's delivery plan also needs to include the governance and assurance for this strategy, and its approach towards the assessment and reporting of scope 3 emissions and infrastructure carbon (including baselines, reduction pathways, tools and systems) and how it will work with its supply chain. We also expect Network Rail's delivery plan to include its planned approach for reporting relevant scope 3 emissions data which integrates with existing and future reporting arrangements put in place under the 'Carbon Management Framework'.

6.45 Further clarity will be required from Network Rail on the details of its plans for external offsetting relating to decarbonisation and biodiversity. Offsetting is a concern because we expect regions to first look for opportunities regarding practices and designs within their own portfolio of works and asset base to achieve reductions before the use of offsetting.

6.46 We expect Network Rail to include detail in its delivery plan on other energy reduction, renewable energy and alternative power sourcing initiatives identified by the regions in its SBP.

Biodiversity

Table 6.3 Biodiversity Units (change in CP7) ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 year 5

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (CP7 year 5)	4.8pp	4.0pp	4.0pp	4.0pp	4.2pp	4.0pp
Network Rail SBP forecast (CP7 year 5)	4.8pp	4.0pp	2.0pp	4.0pp	3.9pp	2.5pp

6.47 We have set the Biodiversity Units trajectories for Eastern, North West & Central and Wales & Western in line with Network Rail's SBP forecasts for these regions. We believe these forecasts are sufficiently ambitious and align with legislative requirements and government expectations. In the England & Wales HLOS there are wider biodiversity requirements relating to working with stakeholders and

considering nature-based solutions. Further information on our assessment of these areas can be found in our PR23 draft determination: supporting document on sustainable and efficient costs.

6.48 We have set the Biodiversity Units trajectory for Southern to be the same as North West & Central and Wales & Western which is in line with Network Rail's own technical guidance. We note there is some uncertainty in this developing area, but there is a lack of evidence in Network Rail's plans to explain why the forecast for Southern is less challenging than for other regions.

6.49 We noted that there is no requirement on biodiversity in the Scotland HLOS. However, similar to our approach to setting Southern's trajectory, we have set the trajectory for Scotland to be the same as North West & Central and Wales & Western which is in line with Network Rail's own technical guidance.

6.50 We have set the Biodiversity Units trajectory for England & Wales as a simple average of the four regional trajectories in England & Wales for each year of CP7. We expect Network Rail to calculate trajectories for England & Wales and Great Britain using weighted averages of the regional trajectories (based on absolute changes). We will confirm these trajectories in the final determination.

Other areas

6.51 We understand that Network Rail expects to start monitoring the OPI measure at the start of CP7. We expect Network Rail to include forecasts of OPI in its delivery plan.

6.52 We expect Network Rail to provide more detail in its delivery plan on how, as a 'responsible organisation', it will work with train operators at priority sites identified under the CLEAR programme. This includes setting forecasts for air quality at stations including levels of $PM_{2.5}$, PM_{10} and NO_2. We expect Network Rail's delivery plan to take account of any requirements set out by government following publication of its review of air quality regulations, railway standards and guidelines for the railway.

Customer satisfaction

7.1 The railway provides services for passengers and freight users – and Network Rail can contribute to their level of satisfaction with the service they receive. Understanding the views of those users will help Network Rail to identify where it needs to target improvements and to understand the impact of its actions.

7.2 The Scotland HLOS expects Network Rail to monitor customer satisfaction and deliver improvements to the customer experience. While there are no explicit requirements in the England & Wales HLOS, customer satisfaction monitoring and stakeholder engagement is widely recognised as good practice.

7.3 Our monitoring in CP7 will focus on outputs from a new industry-wide customer survey which we understand is planned to go live during 2024. We will monitor customer satisfaction with overall journeys and with experience at Network Rail managed stations as supporting measures. We will continue to assess Network Rail's stakeholder engagement, including with freight users.

Context

7.4 Previously, customer satisfaction of rail passengers has been monitored through the National Rail Passenger Survey (NRPS), which is no longer running, and the Wavelength survey. Great British Railways Transition Team (GBRTT) is currently leading the development of a new industry-wide customer survey that is expected to replace the two previous surveys, with the aim of monitoring how customers rate their end-to-end rail travel experience on an ongoing basis and informing decisions on improvements to the customer experience across the industry. We understand that the new survey is planned to go live during 2024.

7.5 We assess Network Rail's stakeholder engagement, including its engagement with freight users, on an annual basis. To do this we use stakeholder surveys undertaken by both Network Rail and ORR. The aim is to ensure Network Rail engages with its stakeholder community in a way that improves delivery for both passengers and freight users and enhances value for money. In our 'December 2022 policy conclusions' we stated that we will remove the duplication of Network Rail and ORR surveys and make Network Rail responsible for the survey of its stakeholders. We added that we would work with Network Rail to agree the form and content of its stakeholder engagement for CP7.

7.6 In our 'December 2022 technical conclusions' we confirmed that there would be no success measures for customer satisfaction. For satisfaction with an overall journey it is particularly challenging to separate out Network Rail's contribution from other factors. However, we outlined that we would monitor customer satisfaction with overall journey and customer satisfaction with the experience at Network Rail managed stations as supporting measures.

7.7 We also stated we would explore with Network Rail how its stakeholder surveys could be used to support our additional assurance monitoring in CP7.

Assessment of Network Rail's plans

7.8 There are no direct references or requirements relating to customer satisfaction in the England & Wales HLOS. Nevertheless, customer satisfaction monitoring is widely recognised as good practice and DfT is a key collaborator in the development of the new customer survey by GBRTT.

7.9 The Scotland HLOS makes direct reference to customer satisfaction and states the key elements as: "A high performing, accessible railway with competitive and improving journey times". It states that Scottish Ministers require that Network Rail is measured, as appropriate, against the same NRPS targets as ScotRail and the Caledonian Sleeper Guest Satisfaction Survey. It places focus on 'Overall satisfaction' and 'How well the Train Operating Company dealt with disruption' measures. It also states that Network Rail should work with the wider rail industry to continue to deliver an agreed measurable improvement to the customer experience by the end of CP7 through improved, and more consistent Customer Information Systems (CIS).

7.10 Network Rail's SBP for England & Wales includes a strategic theme and objectives for customers and communities, and customer satisfaction is part of that theme. There is a strong focus on accurate, timely information and on accessibility and the SBP identifies customer information as a crucial driver of customer satisfaction. As such, Network Rail plans to continue to focus on implementing an industry customer information system. Network Rail plans to focus on customer service in CP7 through continual service skills training for staff, stakeholder engagement and establishing cultural change programmes. Its plans for managed stations in CP7 aimed at improving the customer experience include maintaining cleanliness, investing in CCTV, changing signage to improve wayfinding and developing a strategy for retail.

7.11 Network Rail Scotland's interim SBP outlines six pillars of customer experience, one of which is a satisfaction metric. This partially addresses the requirements in the HLOS around Network Rail being held to account against NRPS results (soon to be replaced with the new customer survey).

7.12 As part of its SBP, Network Rail has included forecasts for the supporting measures in our outcomes framework by region and for each year of CP7. These forecasts were based on the Wavelength survey as a source for the customer satisfaction with overall journey measure and station terminal data as the source for the customer satisfaction with experience at infrastructure manager managed stations measure. We expect Network Rail to update these forecasts in its CP7 delivery plan. We will use these to monitor and report on Network Rail's performance until the new customer survey supporting measures are established and publicly forecast in Network Rail's updates to its delivery plan (expected in year 2 of CP7).

Conclusions

7.13 Network Rail needs a continued focus on customer satisfaction for both passengers and freight.

7.14 For passengers, we plan to monitor and hold Network Rail to account against two supporting measures: Customer satisfaction with the overall journey, and Customer satisfaction with the experience at infrastructure manager managed stations.

Table 7.1 Customer satisfaction success and supporting measures

Tier	Measure
1: Success measures	• None
2: Supporting measures	• Customer satisfaction with overall journey • Customer satisfaction with experience at infrastructure manager managed stations

7.15 The Scotland HLOS anticipates that Network Rail can be held to account for customer satisfaction against the NRPS survey. As that survey is no longer running an alternative source of insight is needed.

7.16 We expect the new passenger survey to provide an appropriately robust and continuous source of data that will provide insight into Network Rail's contribution to customer satisfaction. As it will be carried out using a different methodology to the previous surveys, Network Rail will need to establish its baseline performance in the first year of the new survey, then set challenging yet deliverable forecasts for subsequent years.

7.17 We plan to use the new survey to support our monitoring of the two supporting measures. If this is not possible, we may consider making changes to these measures by working with Network Rail through the Managing Change Policy. We will review these plans and provide any updates in our final determination.

7.18 It is anticipated that supporting measure forecasts can be set from year 2 of CP7 and monitored from then onwards.

7.19 We will continue to assess Network Rail's stakeholder engagement, including with freight users, through stakeholder surveys. We will explore with Network Rail how its stakeholder surveys can be used to support our additional assurance monitoring in CP7.

System operation

8.1 This chapter sets out our draft determination on system operation outcomes. Effective timetabling will be a clear focus for this outcome area because of its impact on train performance and importance to stakeholders evidenced through the HLOSs.

8.2 The England & Wales SBP provides details on key initiatives including the continued development and implementation of the Industry Timetable Technical Strategy (ITTS) and Better Timetables for Passenger and Freight (BTPF).

8.3 The delivery of projects under ITTS will be categorised as a supporting measure. We expect Network Rail to include forecasts for delivery of milestones for projects under the ITTS umbrella within its CP7 delivery plan and publicly report on progress.

Context

8.4 In our 'December 2022 technical conclusions' we did not outline any success or supporting measures for system operation. We stated that we would continue to explore options and provide more detail on our approach to holding Network Rail to account in our determination.

8.5 The England and Wales HLOS highlights a need for an efficient approach to system operation. This includes performance measurement as well as a strong and effective timetabling capability for executing changes without disrupting customers. The Scotland HLOS also places an emphasis on effective timetabling and the needs of passengers.

Assessment of Network Rail's plans

8.6 For system operation, the England & Wales SBP provides details on key initiatives including the continued development and implementation of the Industry Timetable Technical Strategy (ITTS) and Better Timetables for Passenger and Freight (BTPF). It also discusses making better use of data and technology to provide better measurement on the causes of train delays and to forecast future performance more accurately.

8.7 ITTS was developed in response to a recommendation from ORR's independent inquiry into the timetable disruption in May 2018. This proposed the development

of a strategy to address underlying technical issues which limited the industry's ability to plan effectively. The SO, responsible for delivery of the timetable, has allocated approximately £50 million capital expenditure to ITTS in CP7 (more than any other project) to deliver timetable technology improvements. This should enhance current capability and enable the delivery of a more reliable, more resilient, higher-performing timetable that has fewer defects.

8.8 In CP6 the SO began working with industry to develop BTPF. The objective was to achieve compliance with Network Code timescales with respect to the timetable process. It plans for BTPF to be operational by June 2024. To achieve this, changes to the Network Code and the Network Licence must be implemented. This will require significant work and stakeholder co-operation to achieve.

8.9 More information on system operation is provided in the System Operator (SO) strategic plan, which is assessed in the PR23 draft determination: settlement document for the System Operator. This document also outlines the strategic role the SO has in overseeing freight activity across the Great Britain network and how we will hold it to account for performance and growth.

Conclusions

8.10 Effective timetabling is a key driver of train performance and is a priority for funders, operators and end users. Our CP7 outcomes framework for system operation will therefore have a clear focus on this area.

8.11 The ITTS programme is critical for improvements in timetable production. Therefore, as part of our supporting measures we will include ITTS delivery. We expect the infrastructure manager to provide forecasts for delivery of milestones for projects under the ITTS umbrella within its CP7 delivery plan and report publicly on progress through the control period.

Table 8.1 System operation – CP7 outcomes framework

Tier	Measure
1: Success measures	• None
2: Supporting measures	• Strategic projects delivery - delivery of projects under the Industry Timetable Technical Strategy (ITTS)

8.12 The SO's plan highlights that there are some outstanding decisions to be made on the scope and spend of ITTS. Given the stated importance of ITTS to delivery of stakeholder objectives, we have asked the SO to confirm the final scope during the summer of 2023. More information on this can be found in the PR23 draft determination: settlement document for the System Operator.

8.13 We will also monitor the ongoing implementation of BTPF and network code compliance as part of our additional assurance and continue to monitor timetable delay and delivery metrics.

8.14 The SO has other vital system operation functions such as strategic planning. Between the draft and final determination, we will work with Network Rail to develop and implement a robust process for our additional assurance monitoring in these other areas. More information is set out in the PR23 draft determination: settlement document for the System Operator.

8.15 We will continue to engage with Network Rail on the potential for any other strategic projects to monitor as part of our supporting measures. We will use our change control process to add, or amend, projects before or during CP7.

Freight growth

9.1 This chapter sets out our draft determination on freight growth outcomes. Freight growth is an important outcome area given the context of changing industry demand as well as the need to decarbonise the economy. Reflecting this, both HLOSs set out a requirement for a growth target in CP7.

9.2 We confirm that Freight net tonne kilometres moved is the success measure for freight growth in CP7. After assessing the regional freight growth forecasts, it is our decision to use these as our baseline trajectories. As part of our additional assurance monitoring we will ensure that all regions have developed required freight plans which align with long-term ambitions for freight growth.

Context

9.3 In our 'December 2022 technical conclusions' we concluded that Freight net tonne kilometres moved would be a headline success measure in our CP7 outcomes framework. We did not set any other measures, pending further engagement with Network Rail and review of HLOSs and SBPs.

9.4 Both HLOSs place a strong emphasis on freight growth in CP7. The England & Wales HLOS highlights the need for Network Rail to develop clear freight plans to benefit freight customers and support growth, augmented by a stretching yet realistic growth target over the control period.

9.5 The Scotland HLOS highlights freight growth as a key priority to help achieve broader economic and environmental outcomes. It requires freight growth in CP7 of 8.7% net tonne kilometres across the Scottish network, with an expectation that growth closer to 10% may be reasonably achievable. There is also a requirement for Network Rail Scotland to develop a longer-term rail freight growth strategy by the halfway point of CP7.

9.6 Both HLOSs highlight the importance of supporting action in areas such as network access, capability, capacity allocation, industry engagement, performance, and safety in retaining and attracting new freight customers to achieve growth.

Assessment of Network Rail's plans

9.7 Freight growth within the England & Wales SBP is significantly shaped by the 30-year freight strategy. This strategy was written by the SO on behalf of the wider industry between 2020 and 2021, although not published.

9.8 All regions provide forecasts for freight growth (Freight net tonne kilometres moved). Alongside these are initiatives, interventions and investments that are required to deliver and grow safe and reliable rail freight. Consistent with HLOSs, there is strong recognition in Network Rail's SBP of the supporting action needed to meet freight growth targets. The SO, as a 'guiding mind' for freight growth, also outlines its focus on corridors and linking routes together, working with them to improve performance across large parts of the network.

Heavy Axle Weight (HAW) capability

9.9 A priority in the SBP is the need to invest in high priority structures to safeguard against the loss of Heavy Axle Weight (HAW) capability. The SO has identified a list of high priority structures across the regions where capability to carry heavier traffic has already degraded, or is likely to degrade, within CP7. The England & Wales SBP includes a £72 million investment for mitigation of this across the network. However, not all regions' strategic plans include a breakdown of this funding.

Forecasts and methodology

9.10 Forecasts provided by the regions in England & Wales are 'top-down' and are based on the mid-range of five market scenarios developed by the consultants MDS Transmodal. This is the 'central case' between high and low growth scenarios that favour/disfavour rail compared to road. The Network Rail Scotland forecast is based on 'bottom-up' knowledge of both the Scottish logistics market and the network capability and capacity of the Scottish rail network.

9.11 All regions forecast growth over the control period, with overall growth of 7.5% for England & Wales and 8.7% for Scotland. The percentage freight growth forecast for the Southern region is lower than for other regions because of capacity constraints at key junctions.

9.12 The methodology used by Network Rail Scotland provides a growth forecast (8.7%) slightly lower than that of MDS Transmodal (10.6%). During our assessment we received further briefings from Network Rail Scotland on the data and assumptions used to gain a better understanding of this difference. Following this engagement, we are content that 8.7% is the appropriate starting point for

setting Scotland's CP7 freight growth baseline trajectory, while noting the Scotland HLOS aspiration for growth of 10%.

Enhancements

9.13 Regional plans refer to freight growth being achieved through named enhancements projects, which are funded through other government portfolios which are outside of the determination. Decisions around some of these projects are still uncertain. However, we note that third party investment is a key factor in freight growth and that demand for rail freight remains strong. On this basis, we find that even if the named enhancements projects were delayed or rescoped, Network Rail's proposals for OSMR spend to enable freight growth are still reasonable.

Freight access charges

9.14 We note that freight access charges (particularly the variable usage charge, or VUC) are set to increase in real terms in CP7, relative to CP6. Changes in charges are one factor that can influence rail freight growth. MDS Transmodal's mid-range forecasts have assumed that average VUC rates will increase in line with the policy set in PR18. This is consistent with the proposed profile of VUC rates for freight in CP7, as explained in our PR23 draft determination: policy position - access charges.

Conclusions

9.15 Reduced passenger demand because of the pandemic, changed commuting habits, as well as growth in the rail freight market, may provide an opportunity for Network Rail to reconsider timetables and allow for more freight capacity. There is both an economic and environmental rationale for this. Overall, Network Rail's SBP aligns well with this opportunity and the requirements in the HLOSs to grow rail freight in CP7.

9.16 We understand there are a range of factors which influence rail freight growth, but that the network is a critical enabler. Setting a challenging trajectory for growth sends a positive signal to Network Rail, the industry and funders that we recognise the important role that the network can play in achieving broader economic and environmental outcomes from rail freight growth.

9.17 Having engaged further with Network Rail and GBRTT's Strategic Freight Unit (SFU) we are satisfied with the robustness of the methodologies used to develop freight growth forecasts. As such, they provide a sound basis for the CP7 baseline trajectories shown in Table 9.1.

Table 9.1 **Freight growth (Freight net tonne kilometres moved) ORR baseline trajectories compared with Network Rail SBP forecasts, CP7 year 5**

	Eastern	North West & Central	Southern	Wales & Western	England & Wales	Scotland
ORR baseline trajectory (CP7 year 5)	7.5%	8.6%	2.9%	6.9%	7.5%	8.7%
Network Rail SBP forecast (CP7 year 5)	7.5%	8.6%	2.9%	6.9%	7.5%	8.7%

9.18 In our final determination, in addition to freight growth baseline trajectories for each region and England & Wales as a whole, we intend to include trajectories for Great Britain. These will be aligned with regional trajectories and we will work with Network Rail to produce these. We are including these trajectories to provide an overview of our performance expectations and to support any future changes to trajectories (e.g. due to changes in geographical boundaries).

9.19 As shown in Table 9.2, we will only have one formal measure for freight growth in CP7. Between the draft and final determination we will work with the SO's Freight and National Passenger Operator (FNPO) team to ensure a common approach between ORR and Network Rail as to how this measure is calculated and trains assigned to regions.

Table 9.2 Freight growth - CP7 outcomes framework

Tier	
1: Success measures	• Freight net tonne kilometres moved
2: Supporting measures	• None

9.20 As part of our additional assurance monitoring in CP7, we will ensure that all regions and the SO have developed freight plans. These plans will provide further reassurance that Network Rail is continuing to work closely with industry to break down barriers and identify further opportunities for freight paths and growth. Within the plans, we expect to see specific, prioritised plans for improving the capability of

high priority structures identified by the SO. Plans should also align with longer-term strategy being developed for freight growth.

9.21 Our PR23 draft determination: settlement document for the System Operator outlines more on its role in driving Network Rail's culture to promote freight growth and linked programmes such as the Freight Safety Improvement Portfolio (FSIP) and 21st Century Operations.

Network capability

10.1 This chapter sets out our draft determination on network capability outcomes. As outlined in our 'December 2022 technical conclusions', we will not have any success or supporting measures for this outcome area.

10.2 However, to reassure operators we will increase our scrutiny of network capability through enhanced monitoring of 'capability non-conformance', with a process ready for implementation by the start of CP7. We will also monitor whether Network Rail is meeting all its licence and HLOS requirements with respect to areas such baseline capability and data provision.

Context

10.3 In our 'December 2022 technical conclusions' we did not outline any success or supporting measures for network capability. We stated that we would continue to explore options via our independent review to provide an updated position on CP7 monitoring in our determination.

10.4 There are no network capability requirements specified in the England & Wales HLOS. However, there are certain requirements outlined in the Scotland HLOS. This includes maintaining capability and freight gauge to required standards as well as having sound information which stakeholders can rely on to make safe and robust business decisions.

Assessment of Network Rail's plans

10.5 The England & Wales SBP focuses mainly on safeguarding HAW capability and more specifically on the £72 million funding for high priority structures to facilitate freight growth.

10.6 Network Rail Scotland's interim SBP highlights the need to manage the network in Scotland to a higher published capability requirement than other parts of the Great Britain network.

10.7 In a submission separate to its interim SBP, Network Rail Scotland states that the Scotland HLOS requirements will be met with consistency of approach from CP6 such as the Sectional Appendix, A2 data quality reporting and the Train Infrastructure Interface Specification (TIIS).

Conclusions

10.8 Network Rail has an obligation in its licence to maintain the quality and capability of the network. The SO and the regions both have obligations to maintain appropriate information, including on capability.

10.9 As part of our overall approach for CP7, we expect Network Rail to protect and maintain the baseline capability of the network (including gauge). It should take all changes through the recognised industry processes and provide accurate and timely information to operators.

10.10 These obligations and requirements take on greater significance given the ambition to grow rail freight in CP7 and historical challenges with sub-optimal data provision and the network change process not being carried out effectively. These challenges need to be addressed, as part of a range of supporting actions, to retain and attract new freight traffic.

10.11 As part of our enhanced monitoring approach, and to reassure operators, we have decided to monitor 'capability non-conformance' in CP7. This approach will identify information on the root cause of a failure and its impact or severity. As well as being a tool for ORR to hold Network Rail to account, it will provide the opportunity for Network Rail to learn from incidents and implement improvements. We are working with Network Rail to ensure the necessary processes are in place for the beginning of CP7.

10.12 As well as capability non-conformance, we are working with Network Rail on the development of a range of leading and lagging network capability indicators for CP7 covering: network capability provision; network change process effectiveness; data quality; and decision making.

10.13 We do not plan to have any success or supporting measures for network capability in CP7.

Network availability and possession management

11.1 This chapter sets out our draft determination on network availability and possession management outcomes. As outlined in our 'December 2022 technical conclusions', we will not have any success or supporting measures for this outcome area.

11.2 Network Rail must balance the needs of necessary engineering work, efficiency, and minimising disruption to end users in CP7. HLOS requirements, more detail of which are found below, should also be a priority.

11.3 Due to changes to the Schedule 4 regime, we intend to enhance our monitoring and public reporting of late notice possession changes and the number of disputes escalated to the Access Disputes Committee (ADC).

Context

11.4 In our 'December 2022 technical conclusions' we did not outline any success or supporting measures for network availability and possession management. However, we signposted our intention to undertake enhanced monitoring of how Network Rail manages possessions in CP7 because we are offering passenger and freight operators the option of opting out of the Schedule 4 regime. This opt-out has the potential to reduce the financial incentives on Network Rail to plan possessions efficiently and minimise disruption to end users.

11.5 We appointed consultants in October 2022 to engage further with the industry and provide expert advice to help us to reach an evidence-based policy position on the approach to monitoring this outcome area in CP7.

11.6 The England & Wales HLOS outlines that Network Rail should take steps to minimise the impact of disruption, particularly sustained disruption, to protect the attractiveness of rail as a mode of transport.

11.7 The Scotland HLOS sets the following requirements: minimise unnecessary railway closures through overrunning possessions; maximise access booked for more efficient possessions; always have at least one cross-border route available other than in unforeseen or exceptional circumstances; and where practicable, enhanced protection and recovery during times of planned disruption for rural

routes requiring lifeline services as well as engagement with other transport mode operators to ensure that there is no concurrent corridor disruption.

Assessment of Network Rail's plans

11.8 Although there is no reference in Network Rail's SBP to changes to Schedule 4 and our signalled intention for enhanced monitoring, some regions outlined intended actions with respect to network availability and possession management.

11.9 There is a focus in Eastern and North West & Central's plans on minimising disruption through exploring and trialling moving possessions either from seasonal peaks or from weekends to weekdays due to changing demand patterns. There is also a focus on efficiency, such as proposals from Eastern and Wales & Western regions to combine work into longer possessions.

11.10 In addressing its specific HLOS requirements, Network Rail Scotland outlines that it will endeavour to minimise the impact of possession overruns by monitoring trends and implementing continuous improvement. On maximising possessions, it sets out how a planning team considers the integration of enhancements and renewals. There is a commitment to maintain at least one cross-border route through processes such as the engineering access statement and access liaison meetings.

11.11 With respect to lifeline services, Network Rail Scotland undertook to provide the Transport Scotland Rail Directorate with greater visibility of its planned possessions. This will allow them to consult on planned rail closures with other directorates in Transport Scotland, in line with the CP6 process, to ensure there is no concurrent corridor disruption taking place. However, there is no explicit expenditure in the interim SBP to deliver enhanced protection or recovery of rural routes beyond the level already provided in CP6.

Conclusions

11.12 Network Rail has an obligation under its licence to carry out necessary engineering work on the network. It needs to do this as efficiently as possible, whilst looking to always minimise the impact on end users. This should continue to be a guiding principle throughout CP7, alongside addressing the requirements in HLOSs.

11.13 We are supportive of the innovation and efficiency efforts outlined in Network Rail's plans, which should be seen as an opportunity to share learning across

regions. We expect robust engagement and local agreement with stakeholders when trialling new initiatives, alongside honest and transparent review. In undertaking longer possessions with a focus on efficiency, the need to minimise the impact of disruption, highlighted in the England & Wales HLOS, should be factored into decision making.

11.14 As a consequence of the change to the Schedule 4 regime and the findings from the consultancy report on options for monitoring network availability and possession management in CP7, we have decided to undertake enhanced monitoring and public reporting of:

(a) late notice possession changes; and

(b) the number of access disputes escalated to the Access and Disputes Committee (ADC).

11.15 Despite a proposal for late notice possession changes to be part of our supporting measures, we have decided it would not be appropriate to set a forecast for this measure. Therefore, both late notice possession changes and access disputes data will form part of our additional assurance monitoring. We are currently working with Network Rail on the type of data we want to capture as well as issues such as ownership, quality assurance and presentation.

11.16 As well as these two areas, we are investigating the potential to report the number of services 'cancelled' for freight and open access operators when comparing 'plan of day' and the corresponding day timetable.

11.17 Although we are enhancing our monitoring of network availability and possession management in CP7, we do not plan to have any success or supporting measures.

11.18 We are also committed to the continued monitoring of recommendations in the independent review of possession efficiency completed in April 2021.

Accessibility

12.1 Network Rail has described in its England & Wales SBP how it will meet its obligations regarding improving accessibility of the railway to everyone. These commitments include:

- designing all new schemes in line with the Station Code, known as 'Design standards for accessible railway stations' (and other accessibility requirements);
- training and provision for 'turn-up-and-go' services;
- plans to fit tactile paving on platforms; and
- reduced times to address reliability issues for lifts and escalators.

12.2 We set out in this chapter how we will monitor Network Rail's delivery of these obligations.

12.3 We are concerned that Network Rail Scotland's interim SBP is silent on accessibility and we expect this to be resolved in its response to our draft determination. Despite this we found that there will be an increase in the number of lifts and escalators renewed in Scotland in CP7, with most of these interventions taking place at Network Rail managed stations.

Context

12.4 The rail network should be open to everyone, irrespective of disability. In this regard Network Rail has an important role to play in delivering improvements and providing assistance for people with reduced mobility or disabilities using the railway.

12.5 In our 'December 2022 technical conclusions' we did not identify any success measures or supporting measures for accessibility. We confirmed that we were planning to investigate if there were measures we could introduce to increase transparency of accessibility improvements when Network Rail is delivering renewals for CP7.

12.6 We also undertook to continue monitoring Network Rail's compliance with requirements under the Accessible Travel Policy (ATP) licence condition and with relevant technical standards under law and licence, including the Station Code, the

Railways (Interoperability) Regulations 2011 (RIR 2011) and National Technical Specification Notice for Persons with Reduced Mobility (NTSN: PRM). These activities would be part of our additional assurance monitoring.

Assessment of Network Rail's plans

12.7 The England & Wales HLOS sets a clear expectation that Network Rail must consider the needs and expectations of inclusion and accessibility of current and potential users of the rail network. The Scotland HLOS also identifies the need for accessibility to be considered in Network Rail's planning in more specific scenarios, such as improving accessibility of platforms at stations.

12.8 We are broadly content that the England & Wales SBP aligns with the HLOS requirements. However, we are concerned that Network Rail Scotland has not included accessibility in its plans. We expect it to address this in future versions of its plans, including its response to our draft determination. Despite this we found that there will be an increase in the number of lifts and escalators renewed in Scotland in CP7, with most of these interventions taking place at Network Rail managed stations.

Accessibility by design

12.9 The commitment in the England & Wales SBP to design all new schemes in accordance with the Station Code (and other relevant accessibility requirements) reflects an existing requirement under either RIR 2011 or the Accessible Travel Policy licence condition (depending on whether the station improvement works qualify as 'major'). We will continue to hold Network Rail to account against these requirements through scrutiny of the management systems and assurance processes that it has in place to ensure compliance with the Station Code, and through the authorisation process for projects where the works are in scope of RIR 2011 and subject to the requirements of the NTSN: PRM.

12.10 The England & Wales SBP specifically refers to plans to provide 'Changing Places' toilets at all national hub managed stations, as recommended in the Station Code.

12.11 The England & Wales SBP also refers to the development and implementation of a new Diversity Impact Assessment (DIA) standard, which will require all regions to assess the impact of their plans on diversity and inclusion. We welcome the development of a new standard in this area in response to inconsistent current use of DIAs that Network Rail has identified. Thorough implementation of this at the regional level will be key to realising its potential.

12.12 The England & Wales SBP states that this commitment will also enable compliance with the Public Sector Equality Duty under the Equality Act 2010. ORR does not monitor or determine compliance with this requirement.

Training, 'turn-up-and-go' assistance

12.13 The England & Wales SBP commitments on training and provision of 'turn-up and-go' assistance reflect existing regulatory requirements under the Accessible Travel Policy (ATP) licence condition. We will monitor compliance with these as part of our existing regulation, alongside other aspects including the provision of booked assistance (which is not mentioned in the SBP).

Fitment of tactile paving

12.14 The England & Wales SBP commitment to complete the fitment of tactile paving on platform edges by April 2025 reflects Network Rail's pre-existing commitment in response to RAIB's recommendations following a fatality at Eden Park station. We will continue to monitor Network Rail's progress in meeting this commitment.

Building better data on accessibility

12.15 The England & Wales SBP includes a commitment from Network Rail that it will continue to work with industry on the integration of accessibility data, allowing industry parties and passengers to access better live information. We will continue to work with industry to monitor the delivery of this work through the Smarter Information – Smarter Journeys project.

12.16 The England & Wales SBP also refers to the development of a new step-free prioritisation tool. We expect Network Rail to apply this tool intelligently to support its commitments on accessibility. However, this will be a supporting tool, and we do not intend to hold Network Rail to account for its delivery. We note that there is related work planned by GBR, on the basis of results from the recent national accessibility audit.

Lifts and escalators

12.17 The England & Wales SBP includes a commitment to implement improved response times when there are faults with lifts and escalators, and commits £22 million for the renewal of lifts and escalators at Network Rail managed stations.

12.18 We plan to undertake assurance work within the final year of CP6 to assess Network Rail's asset knowledge and management systems in this area. We will

engage with Network Rail to understand the metrics that it uses to measure asset reliability and response times.

CP7 reporting

12.19 The focus of our CP7 reporting will be on securing regulatory compliance with accessibility requirements and improvements as set out above.

12.20 We are not proposing any success or supporting measures for accessibility. After engaging with Network Rail we are not satisfied that measures are adequately developed for Network Rail to forecast in its plans. Focussing on the delivery of only those accessibility improvements that Network Rail is currently able to measure (such as step-free journeys) risks skewing investment so that it does not deliver the best overall outcome for users.

12.21 Network Rail did report that the percentage of accessible step-free journeys on the network in CP6 increased from 55% to 65%. We are working with the company to understand how frequently it can provide updates to ascertain if this trend continues in CP7.

Conclusions

12.22 We are satisfied that Network Rail has described its obligations for accessibility in its SBP for England & Wales, and we have set out in the previous section how we will monitor against these obligations. We are also working with Network Rail to understand where we can use customer satisfaction scores to understand the impact of accessibility improvements on the end user.

12.23 Network Rail Scotland's interim SBP was silent on accessibility commitments. We expect Network Rail Scotland to address this in its response to our draft determination.

Annex A: Description of success and supporting measures

Table A.1 Description of success and supporting measures in our CP7 outcomes framework

Outcome area	Measure	Tier	Description	Monitoring focus
Health and safety	Fatalities and Weighted Injuries (FWI) for workforce, passengers and public	Supporting	A weighted measure of fatalities and non-fatal injuries.	GB, region
Health and safety	Train Accident Risk Reduction (TARR)	Supporting	Achievement of the key risk reduction activities planned in the year. The measure is made up of milestone and volume targets, both of which have different achievement weightings.	GB, region
Health and safety	Personal Accountability for Safety (PAFS)	Supporting	The number of breaches in 'life saving rules' and high potential events. It is a measure of how Network Rail is improving culture and behaviours to help keep staff safe.	GB, region

Outcome area	Measure	Tier	Description	Monitoring focus
Train performance: passenger	On Time	Success	The percentage of recorded station stops arrived at early or less than one minute after the scheduled arrival time.	Region, national passenger operator
Train performance: passenger	Cancellations	Success	The percentage of planned passenger trains which either did not run their full planned journey or did not call at all their planned station stops. The measure is a score which weights full cancellations as one and part cancellations as half.	Region, national passenger operator
Train performance: passenger	Scotland train performance measure	Success	An adjusted version of the ScotRail Passenger Performance Measure (PPM) where delays caused by the need for speed restrictions during periods of severe weather, or where trains have been delayed in order to permit connections from other late running trains or ferries, have been removed. PPM is the percentage of planned trains arriving at their final scheduled destination early or less than five minutes after their scheduled arrival time having called at all their planned station stops.	ScotRail Trains Limited (passenger operator) only

Outcome area	Measure	Tier	Description	Monitoring focus
Train performance: passenger	Delay minutes per 1000 miles train travel (track/train split)	Supporting	The attributed delay minutes to in-service passenger trains from incidents occurring in each region per 1,000 train miles. This measure will also be disaggregated to present delays attributed to the infrastructure manager and delays attributed to train operators.	Region
Train performance: passenger	Time to 15	Supporting	The percentage of recorded station stops arrived at early or less than 15 minutes after the scheduled arrival time.	Region
Train performance: passenger	Average Passenger Lateness (APL)	Supporting	The average lateness of a passenger as they alight from their train. The measure reflects the impact of train punctuality and cancelled trains on passenger lateness and is weighted by the number of passengers expected to alight at stations.	GB
Train performance: freight	Freight Cancellations	Success	The percentage of commercial freight services that are cancelled by the infrastructure manager or another operator that is not a commercial freight operator.	GB, region

Outcome area	Measure	Tier	Description	Monitoring focus
Train performance: freight	Freight Cancellations and Lateness (FCaL)	Supporting	The percentage of commercial freight services that are either: • cancelled by the infrastructure manager or another operator that is not a commercial freight operator; or • arrive at their planned destination 15 minutes or more after their booked arrival time with 15 minutes or more delay caused by the infrastructure manager or another operator that is not a commercial freight operator.	GB, region
Train performance: freight	Arrivals to Fifteen (A2F)	Supporting	The percentage of commercial freight services ran that arrive at their planned destination within 15 minutes of their booked arrival time.	GB
Asset sustainability	Composite Sustainability Index (CSI)	Success	The percentage improvement of asset sustainability compared to the end of control period 4. Depending on the asset type, asset sustainability is measured either by remaining life of the asset or by asset condition score and is weighted by the replacement value of the asset.	Region

Outcome area	Measure	Tier	Description	Monitoring focus
Asset sustainability	Composite Reliability Index (CRI)	Supporting	An index providing an assessment of the short-term condition and performance of infrastructure assets (track, signalling, points, electrification, telecoms, buildings, structures and earthworks) by monitoring the overall improvement in reliability since the start of the control period. It measures the number of Service Affecting Failures (SAFs) relative to the end of the control period baseline and is weighted by route criticality from 1 to 5.	Region
Asset sustainability	Service Affecting Failures (SAFs)	Supporting	The number of unique TRUST reliability incidents causing delay attributed to track, points, signalling and electrification causes.	Region
Asset sustainability	Effective volumes	Supporting	A weighted aggregation of renewals volumes, where the weighting distinguishes between activity types and their different impact on asset life. Effective volumes of one asset type cannot be compared to another due to the different units and scales of measurements.	Region
Asset sustainability	Lineside vegetation - compliance	Supporting	Percentage of mile compliance with Network Rail vegetation standard.	Region

Outcome area	Measure	Tier	Description	Monitoring focus
Asset sustainability	Structures examinations – site examination and reporting compliance	Supporting	Site examination stage and reporting stage: actuals versus forecast, and non-compliance recovery (backlog elimination) actual versus forecast.	Region
Asset sustainability	Earthworks examinations – non-compliance	Supporting	Non-compliances for all and high consequence sites (Earthwork asset criticality band 4&5)	Region
Asset sustainability	Buildings examinations – detailed and visual examinations	Supporting	Number of detailed and visual examinations versus plan	Region
Asset sustainability	Drainage examinations – compliance	Supporting	Number drainage examination versus plan	Region
Asset sustainability	Maintenance – plan versus actual volume hours	Supporting	Compares year-to-date planned modelled hours (based on base plan volumes x Activity Based Planning (ABP) norm times) to year-to-date actual modelled hours (based on actual volumes x ABP norm times)	Region

Outcome area	Measure	Tier	Description	Monitoring focus
Asset sustainability	Resilience and adaptation – key WRCCA activities	Supporting	Delivery of key resilience and adaptation activities in Network Rail regions' WRCCA plans.	Region
Asset sustainability	Asset data quality	Supporting	Timebound obligations to meet asset data standards.	Region
Efficiency and financial performance	Financial Performance Measure (FPM) (opex/capex split)	Success	Compares actual income and expenditure to a 'post-efficient' baseline (such as budget), adjusted for delivery of outputs and covers more than just operations, support, maintenance and renewals. It covers most items of Network Rail's income and expenditure but excludes some that are not as controllable such as network grant, fixed track access charges, traction electricity income and costs, and business rates. All other things being equal, if the expected efficiency is achieved, the target FPM is equal to zero. Outperformance is achieved when more work is delivered for the agreed cost or the work is delivered at a lower cost than was agreed (underperformance implies the opposite scenario(s)).	Region
Efficiency and financial performance	Efficiency (£)	Success	A measure of efficiency savings against Network Rail's CP7 delivery plan.	Region

Outcome area	Measure	Tier	Description	Monitoring focus
Efficiency and financial performance	Fishbone analysis of cost drivers	Supporting	Provides insight into the drivers of changes to costs over time including efficiencies, headwinds, tailwinds, and input price effects.	Region
Efficiency and financial performance	Booking of disruptive access	Supporting	Access booked as a percentage of access required.	Region
Efficiency and financial performance	Workbank planning	Supporting	Work authorised in the system, renewals remits issues, workbank stability.	Region
Efficiency and financial performance	Efficiency plan quality	Supporting	Red/amber/green rating of the quality of efficiency plans (one year in advance).	Region

Outcome area	Measure	Tier	Description	Monitoring focus
Environmental sustainability	Carbon emissions scope 1 and 2	Success	All scope 1 and scope 2 carbon emissions as defined under the Greenhouse Gas Protocol. Scope 1 emissions are all direct emissions from the activities of the infrastructure manager or under its control including fuel (oil, gas) combustion on site such as gas boilers for heating and fuel for fleet vehicles. Scope 2 emissions are all indirect emissions arising from the generation of electricity purchased and used by the infrastructure manager.	GB, region
Environmental sustainability	Biodiversity Units	Success	As defined by Natural England's Biodiversity Metric 3.0. The measure is a habitat-based approach used to assess an area's value to wildlife. It uses habitat classification, condition and strategic importance to calculate a biodiversity unit value.	GB, region
Environmental sustainability	One Planet Indicator (OPI)	Supporting	The environmental footprint associated with resource consumption across six material categories (waste, water, energy, refrigerants, materials and business travel) expressed as an equivalent to planet area needed to sustain the resource consumption. The ideal is no more than a "one planet economy".	GB, region

Outcome area	Measure	Tier	Description	Monitoring focus
Environmental sustainability	Carbon emissions scope 3	Supporting	Scope 3 emissions are all other indirect emissions (excluding emissions from electricity purchased) from sources that the infrastructure manager does not own or control, including business travel, production and supply of goods, products and materials in the supply chain, waste and water.	GB, region
Environmental sustainability	Air quality at stations	Supporting	Level of harmful pollutants at infrastructure manager managed stations such as nitrogen oxides (NO_x) and particulate matters (PM, including PM_{10} and $PM_{2.5}$).	GB, region
Customer satisfaction	Customer satisfaction with overall journey	Supporting	The percentage of customers surveyed who were satisfied with their overall journey.	GB, region
Customer satisfaction	Customer satisfaction with experience at infrastructure manager managed stations	Supporting	The percentage of customers surveyed who were satisfied with their experience at infrastructure manager managed stations.	GB, region

Outcome area	Measure	Tier	Description	Monitoring focus
System operation	Strategic projects delivery - delivery of projects under the Industry Timetable Technical Strategy (ITTS)	Supporting	Delivery of strategic projects with significant impact on outcomes.	Project specific
Freight growth	Freight net tonne kilometres moved	Success	The amount of freight moved on the railway network, taking into account the weight of the load and the distance carried.	GB, region

Annex B: ORR baseline trajectories and Network Rail forecasts

On Time: ORR baseline trajectories and Network Rail forecasts – tables and charts

Table B.1 ORR On Time CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	70.6%	70.6%	70.7%	70.7%	70.8%
North West & Central	63.2%	63.2%	63.2%	63.8%	63.9%
Southern	68.9%	68.9%	68.9%	68.9%	68.9%
Wales & Western	64.8%	64.8%	64.8%	64.8%	64.8%
England & Wales	67.7%	67.7%	67.7%	67.8%	67.9%
Scotland	71.2%	71.9%	72.3%	72.6%	72.6%

Table B.2 Network Rail On Time CP7 SBP range forecasts by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	68.5% to 69.8%	68.5% to 70.0%	69.1% to 70.7%	68.5% to 70.5%	68.4% to 70.8%
North West & Central	59.4% to 61.1%	59.2% to 61.0%	59.6% to 61.7%	59.8% to 62.4%	60.0% to 62.5%
Southern	66.5% to 68.9%	66.4% to 68.8%	66.2% to 68.8%	66.2% to 68.9%	66.0% to 68.9%
Wales & Western	62.3% to 64.0%	62.2% to 63.8%	63.2% to 64.8%	63.2% to 64.8%	63.2% to 64.7%
England & Wales	Not provided				65.2% to 67.5%
Scotland	67.5%	67.6%	67.7%	67.8%	68.0%

Figure B.1 On Time performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Eastern

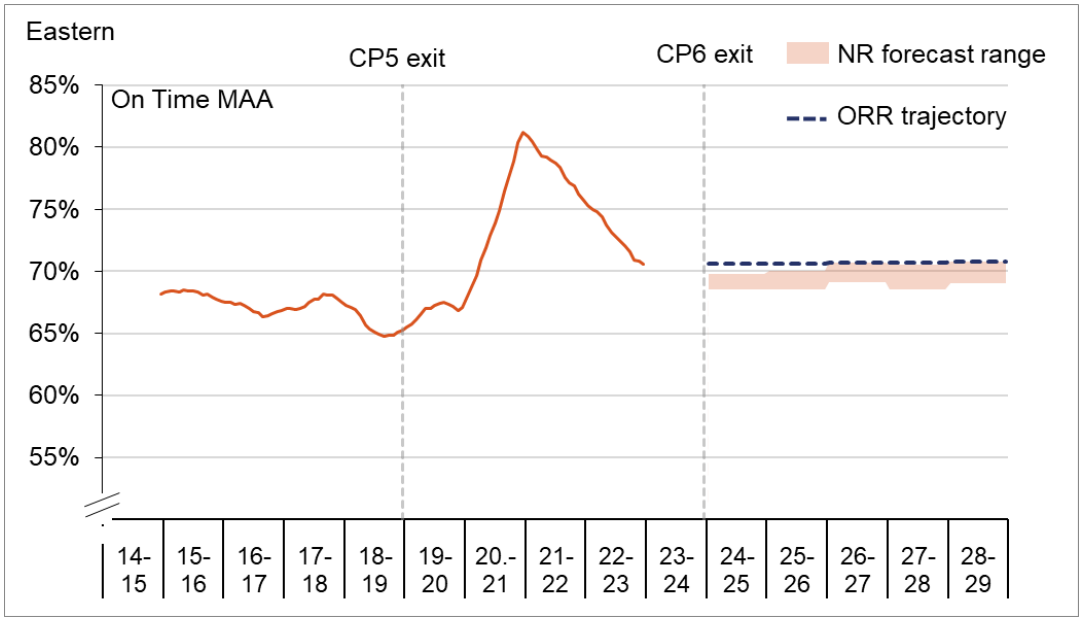


Figure B.2 On Time performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – North West & Central

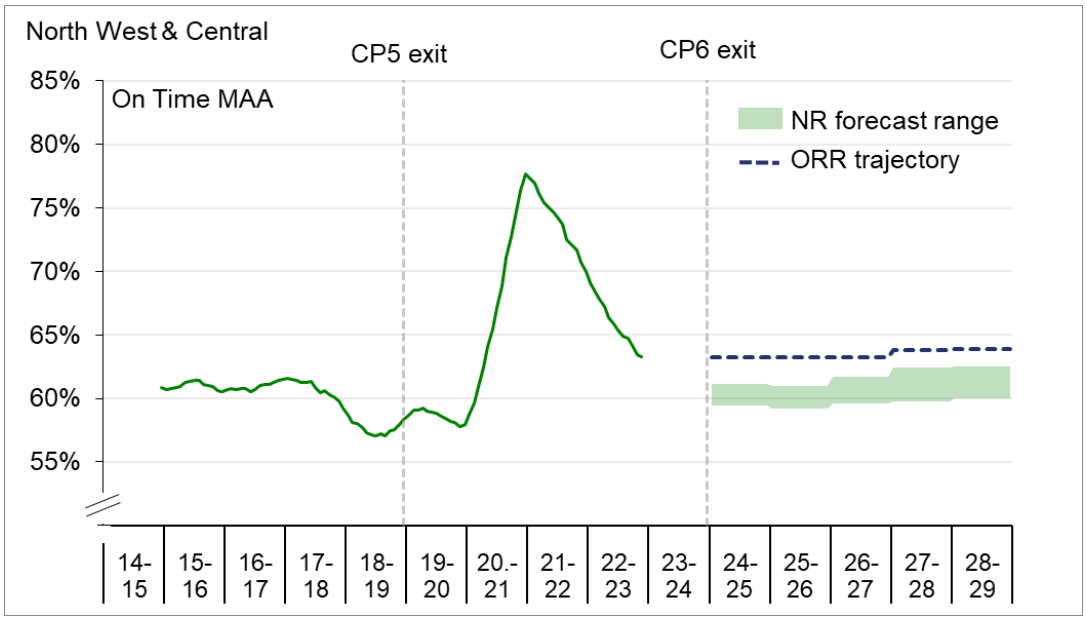


Figure B.3 On Time performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Southern

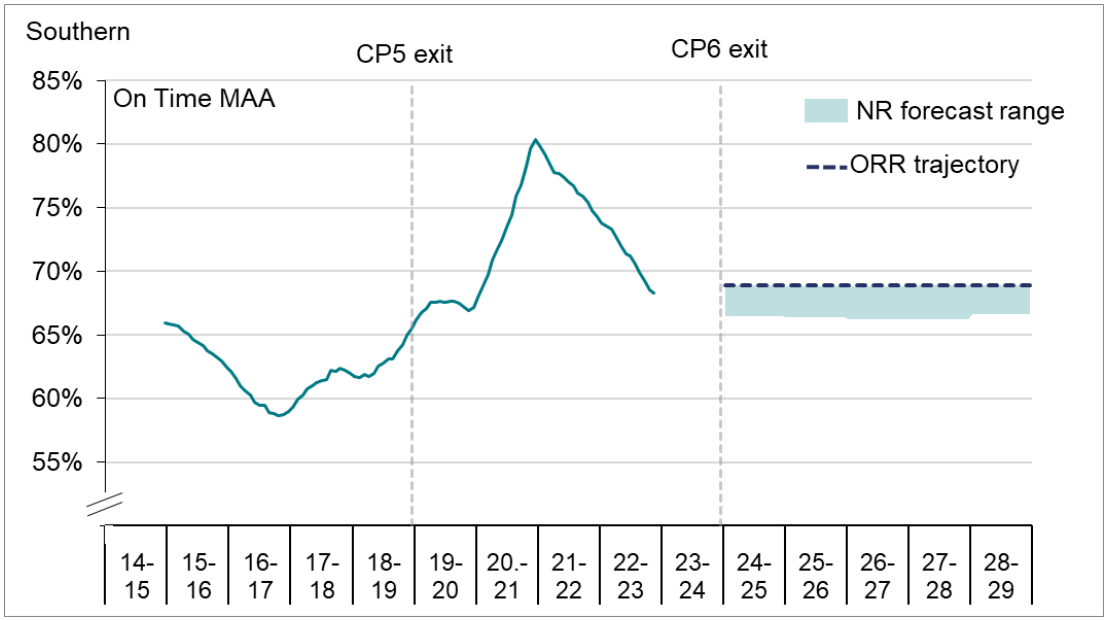


Figure B.4 On Time performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Wales & Western

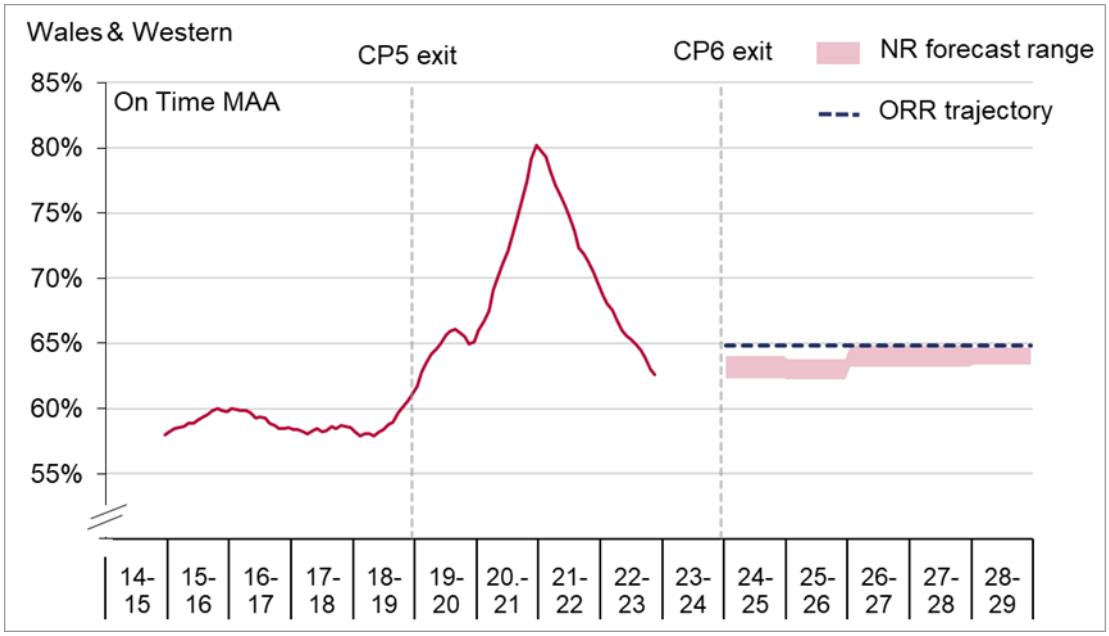
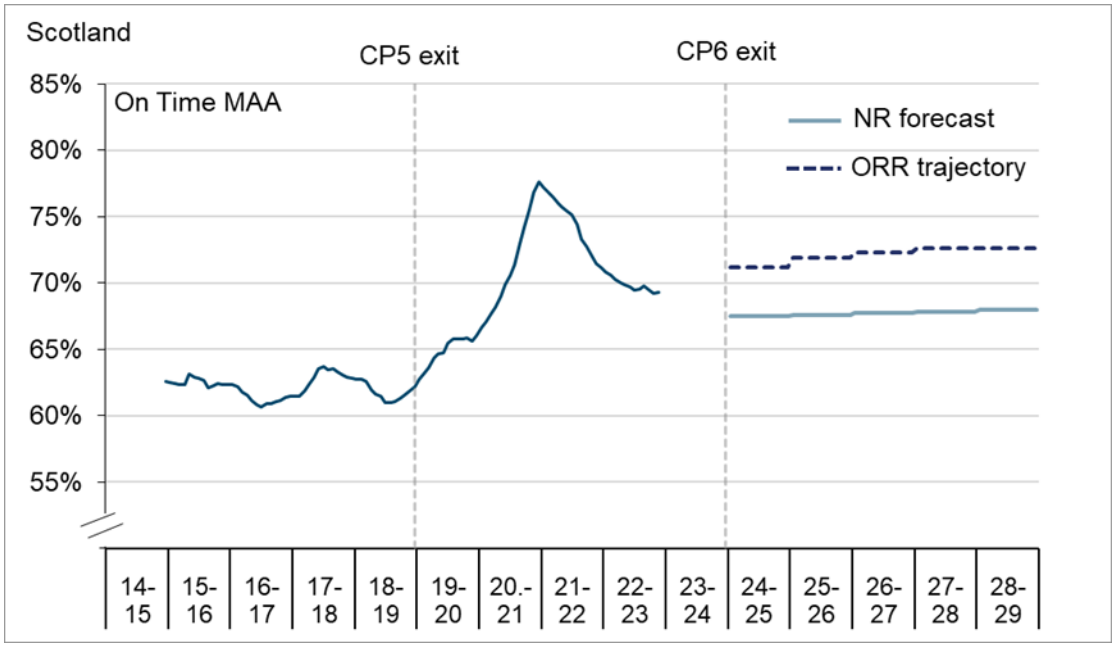


Figure B.5 On Time performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Scotland



Cancellations: ORR baseline trajectories and Network Rail forecasts – tables and charts

The disaggregation of the Cancellations measure by region is currently in development. The historical data presented in the charts below was provided to us by Network Rail and should be regarded as 'unofficial'. Network Rail used a 'proxy' regional cancellations dataset (based on aggregated train operator level data) with a longer historical series to inform its SBP range forecasts. We have used this 'proxy' dataset to calculate the historical average used to set our baseline trajectories.

Table B.3 ORR Cancellations CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	2.3%	2.3%	2.3%	2.3%	2.3%
North West & Central	2.3%	2.3%	2.3%	2.3%	2.3%
Southern	2.3%	2.3%	2.3%	2.3%	2.3%
Wales & Western	2.3%	2.3%	2.3%	2.3%	2.3%
England & Wales	2.3%	2.3%	2.3%	2.3%	2.3%
Scotland	2.3%	2.3%	2.3%	2.3%	2.3%

Table B.4 Network Rail Cancellations CP7 SBP range forecasts by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	2.7% to 3.8%	2.7% to 3.8%	2.7% to 3.8%	2.7% to 3.8%	2.7% to 3.8%
North West & Central	3.2% to 4.5%	3.2% to 4.5%	3.2% to 4.5%	3.2% to 4.5%	3.2% to 4.5%
Southern	3.1% to 4.3%	3.1% to 4.3%	3.1% to 4.3%	3.1% to 4.3%	3.1% to 4.3%
Wales & Western	2.8% to 3.8%	2.8% to 3.8%	2.8% to 3.8%	2.8% to 3.8%	2.8% to 3.8%
England & Wales	Not provided				3.0% to 4.1%
Scotland	3.3%	3.2%	3.1%	3.0%	3.0%

Figure B.6 Cancellations performance from 2017-18 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Eastern

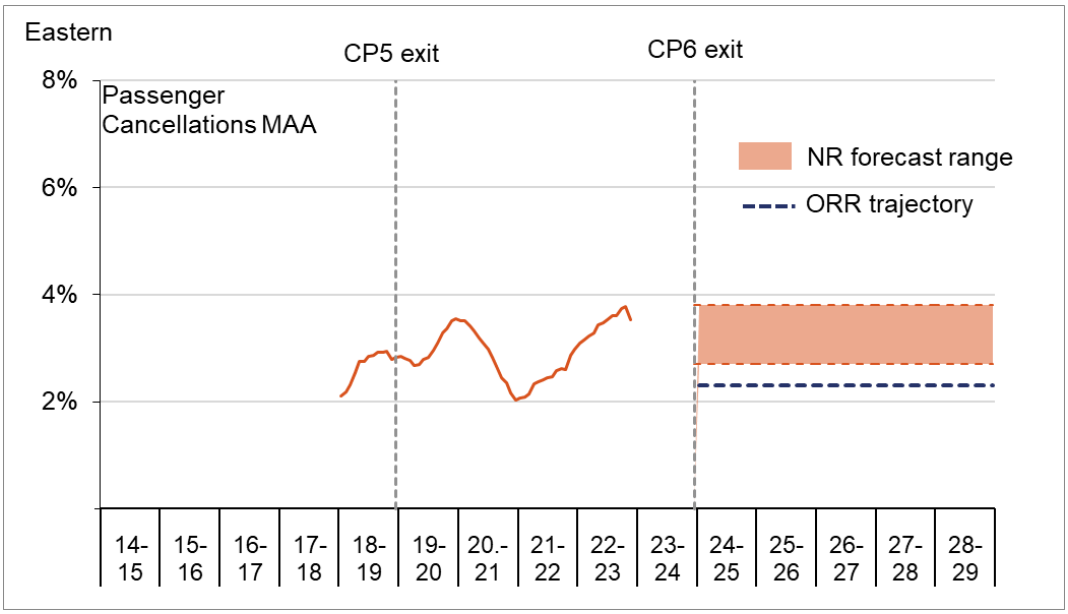


Figure B.7 Cancellations performance from 2017-18 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – North West & Central

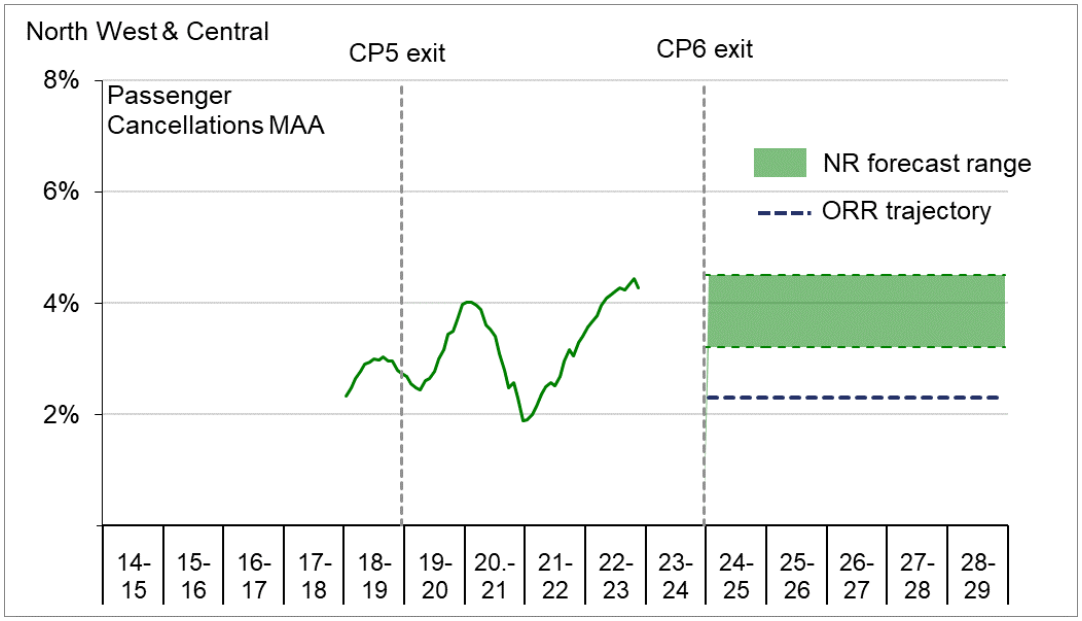


Figure B.8 Cancellations performance from 2017-18 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Southern

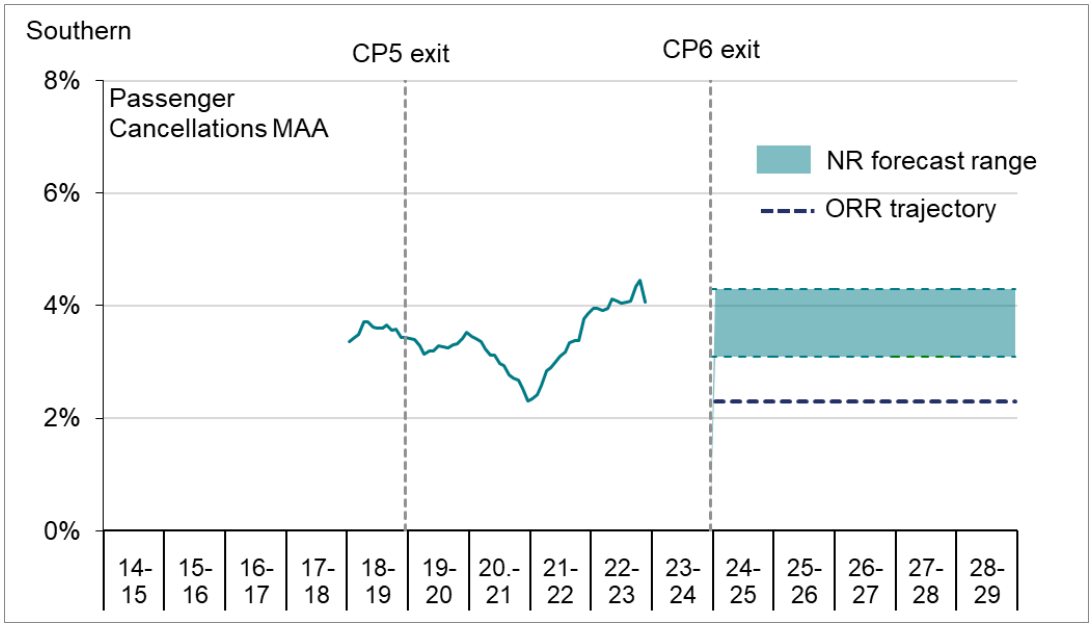


Figure B.9 Cancellations performance from 2017-18 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Wales & Western

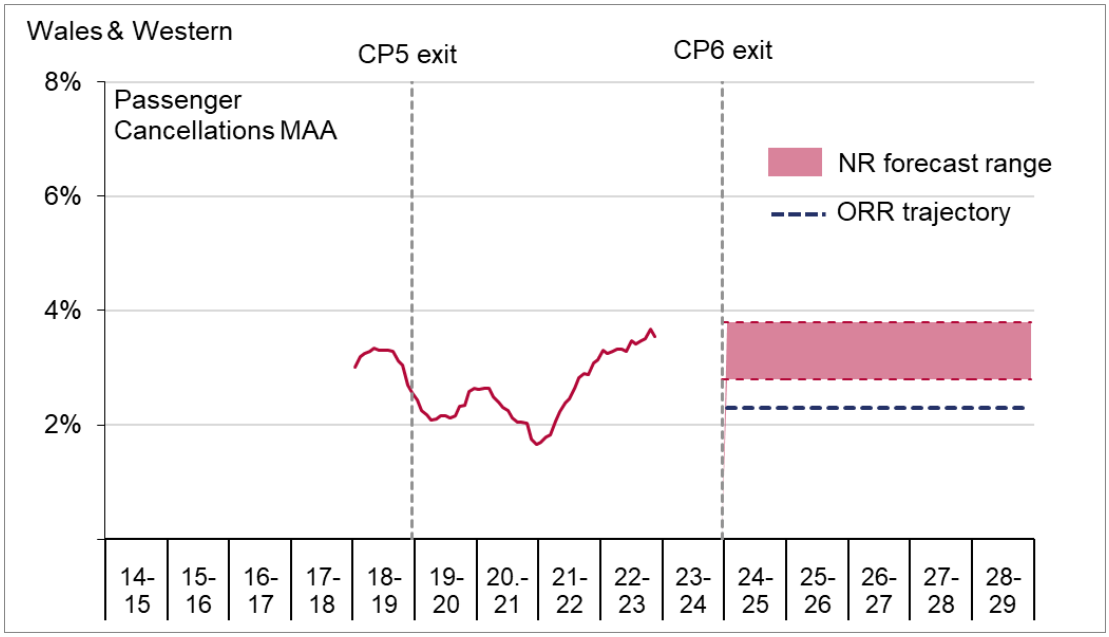
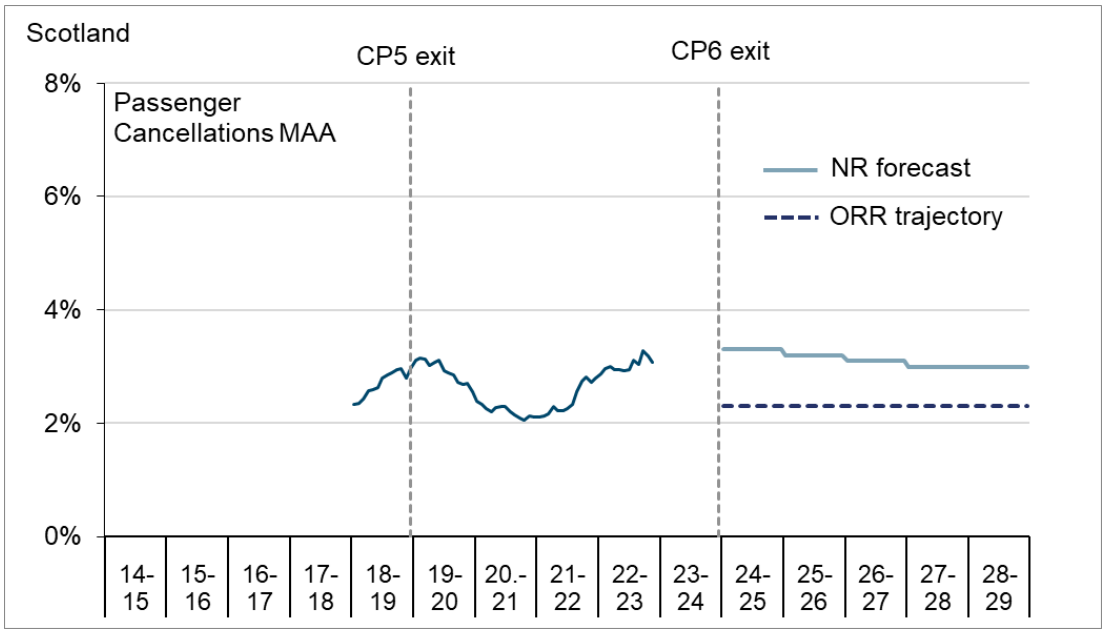


Figure B.10 Cancellations performance from 2017-18 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Scotland



Scotland train performance measure: ORR baseline trajectories and Network Rail forecasts – tables and charts

Network Rail's forecasts below use the 'Baseline Outcome' forecast from Network Rail Scotland's interim SBP. This plan includes two additional forecasts for the Scotland train performance measure: 'Accelerated Outcome' and 'Fast Outcome' which are dependent on unconfirmed plans and/or funding.

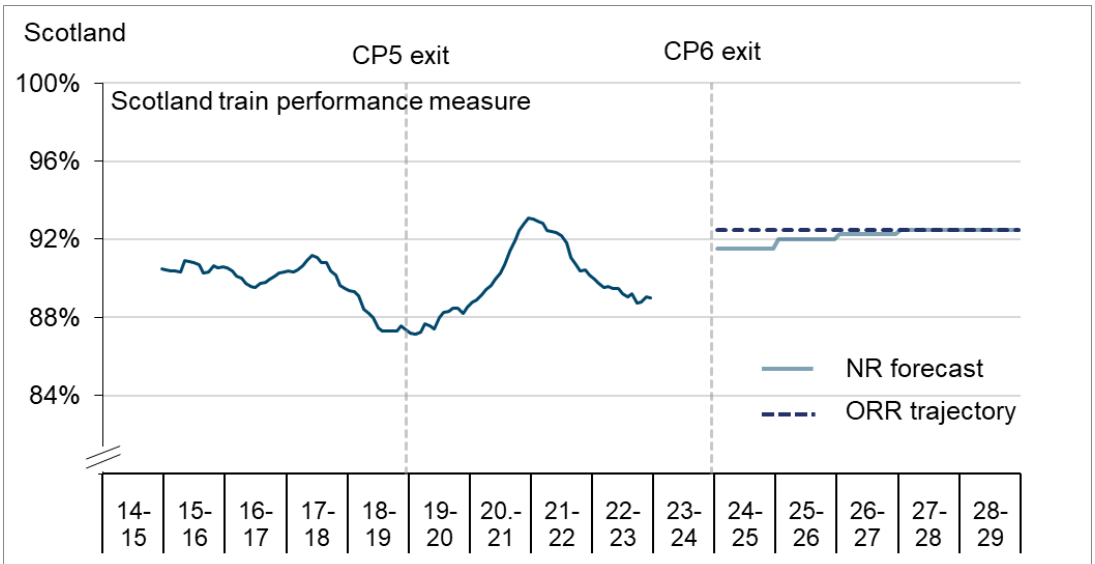
Table B.5 ORR Scotland train performance measure CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Scotland	92.5%	92.5%	92.5%	92.5%	92.5%

Table B.6 Network Rail Scotland train performance measure CP7 SBP range forecasts by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Scotland	91.5%	92.0%	92.3%	92.5%	92.5%

Figure B.11 Scotland train performance measure from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Scotland



Note: Historical data presented is for ScotRail PPM. CP7 ORR trajectory and NR forecast are for Scotland train performance measure, an adjusted version of ScoRail PPM

Freight Cancellations: ORR baseline trajectories and Network Rail forecasts – tables and charts

Network Rail's Freight Cancellations SBP CP7 forecasts were provided using an updated methodology which included some significantly retimed trains not currently counted in the existing Freight Cancellations measure. We were persuaded by freight train operators' objections to this change. As a result, we have set our Freight Cancellations trajectories so that no retimed trains are counted within the measure.

Table B.7 ORR Freight Cancellations CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	1.3%	1.3%	1.3%	1.3%	1.3%
North West & Central	1.0%	1.0%	1.0%	1.0%	1.0%
Southern	2.0%	2.0%	2.0%	2.0%	2.0%
Wales & Western	1.5%	1.5%	1.5%	1.5%	1.5%
England & Wales	1.2%	1.2%	1.2%	1.2%	1.2%
Scotland	1.3%	1.3%	1.3%	1.3%	1.3%
Great Britain	1.2%	1.2%	1.2%	1.2%	1.2%

Table B.8 Network Rail Freight Cancellations CP7 SBP range forecasts by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	1.5% to 2.8%	1.5% to 2.8%	1.5% to 2.8%	1.5% to 2.8%	1.5% to 2.8%
North West & Central	1.0% to 1.9%	1.0% to 1.9%	1.0% to 1.9%	1.0% to 1.9%	1.0% to 1.9%
Southern	2.2% to 4.0%	2.2% to 4.0%	2.2% to 4.0%	2.2% to 4.0%	2.2% to 4.0%
Wales & Western	1.6% to 3.3%	1.6% to 3.3%	1.6% to 3.3%	1.6% to 3.3%	1.6% to 3.3%
England & Wales	1.4% to 2.6%	1.4% to 2.6%	1.4% to 2.6%	1.4% to 2.6%	1.4% to 2.6%
Scotland	2.2%	2.1%	2.0%	2.0%	2.0%
Great Britain	Not provided				

Figure B.12 Freight Cancellations performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Eastern

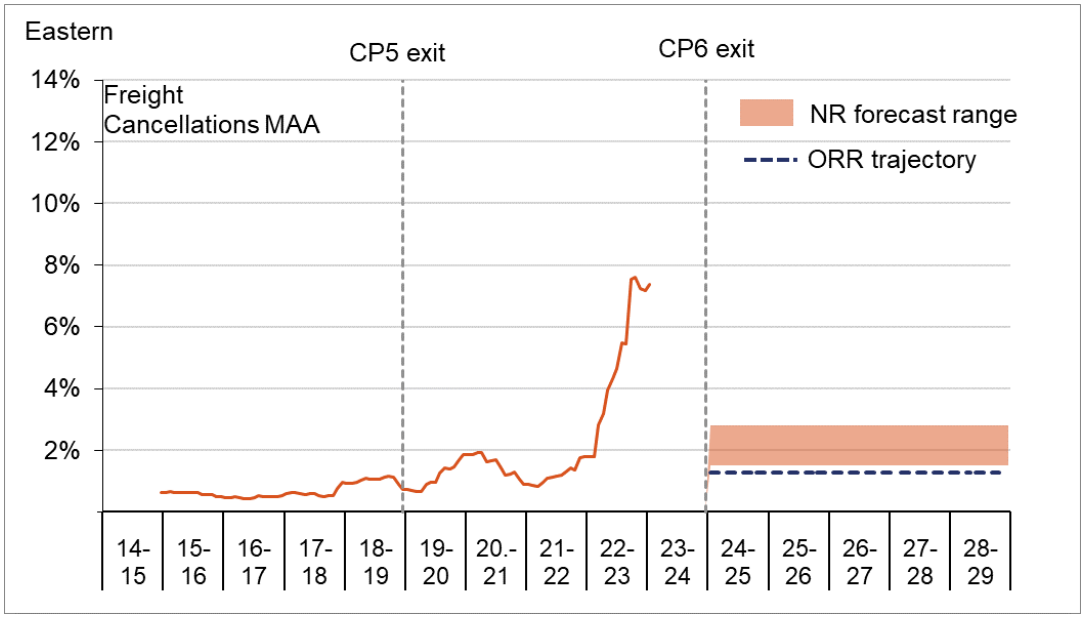


Figure B.13 Freight Cancellations performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – North West & Central

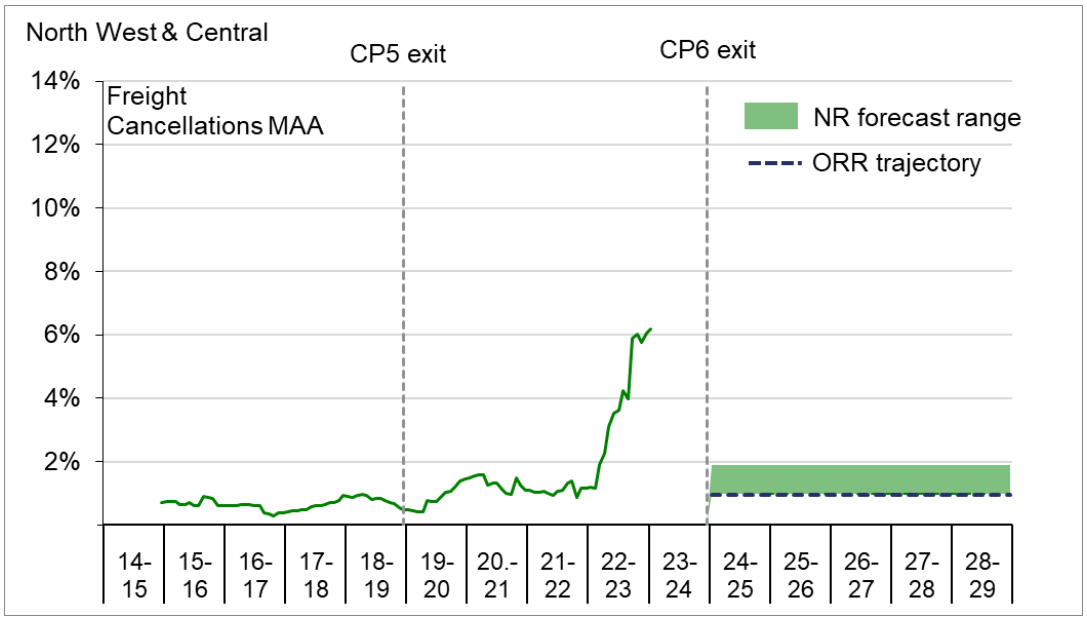


Figure B.14 Freight Cancellations performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Southern

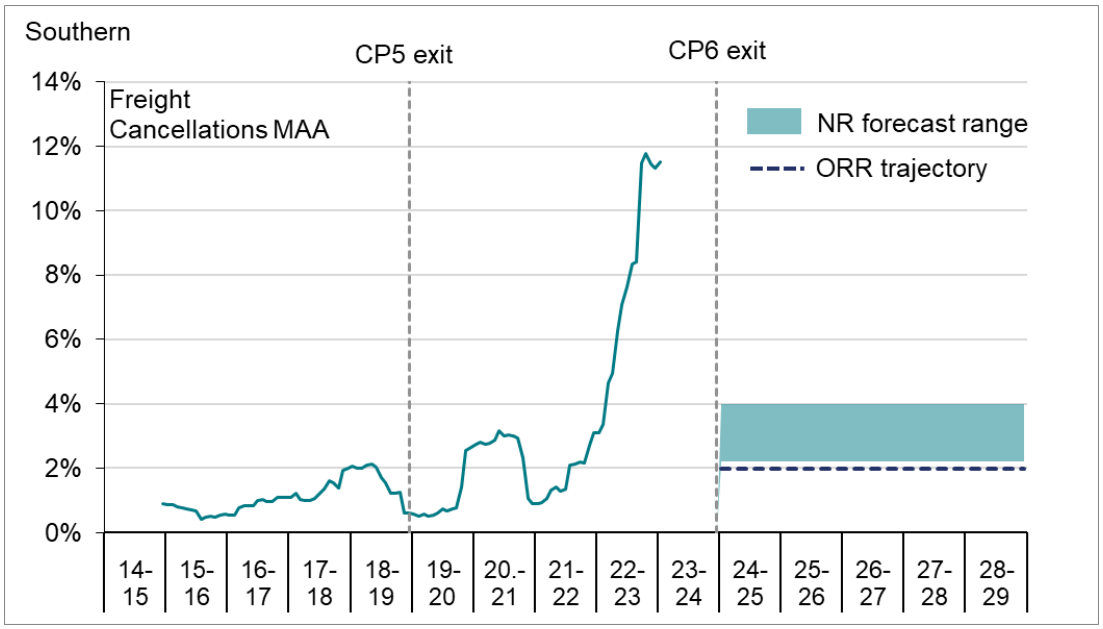


Figure B.15 Freight Cancellations performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Wales & Western

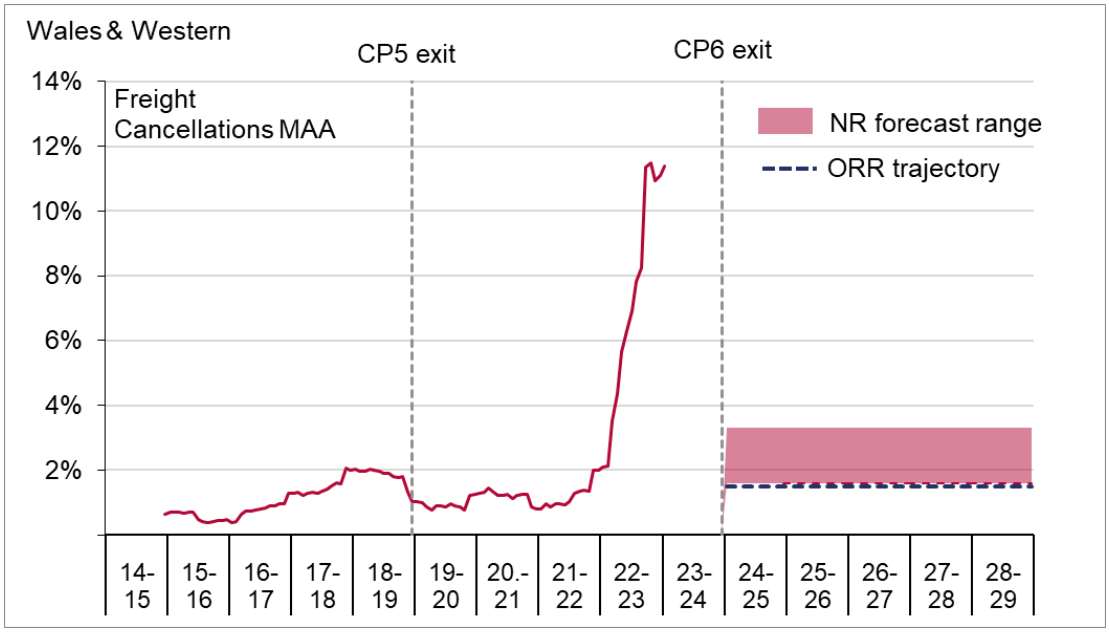


Figure B.16 Freight Cancellations performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories and Network Rail forecasts – Scotland

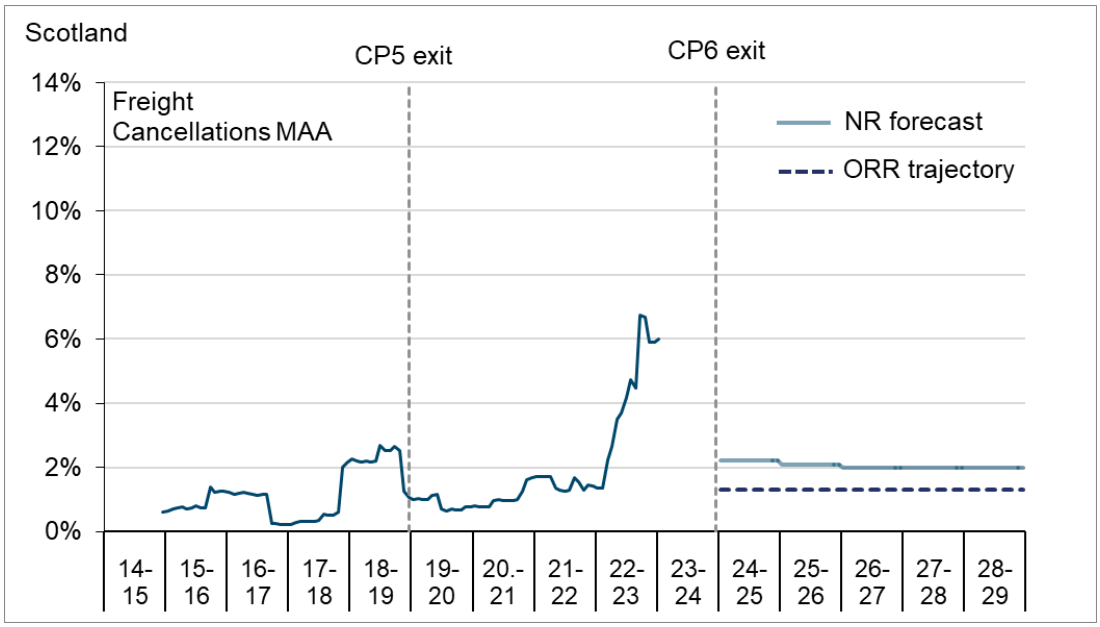
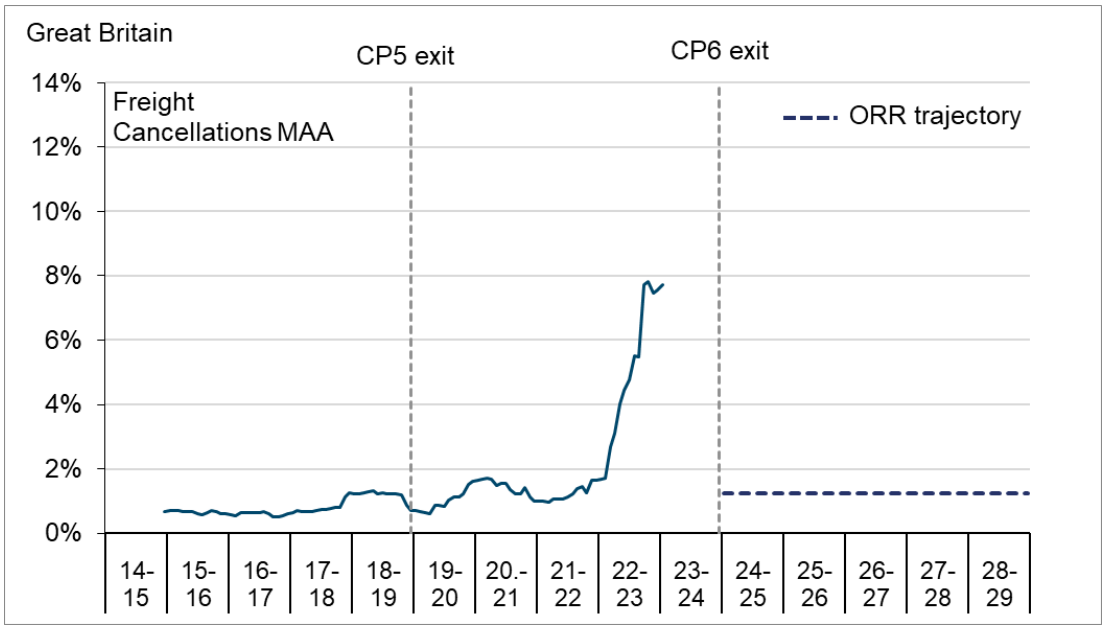


Figure B.17 Freight Cancellations performance from 2014-15 to 2022-23 moving annual average (MAA) with CP7 ORR baseline trajectories – Great Britain



Composite Sustainability Index (CSI): ORR baseline trajectories and Network Rail forecasts – tables

Network Rail's SBP only includes a CSI for the final year of the control period, as it is a slow moving measure. Network Rail updates its year five forecasts on an annual basis, allowing us to monitor risk to delivery.

Table B.9 ORR CSI percentage point (pp) change during CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern					−2.9pp
North West & Central					−3.5pp
Southern					−2.7pp
Wales & Western					−2.5pp
England & Wales					−3.0pp
Scotland					−3.4pp

Table B.10 Network Rail CSI percentage point (pp) change during CP7 SBP forecasts

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern					−2.9pp
North West & Central					−3.5pp
Southern					−3.0pp
Wales & Western					−3.1pp
England & Wales					−3.1pp
Scotland					−3.4pp

Financial Performance Measure (FPM): ORR baseline trajectories and Network Rail forecasts – tables

Table B.11 ORR FPM CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	0	0	0	0	0
North West & Central	0	0	0	0	0
Southern	0	0	0	0	0
Wales & Western	0	0	0	0	0
England & Wales	0	0	0	0	0
Scotland	0	0	0	0	0

Table B.12 Network Rail FPM CP7 SBP forecasts by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	0	0	0	0	0
North West & Central	0	0	0	0	0
Southern	0	0	0	0	0
Wales & Western	0	0	0	0	0
England & Wales	0	0	0	0	0
Scotland	0	0	0	0	0

Efficiency

Network Rail included a forecast of efficiency for each region in its SBP. However, at this stage our analysis has focused on the England & Wales and Scotland level forecasts. We are therefore setting the baseline success measure trajectories at this level in our draft determination. We expect to set an efficiency baseline trajectory for each region in our final determination. We will monitor Network Rail against the efficiency baseline trajectories in its CP7 delivery plan for each region, and for national functions, provided that these trajectories are aligned with the conclusions in our final determination.

Table B.13 ORR Efficiency CP7 baseline trajectories

£ million, 2023-24 prices	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)	Total
Eastern	108	167	216	229	271	992
North West & Central	77	126	199	221	266	890
Southern	75	119	166	200	221	781
Wales & Western	71	88	129	135	146	569
England & Wales	331	501	710	785	905	3,232
Scotland	38	76	93	105	117	429

Table B.14 Network Rail Efficiency CP7 SBP forecasts by year

£ million, 2023-24 prices	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)	Total
Eastern	108	167	216	229	271	992
North West & Central	77	126	199	221	266	890
Southern	75	119	166	200	221	781
Wales & Western	71	88	129	135	146	569
England & Wales	331	501	710	785	905	3,232
Scotland	38	76	93	105	117	429

Carbon emissions scope 1 and 2: ORR baseline trajectories and Network Rail forecasts – tables and charts

Network Rail forecasts in England & Wales use 'risk-adjusted' (or 'Proposed Regulatory Baseline') forecasts in Network Rail's SBP.

We note that in Network Rail's plans it has presented its Carbon emissions scope 1 and 2 forecasts for Scotland on a different basis to forecasts for regions in England & Wales. We have used the latter as our basis to set the trajectories for this measure. To set the trajectory for Scotland, we have subtracted Network Rail's CP6 year 5 forecast (−25%) from its CP7 year 5 forecast.

Table B.15 ORR Carbon emissions scope 1 and 2 percentage point (pp) change in CP7 baseline trajectories by year

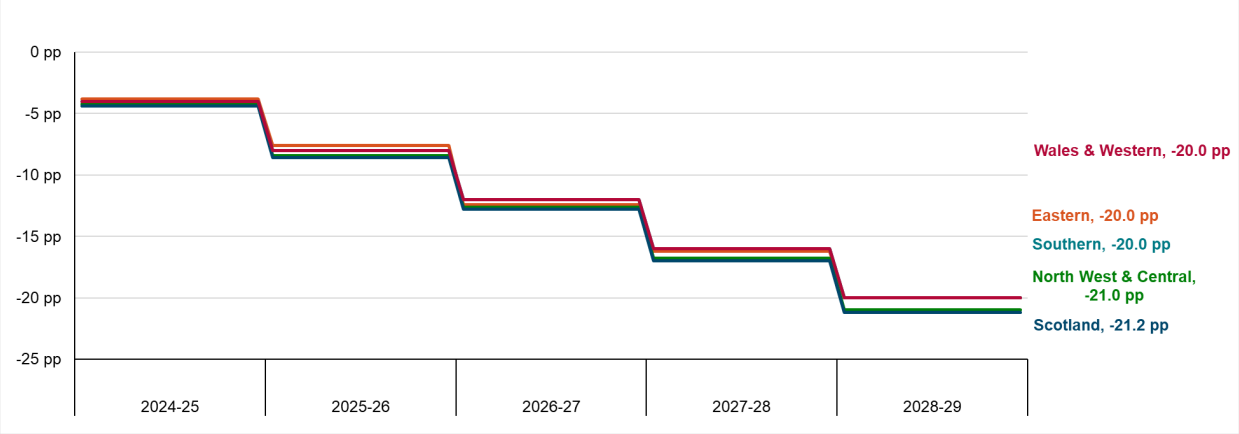
	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	−3.8pp	−7.6pp	−12.4pp	−16.2pp	−20.0pp
North West & Central	−4.2pp	−8.4pp	−12.6pp	−16.8pp	−21.0pp
Southern	−4.0pp	−8.0pp	−12.0pp	−16.0pp	−20.0pp
Wales & Western	−4.0pp	−8.0pp	−12.0pp	−16.0pp	−20.0pp
England & Wales	−4.0pp	−8.0pp	−12.3pp	−16.3pp	−20.3pp
Scotland	−4.4pp	−8.6pp	−12.8pp	−17.0pp	−21.2pp

Table B.16 Network Rail Carbon emissions scope 1 and 2 percentage point (pp) change in CP7 SBP range forecasts by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	−3.8pp	−7.6pp	−12.4pp	−16.2pp	−20.0pp
North West & Central	−4.2pp	−8.4pp	−12.6pp	−16.8pp	−21.0pp
Southern	−2.2pp	−4.4pp	−6.6pp	−8.8pp	−11.0pp
Wales & Western	−4.0pp	−8.0pp	−12.0pp	−16.0pp	−20.0pp
England & Wales	−3.6pp	−7.2pp	−11.1pp	−14.7pp	−18.4pp
Scotland	−29.4%	−33.6%	−37.8%	−42.0%	−46.2%

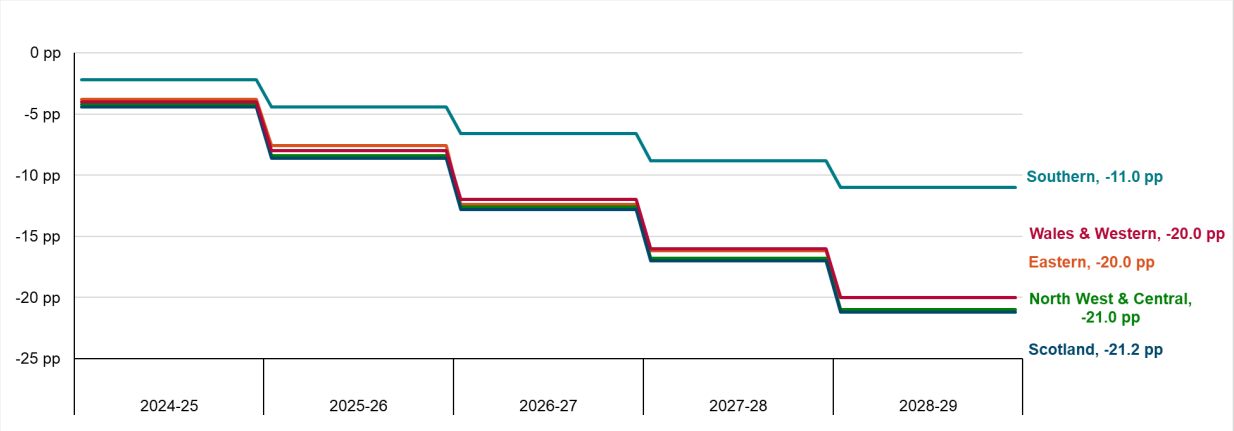
Note: The forecasts for Scotland in the table above are percentage changes relative to 2018-19. All the other forecasts in the table above are the percentage point changes within CP7 only, relative to a 2018-19 baseline.

Figure B.18 Carbon emissions scope 1 and 2 percentage point (pp) change in CP7 ORR baseline trajectories – by Network Rail region



Note: The baseline trajectories for Southern and Wales & Western are the same so the lines on Figure B.18 overlap.

Figure B.19 Carbon emissions scope 1 and 2 percentage point (pp) change in CP7 Network Rail SBP forecasts – by Network Rail region



Note: For comparability, we have adjusted Network Rail Scotland's forecast so that it is on the same basis as forecasts for regions in England & Wales in Figure B.19.

Biodiversity Units: ORR baseline trajectories and Network Rail forecasts – tables and charts

Network Rail forecasts in England & Wales use 'risk-adjusted' (or proposed regulatory baseline) forecasts in Network Rail's SBP.

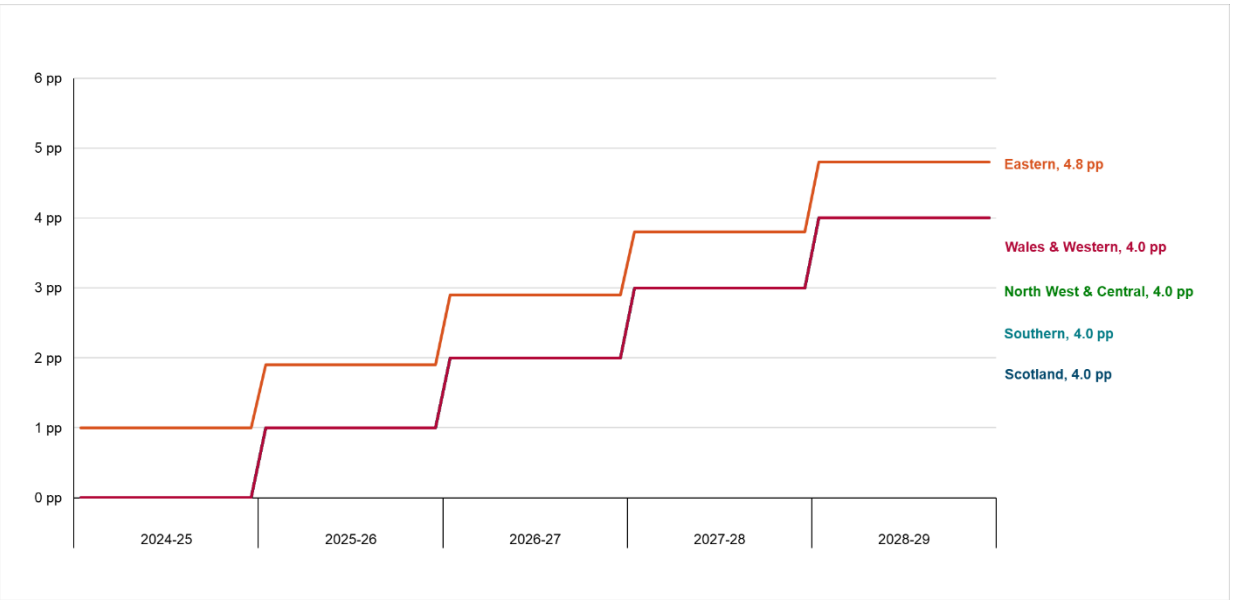
Table B.17 ORR Biodiversity Units percentage point (pp) change in CP7 baseline trajectories by year

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	1.0pp	1.9pp	2.9pp	3.8pp	4.8pp
North West & Central	0.0pp	1.0pp	2.0pp	3.0pp	4.0pp
Southern	0.0pp	1.0pp	2.0pp	3.0pp	4.0pp
Wales & Western	0.0pp	1.0pp	2.0pp	3.0pp	4.0pp
England & Wales	0.3pp	1.2pp	2.2pp	3.2pp	4.2pp
Scotland	0.0pp	1.0pp	2.0pp	3.0pp	4.0pp

Table B.18 Network Rail Biodiversity Units percentage point (pp) change in CP7 SBP range forecasts by year

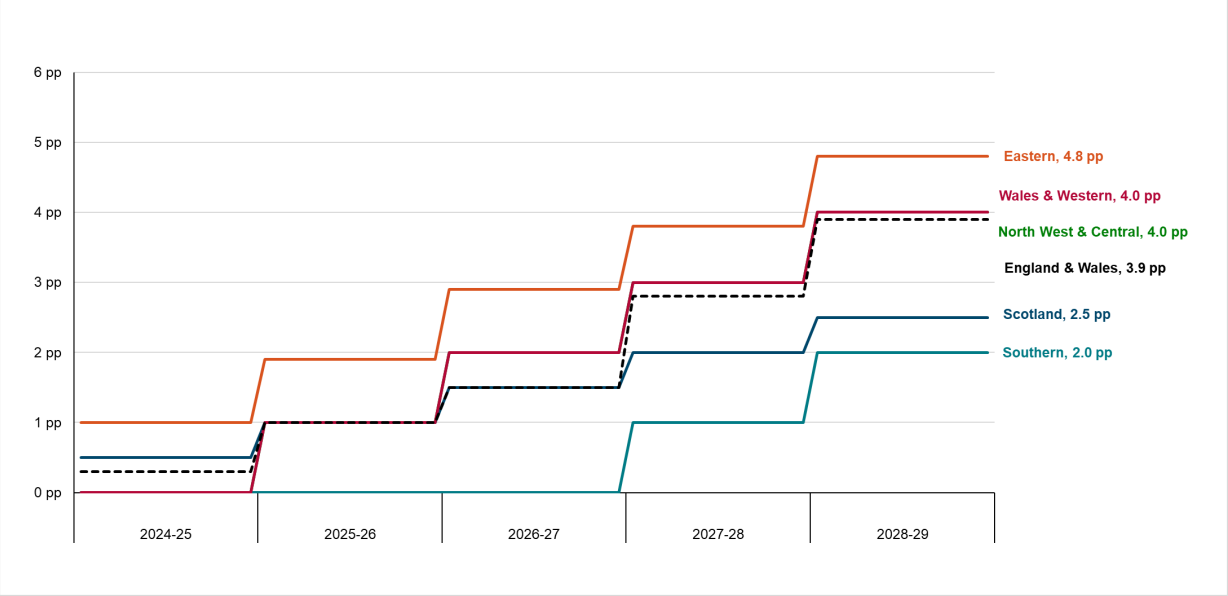
	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	1.0pp	1.9pp	2.9pp	3.8pp	4.8pp
North West & Central	0.0pp	1.0pp	2.0pp	3.0pp	4.0pp
Southern	0.0pp	0.0pp	0.0pp	1.0pp	2.0pp
Wales & Western	0.0pp	1.0pp	2.0pp	3.0pp	4.0pp
England & Wales	0.3pp	1.0pp	1.5pp	2.8pp	3.9pp
Scotland	0.5pp	1.0pp	1.5pp	2.0pp	2.5pp

Figure B.20 Biodiversity Units percentage point (pp) change in CP7 ORR baseline trajectories – by Network Rail region



Note: The baseline trajectories for North West & Central, Southern, Wales & Western and Scotland are the same so the lines on Figure B.20 overlap.

Figure B.21 Biodiversity Units (change in CP7) Network Rail forecasts – by Network Rail region



Note: The forecasts for North West & Central and Wales & Western are the same so the lines on Figure B.21 overlap.

Freight net tonne kilometres moved: ORR baseline trajectories and Network Rail forecasts – tables and charts

Forecasts provided by the regions in England & Wales are 'top-down' and based on the mid-range of five market scenarios developed by consultants MDS Transmodal. This is the 'central case' between high and low growth scenarios that favour/disfavour rail compared to road. The Network Rail Scotland forecast is based on 'bottom-up' knowledge of both the Scottish logistics market and the network capability and capacity of the Scottish rail network.

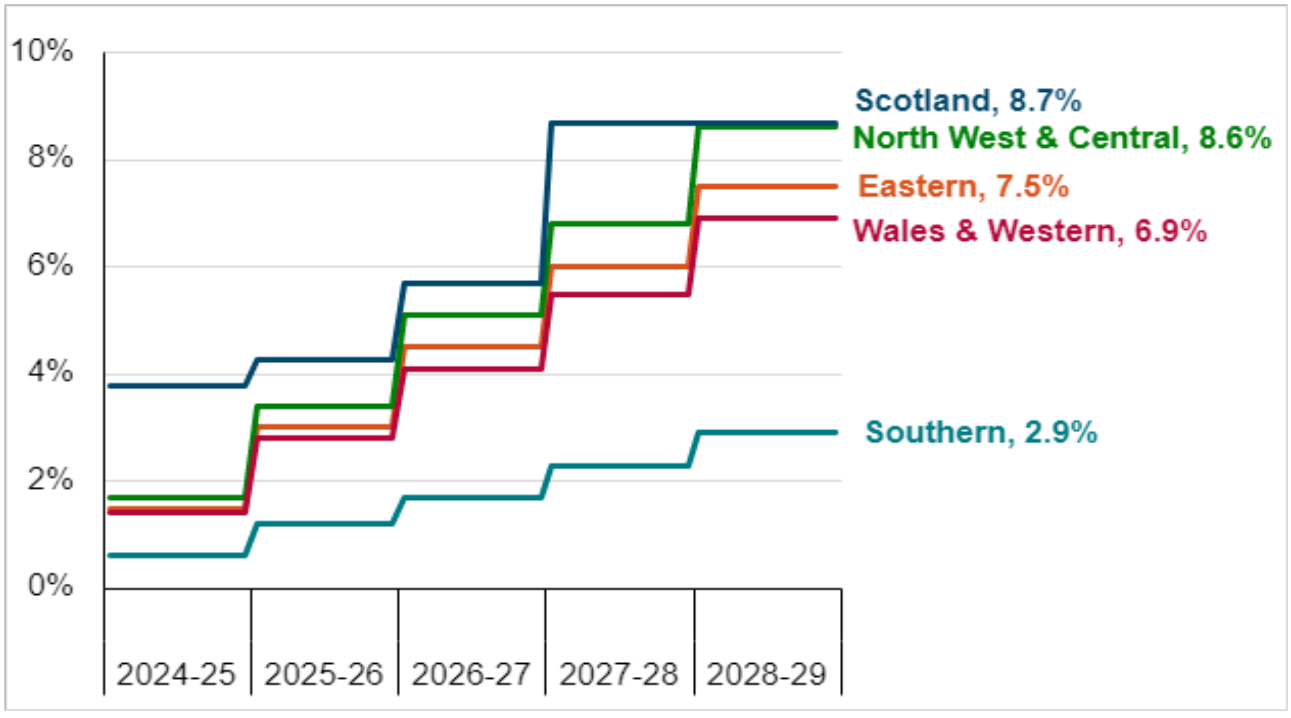
Table B.19 ORR freight growth (Freight net tonne kilometres moved) CP7 baseline trajectories by year (cumulative from CP6 year 5)

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	1.5%	3.0%	4.5%	6.0%	7.5%
North West & Central	1.7%	3.4%	5.1%	6.8%	8.6%
Southern	0.6%	1.2%	1.7%	2.3%	2.9%
Wales & Western	1.4%	2.8%	4.1%	5.5%	6.9%
England & Wales	1.5%	3.0%	4.5%	6.0%	7.5%
Scotland	3.8%	4.3%	5.7%	8.7%	8.7%

Table B.20 Network Rail freight growth (Freight net tonne kilometres moved) CP7 SBP forecasts by year (cumulative from CP6 year 5)

	2024-25 (year 1)	2025-26 (year 2)	2026-27 (year 3)	2027-28 (year 4)	2028-29 (year 5)
Eastern	1.5%	3.0%	4.5%	6.0%	7.5%
North West & Central	1.7%	3.4%	5.1%	6.8%	8.6%
Southern	0.6%	1.2%	1.7%	2.3%	2.9%
Wales & Western	1.4%	2.8%	4.1%	5.5%	6.9%
England & Wales	1.5%	3.0%	4.5%	6.0%	7.5%
Scotland	3.8%	4.3%	5.7%	8.7%	8.7%

Figure B.22 ORR freight growth (Freight net tonne kilometres moved) CP7 baseline trajectories by Network Rail region



Note: ORR baseline trajectories match forecasts in Network Rail's SBP.

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